



**A Quarterly Refereed Journal
of Dialogues on Education
(ISSN 2278-2435)**

Vol. 10, Issue-2, May 2021

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1. Pedagogical Environments that Open Avenues to Thinking Mathematically in Large-Sized Classrooms

- **Haneet Gandhi**, Assistant Professor, Department of Education, Central Institute of Education (C.I.E), University of Delhi, haneetgandhi@gmail.com, hgandhi@cie.du.ac.in
- **Pooja Keshavan Singh**, Project Research Assistant, Department of Education, Central Institute of Education (C.I.E), University of Delhi, keshavansinghpooja@gmail.com

Abstract

The study aims to understand how the 'largeness' of a mathematics classroom can be used as an asset in building students' understanding in mathematics, and promoting their skills of problem-solving, proving and visualization. Part of a larger study, the data reported here was collected through field observations by two observers and video recording conducted in two schools having class size more than 30 (larger than the prescribed norms). The paper analyses how the two sampled teachers utilized the large size-ability of their classrooms as a resource in engaging students optimally for building mathematically-oriented discussions, honing the tenets of learning mathematics. Three recurrent strategies that could be identified from the sample episodes were Collaborative Environment, Initiation of Multiple Answers and Paving ways for Reasoning and Sense-making. The study has implications for designing pedagogic instructions for a long-standing problem in countries where largeness of classrooms is a reality.

Keywords: Large-size classrooms, Effective pedagogic strategies, Mathematics, Middle-grades.

INTRODUCTION

The current scenario in understanding classroom teaching has expanded. As compared to earlier when the role of teaching-learning was centered only on the teacher, it is now believed that effective learning emerges with an amalgamation of ideas, interaction and dialogical discourses. Traditional teaching styles in which a teacher transmitted the knowledge are now questioned as these approaches are unlikely to help students think deeply, critically and creatively, especially in mathematics. For example, Goos et. al. (2002) deduced that teachers presenting the content in a transmutative mode tend to reinstate the mathematics that has already been established. They usually follow an authoritative dialogical manner for re-establishing the mathematical facts. In

such classrooms students work in solidarity, agreeing to the procedural notes set in by the teacher. Dialogical environments, on the other hand, go beyond maintaining solidarity towards procedural knowledge.

In mathematics classes, cognitive, social and emotional faculties need to be built in a confluence for effective learning to take place. This confluence can be realized only through interaction. The National Council of Teachers of Mathematics (NCTM) has included communication in its Principles and Standards for School Mathematics (NCTM, 2000) as one of five process skills that should be incorporated into mathematics classrooms. Not only because teamwork, collaboration and communication are important skills for any workforce, interacting with others help people exchange ideas and reflect upon their own thoughts. Discussions lead to a communal construction of mathematics in the classrooms (Pimm, 1987; Downer et. al., 2012). NCERT's Position Paper on Teaching of Mathematics (NCERT, 2005) also identifies effective mathematics classrooms as being those where children learn to enjoy mathematics, talk about it, get opportunities to reason their thinking, pose and solve meaningful problems, use abstractions to perceive relationships and structures. Engaging every student with a sense of success while at the same time offering conceptual challenges were listed as key pedagogical strategies for generating mathematical thinking in the document.

There is a denseness of research studies that urge on having dialogues and talks in mathematics classes (some for example are Clarke et. al., 2006; Adler & Sfard, 2016; Pimm, 1987; Sfard et.al., 1998, Boaler, 1998). These studies have shown how an effective talk, in the form of monologues, dialogues, conversations, discussions and argumentation lead to an increased level of mathematical engagement in the classrooms.

Holding a dialogical discourse involves a two-way interaction. It is a form of talk which promotes exchange of viewpoints, agreements and disagreements, questioning and answering, reasoning and collective sense-making (Fisher, 2001). However, this does not mean there will be no authority in the classroom. The teacher would still hold an authoritative position as all matters end with the approval by the teacher, especially in mathematics classrooms. What alters is a shift in the level of participation. Rather than being teacher-centric, such classes are more open to

acceptance of students' voices. Students and teachers participate equally to bring a consensual network of emotions and cognition. In other words, one can say there emerges a sharing of authority. Young (1992) notes this shift in classroom structures as "being the authority" to "being in authority".

In mathematics dialogical environments a whole range of mathematical processes take precedence. Giving importance to these processes not only builds a better understanding of the subject, it also helps in removing the fear of the subject from the children's minds. Such learning environments invite participation, effective engagement and offer a sense of achievement. A growing body of literature (Galbraith & Jones, 2006; Kline & Ishii, 2008; Krüssel et.al., 1998; Tong, 2009; Walshaw & Anthony, 2008) in mathematics education supports the notion that learning environments that encourage dialogues help in developing a strong conceptual understanding of mathematics. Teacher oriented discussions, in supporting environments, encourage students to make sense of the mathematics being taught. Mathematical discussions which include defense of ideas, providing explanations, and analyzing other people's mathematical arguments is part of good mathematical pedagogy.

The diverging results of the benefits of dialogical environments in mathematics classrooms, as discussed above, and the different ways of conceptualizing discussions in the mathematics classroom, indicate that classes in which discussions take place contribute positively in mathematical thinking of the students. However, what has not been explicitly handled is how such dialogues take place in classrooms where the classroom size is much beyond the normative standards. Most of the above-listed studies have been conducted where the class sizes were small and easier to work with. In India, however, this is not the case. In India and in other developing countries, the strength of students in a class is usually beyond 30. According to the Right to Education Act 2009, the class strength of 30 students has been declared an optimal size of a class. Thus, any class having more than 30 students enrolled at a time can be termed as a 'large-sized classroom'. Most of the classes in India surely qualify in the category of being 'large-sized', therefore for any research study to make impact on the praxis in real sense must be done in classes where the student-teacher ratio is big. Workable solution can be sought only when research is conducted in existing naturalistic realities.

This study brings together some of the nuances of the dialogical exchanges that take place in large-sized mathematics classes in India in an overt manner, thereby promoting an environment of working together in building mathematical conceptual knowledge. It builds on the vision of the National Curriculum Framework (NCERT, 2005), and considers communication and discussion as the hallmark of a thinking mathematics classroom where the role of the teacher is extremely critical in providing ethos of reasoning and collaborating. This paper focuses on an important aspect of effective teaching and learning in a mathematics classroom, where the number of participants are many. It discusses the crucial pedagogic aspects that emerge inadvertently by virtue of handling large-sized classes and also conforming to the task of making mathematics classrooms effective. For making the point, pedagogic strategies of two secondary school mathematics teachers have been discussed. The results can, however, be generalized to any effective and well-informed mathematics teacher who holds a commitment of helping her students understand mathematics. The paper talks about building collaborative ethos and generating multiple answers as a source for promoting mathematical thinking.

THE STUDY

This paper shares results of a part of a larger study which is in progress¹. The larger study is aimed at studying and improving the learning of mathematics in large-sized classrooms (with students from diverse backgrounds) at Secondary and Higher Secondary grades. It aims to understand how the 'largeness' of our classrooms can be used as an asset in building students' understanding of mathematics, and promoting their skills of problem-solving, proving and visualisation. This paper, in particular, mentions the episodes of two mathematics teachers teaching in secondary schools with a high students' strength. It talks about how these two teachers utilized the large size-ability of their classrooms as an asset while doing mathematics. The findings highlight how these mathematics teachers brought dialogical discourse in their large-sized classrooms, harnessing the tenets of learning mathematics.

METHODOLOGY

The research design of the study qualifies under the Naturalistic design (Strauss and Corbin, 1998) as it was conducted in typical classroom settings without any external disturbances. Since, in this study middle grade mathematics classes were observed while in progress as per the usual school timetable, the observations conducted meet the protocols of a naturalistic study. The researcher's job was to make notes of what was happening in the class without any participation or interference. Observations being conducted in naturalistic settings help to ascertain the credibility of the behavior or actions exhibited by the teachers and students as being typical, usual and original.

Two schools of Delhi, one government-aided and other private were approached. Both schools were located in the North-west district of Delhi. Grade VII were selected from both schools. The class strength of Grade VII in government-aided school was 52 (35 boys and 17 girls), and that in the other school was 45 (22 girls and 23 boys). Thus, both classes could be termed as being 'large-sized'.

Structure of the sample classes

In the government-aided school most of the students belonged to lower middle class income group. There was a clear gender demarcation in the class as girls sat with girls and boys sat with boys. At times, three students (more than the capacity of the desk) had to sit on one desk. The seating arrangement was organized into rows but due to space constraints extra desks had been placed in the class. This meant that there was very little space in the class to move, even for the teacher. When students wanted to give a response, the teacher used to ask them to speak from their place as the walking passage between the rows was mostly blocked with bags making it difficult for any student to come to the board or to the teacher.

In Grade VII of the other school, students belonged to middle income group background. Here too, the seating arrangement was typical of a large sized classroom with 5 rows having 10 desks in each row. Each desk could seat two students. Boys usually sat with boys and girls sat with girls. Here, the room was big enough to hold 40-50 students. There was ample space in the room

to move around and hence the teacher could also call the students to the green-board. She also moved around the class to look at students' work. The green board was clearly visible from the back of the class and the teacher was audible as well.

For data collection, two field observers sat at two back corners of both classes for better coverage. Video recordings were done of the classes. After each session the recorded data as well as the field notes were tallied between the two field observers to maintain inter-observer objectivity.

RESULTS WITH DISCUSSION

Principles of Grounded theory (Strauss & Corbin, 1998) were applied to understand how the teachers built mathematical discussions in their large-sized classrooms. While analyzing the observations which were collected from the classrooms, repeated initiations and discussions that maneuvered the class discourse were noted. Discussion processes that were found to be repeating over a set of classes were taken as class norms as they typified the processes a teacher adopted in her pedagogy. Discussion norms that became apparent were coded and grouped into themes and categories. These themes and categories helped in theory construction.

Overall, 10 classes of both the teachers were observed. It was noted that the classroom dynamics remained constant in all the classes. This assured the data presented here can be considered as a sample of the respective teachers' pedagogic style. The teaching episodes produced here are meant to provide a glimpse of the teacher's style in initiating discourses by involving maximum number of students of her classes. For the purpose of this paper, analysis of three classroom conversations are being shared as a sample of the discourse that took place in these mathematics classrooms on a regular basis.

Three recurrent pedagogic strategies could be identified from the sample episodes:

- a) Collaborative environment
- b) Initiation of multiple answers
- c) Paving ways for reasoning
- a) **Collaborative environment**

Collaborative learning finds roots in the socio-constructivist epistemology which highlights that learning is mediated in accordance with the context and experience with peers. It asserts causal relationship between social interaction and a person's cognitive development. Thus, social interaction is viewed as a prerequisite for growth and development of cognition. Collaborative environments in mathematics classrooms are those where students have opportunities to participate, reason and construct their understanding as part of a community of learners (NCTM, 1989, 2000). Collaboration has proved its merit in terms of student learning and students' conceptual understanding; in particular, creating more potentially equitable learning environments and developing positive identities with respect to mathematics (Boaler, 1997; Cohen & Lotan, 1997).

In this section, an episode from Grade VII is being cited during which the teacher was observed to be encouraging collaborative work in the students through constant support of every student by participating in the processes of doing mathematics, even if they were hesitant in responding. The following conversation shows how the teacher used the support of the large class strength to help a student generate the solution even when the student herself was not confident about it.

Following problem was given to the entire class:

A cubical shaped glass box is having side length of 6 cm. Find the area of paper required to cover the glass and the volume of the water it can hold.

Teacher called a student, Aditi, to do this question on the chalkboard. Initially, Aditi was hesitant and refrained from coming forward.

Teacher: What are you saying dear, have you not understood how to do this or you can't do this, or you don't know?

Aditi: Maam, I don't know....

Teacher: Don't know...? Come we will help you. (Here, 'we' meant the whole class)

Teacher: ...I am here and your friends are here to help you...

Aditi did not look confident enough so the teacher intervened further in an encouraging tone.

Teacher: So, what would come here (pointing towards the base of the cuboidal figure). Lateral Surface area plus what?

Aditi: Base

Teacher: What of Base ...?

Student 1: Area of base...

Teacher invited other students to also respond. She took cognizance of the prompts from the class students. The teacher's gestures were also supporting, thereby indicating that she was listening to all the prompts which she was receiving from the students. The prompts were like, "find the area", "take the base figure", "it's $4a^2$ " and so on.

Since most of the students were repeating the phrase "take $4a^2$ ", Aditi got the clue and wrote it on the blackboard. Then again, Aditi paused and remained silent as she couldn't proceed. Many students raised their hands to help her.

Chorus probe 1: Write a^2 (Side X Side)

Chorus probe 2: Put the bracket

Chorus probe 3: There is no bracket on 6×6 and cm^2 after that.

Aditi corrected her work and rewrote the formulae as directed by her peers.

In the episode stated above, it can be observed how the students as well as the teacher worked collaboratively in providing leading probes to Aditi, guiding her to reach the solution. The teacher took help from other students of the class when Aditi got stuck and could not proceed. She had a forthcoming response of inviting other student's expression as a collective responsibility. When she mentioned, "come we will help you", the use of the word 'we' made the students realize that they all shared the responsibility to help their peer. The dialogue shifted the authority solely from teacher to the entire class. This created a climate of community and collaboration in the class such that all the students felt themselves as an integral part of it.

The teacher was also observed saying the following phrase several times in her classes, "...for students who do not know how to do something, we are all here to support you". This showed that

care was being taken not to let any student feel being left behind her classmates, despite being part of a large class.

The collaborative culture of the class involved all the students as a resource, meaning thereby that the whole class worked together as a unit in building the answer. The chorus answers proved to be an asset in building the solution. A common unsaid consensus was established in class which indicated that the amount of noise associated with a chorus answer substantiated its validity. The number of people who participated in building an answer mattered. The students participated as individuals but their collective voice mattered more than the individual ones. This indicated that the teacher valued collaboration of all the students more than individualism of a student. All the students contributed to building a collaborative relationship between the students and teacher while formulating solutions to the problems.

b) Initiation of multiple answers

The episode being discussed in this section will throw light on how initiating many answers helps in promoting mathematical thinking. As said earlier, the class size was large which meant there were many people who could participate at a given time. Usually, in mathematics classes one hardly finds any talk taking place. Mathematics classes are mostly seen as the quietest ones. Teachers, as well as students, are usually seen to be working in their respective spaces diligently in an atmosphere of silence. It is uncommon to find discussion-based mathematics classrooms. The large-sized mathematics class that we observed appeared to be somewhat contrary to this commonly held belief about mathematics classes.

The discussion given below took place in one of the observed classes of Grade VII of the government school. Concept of angle sum property and exterior angle property of a triangle was being built up. The teacher drew the following figure on the board for students to find the value of unknown angle, 'x' (Figure 1).

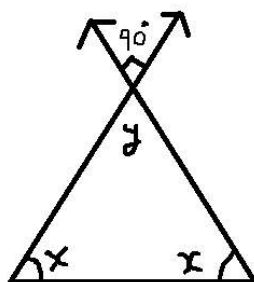


Figure 1: Solve for x

Teacher: What is 'x' in this figure?

After 2 minutes teacher started asking students for answers.

Teacher: Benu?...Naina?

3 to 4 hands went up.

Student 1: 30°

Student 2: 70°

Student 3: 50°

Teacher wrote all the responses on the board and asked if there were any more answers which came to the minds of the students. A student prompted 45° and teacher added it to the list of possible answers. After writing all possible answers on the board, she asked the students to take time and see if they can find which among the displayed ones could be the right solution. They had to also state the reason for their answers. Enough time was given to think.

In another episode, the same teacher again used the same pedagogy of inviting multiple responses to another problem. This time they had to find the value of exterior angle of a triangle (Figure 2).

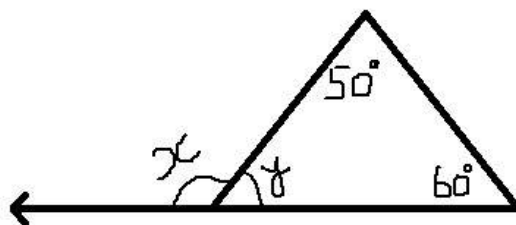


Figure 2: Find x and y

After writing the problem on the board, the teacher paused to invite all answer.

Student 1: 100°

Student 2: 110°

Student3: 70°

The Teacher wrote the three responses on the board and asked if there were any more.

Two more responses emerged.

Student 4: 50°

Student 5: 60°

Two more answers were added to the earliest list.

Teacher: Any more? Does anyone have any other answer?

Long pause

Teacher: Let's discuss each response and see how people would have got them...

Discussion on each answer followed

The two anecdotes given above demonstrate how the teacher valued responses of every student. By writing each received response on the chalkboard, the teacher made the students feel accepted and that their responses mattered. Since there were many students in the class, to make the matter convenient, she could have easily adopted a strategy of dictating the one right answer. Instead, she invited all students to participate and share their answers.

This was an effective pedagogic strategy used by the teacher to engage maximum number of students in her large-sized classroom. The teacher made efforts to invite as many answers as possible, thereby providing a scope for generating multiple answers to a problem. The teacher welcomed as many responses as the students could give. Writing every response on the board indicated an acknowledgment and acceptance to every response received. This opened avenues of thinking among the students. Hearing many answers generated a discussion on the route that could be adopted to reach the solution, which thereby promoted reasoning in the class.

By writing multiple responses on the board, the students were unconsciously made to think on the strategy which the other student would have adopted to reach the answer. Taking all the answers and putting each one of them on the board, irrespective of the fact that it was correct or not, the teacher enhanced participation of maximum number of students. Every student could reason the

process which another student would have used. This also helped them realize that mistakes or errors that can happen while solving a problem. Accepting multiple answers, finding routes to reaching an answer, accepting and recognizing mistakes are key processes to thinking mathematically.

Since the teacher was seen following this pedagogy at several instances, it can be deduced that the classroom ethos were such that any student could express herself and each response was being accepted without any judgments. The large size of the classroom was not an obstacle in building a mathematical way of working. Rather, it turned out to be an advantage for promoting mathematical thinking.

c) Paving ways for reasoning

In large-sized classrooms, one hardly finds an opportunity to build reasoning. Teachers are mostly seen resorting to the chalkboard for writing one right solution or algorithm without any discussions taking place and the students are seen penning down whatever is written on the board. This monotonous strategy is often the most preferred pedagogy of mathematics teachers as it helps them in completing the prescribed syllabus on time, and it also gives an impression of a well-managed class. It is however questionable if students get to learn or understand the subject well. Mindless working with no questioning or discussion is counted as one of the major reasons for fear and dropout from mathematics (NCTM, 2000). Students fear owing to dullness and monotony of the way it is taught, and this issue multiplies many-fold if the class sizes are unmanageable. In such classes, the students hardly get an access to the teacher or a chance to question and reason.

However, in our observations we found teachers reversing this trend. The teacher teaching Grade VII in the private school was often seen emphasizing on the role of understanding the reason that made a rule or a formulae than memorizing it mindlessly. The teacher in the study believed that reasoning and sense making were the most critical processes through which the students can build an understanding of the subject.

In the following episode, the teacher can be seen indulging her students in an exercise of reasoning to systematically derive the formula for volume of a cylindrical shape. She was seen repeatedly urging her students to link the ideas related to volume of a cube with that of a cylinder. She was seen encouraging the students to reason out their working while connecting the basic ideas of finding the volume of any solid. At the same time, she was also discouraging students on reciting the memorized formulas without ascertaining the linkages. Additionally, as a general rule, the teacher had conveyed to the students to hold on their writing work while the discussions were on. She wanted them to internalize the process of finding the volumes of 3- dimensional shapes through listening to others and reasoning.

Teacher: So, volume of a cube is Side^3 or l^3 . Now using a paper, make a cylinder for me.

She picked a paper and gave it to a child. Almost all the students rolled the sheet and made a cylinder.

Teacher: Now if I want to keep this cylinder closed, that is, if I close this cylinder here and here (top and bottom), then it will be closed. Can you think, how to find the volume of the cylinder using the concept that you have used here...just relate them with cylinder. (Pointing to the formula of volume of the cube)

Students who knew the answer, starting stating it. The teacher, however, discouraged them from doing so.

Teacher: I'm not asking for the formula. You are required to connect the formula of volume of a cube with that of a cylinder. How will you find that? We need to find (emphasis added) the formula, but right now I am just asking you, how you will relate what is written here with the volume of a cylinder.

2 to 3 students raised their hands.

Student 1: Ma'am, we will multiply the area of the base of the cylinder with its height.

Student 2: Ma'am here we had taken side X side, so here we will take area of the base.

Teacher: Yes, whenever we have to find the volume of a solid, remember one thing, we always take the area of the base, whether the base is a triangle, square, rectangle or circle. What is the shape of the base here? Aman...?

Aman: Circle...

Teacher: So here again we have to find the area of the base which is a circle...So what is the area of the base, it is circular?

Teacher: You tell, please (She points to a student)

Student 3: πr^2

Teacher: So the volume of cylinder is $\pi r^2 h$.

Student 4: I had been telling you the same thing for so long...?

Teacher: But I had not asked you the formula, you had to construct the formula yourself.

In the anecdote cited above, one can see how the teacher was initiating a discussion on reasoning and deriving the formula rather than on stating the memorizing answer. The discussion related to deriving volume of the cylinder continued till all students could make connections between the concepts. Students' role was to bring out the connections to the earlier learnt concepts. They had to participate, connect the concepts and support others in deriving the formula.

Teacher's repeated emphasis on connecting the two ideas showed her concerns about making her students realize that in mathematics the concepts are built in a logical manner. Students were being encouraged to make sense of the ideas when they were told to make a cylinder with a rectangular sheet of paper. They were expected to give justifications while deriving the formula. These repeated efforts made by the teacher ensured that all students learnt to reason and indulge in thinking mathematically despite belonging to a large-sized classroom.

It was further observed that gradually reasoning and questioning had developed as ethos of this mathematics classroom. Since, the same pedagogy was seen in several classes of this teacher, one can conclude that reasoning and making sense had cultivated as mathematical ethos of this class. It is believed that when avenues of independent working are provided, students start to trust their own abilities as mathematics creators. Mathematics teachers understand that reasoning is a

cornerstone in understanding mathematics. Reasoning provides clarity of thoughts and helps in deducing the solutions. So, a mathematically-oriented classroom must have an ingredient of reasoning incorporated in it.

Third recurrent theme observed in the large classroom was exploring the ‘why’ and ‘how’ behind mathematical ideas. In other words, a culture of reasoning and supporting one’s claim of argument was being initiated in the said classroom which was attributed to the participation of all the students. Alike earlier episodes, here too we observed that the large class size was not a problem for the teacher or the students. They felt that they were capable of deriving formulas together taking support of each other.

CONCLUSION

Often large class sizes are considered as a hindrance to any effective pedagogy. In India, large class-strength is a reality and we cannot shy away from it. Instead of looking for ideal situations and wait for a day when the classrooms will be optimally sized as per the recommended ratio, we decided to catch the reality and find pedagogies that are being adopted effectively by the teachers in the existing circumstances. Through this study, we wanted to capture some of the pedagogic strategies that mathematics teachers can adopt in their big-sized classrooms to encourage mathematical thinking.

The findings gathered by observing the mathematics teachers were positively overwhelming. By observing the classes of both teachers we gathered that these teachers have rather used the class-size as an asset in building ideas. The study also adds value to research as it breaks the myths associated with mathematics classes. Mathematics classes are usually tagged as boring, dull and one-answer oriented; our observations in large-sized classes were quiet contrary to these believes. In fact, the teachers were encouraging collaborative working, reasoning, argumentation, thinking, generating multiple answers and so forth. All these acts are baseliners in promoting a mathematically-rich environment. The large class size became immaterial as every child experienced a freedom to express themselves whether correct or not. They were confident that if they went wrong they will be corrected by their peers which would eventually lead them to a new learning. The largeness of the class was not an impediment to learning mathematics because of the ways both teachers had evolved their pedagogy. Instead, the collaboration turned the large

class size into a human resource where many students collaborated in assisting each other in doing mathematics.

As a concluding remark, we agree to Cazden (2001) in asserting that the establishment of social relationships can seriously impact effective teaching and accurate evaluation in a classroom. Our teachers had the potential to drive effective outcomes in their classes through social relationships and discussions. We believe, once an effective relationship gets built, the size of the classes ceases to matter. In fact, the teachers have potentials to utilize the human resources in bringing out dialogues, discussions and generation of ideas; thereby promoting ethos of critical thinking in their classrooms.

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2. Examination of inside and outside classroom practices for achieving Physical Science Curriculum Expectations at secondary level in West Bengal, India

- **Mr. Ritendra Roy**, Assistant Professor, Department of Education, St. Xavier's College (Autonomous), Kolkata Email - ritendra85@gmail.com
- **Dr. Asheesh Srivastava**, Professor, Head & Dean, Department of Educational Studies, School of Education, Mahatma Gandhi Central University, Motihari, East Champaran, Bihar-845401, India.

Abstract

Understanding the curriculum expectations helps the different stakeholders, like the teachers, parents, and the students, of an education system to know their role and act accordingly. Attaining the curriculum expectations helps to attain the goals of education. From the review of literature, it was found that no study was done on curriculum expectations in India. Hence it was felt to take up a study on curriculum expectation on science education in West Bengal at the secondary level to examine the inside and outside classroom practices to attain the curriculum expectations. The present study was delimited to the government-aided school of West Bengal following the 9th-grade physical science curriculum of the West Bengal Board of Secondary Education. Through cluster sampling, 30 schools and their physical science teachers were selected. Further, from each school, 10 secondary students were randomly selected comprising a total of 300 students. The study included a questionnaire for students and an interview schedule for the physical science teachers. The study followed a descriptive method combining both qualitative and quantitative approaches. The study found that there are various teaching techniques and strategies, like, use of examples, blackboard, lecture, textbook, repetition, question-answer discussion, demonstration, giving complete notes, activity, the introduction of the lesson, picture and diagram drawing, and teaching aids, were used by the teachers to teach physical science at the secondary level. The degree of use of these techniques and strategies were varied from school to school. Less than half of the students were able to relate classroom teaching with daily life and cited examples. Nearly two-fifths of the students were felt that the knowledge and skill they were getting through the physical science curriculum would be helpful for a specific vocation along with named at least one vocation. The students felt that science exhibition, science fair, project work, science model, science magazine, laboratory work, science seminar, excursion or school trip, science club, the quiz could be added as an outside classroom

activity with physical science curriculum. The study found that outside classroom activities needed to be increased along with the varieties.

Keywords: *science education, curriculum expectations, inside classroom practices, outside classroom practices, students' perception*

Humans' curious nature and survival instinct drive him/to manipulate and control nature and natural phenomena, like the use of fire for cooking. These kinds of explorative activities helped to develop a new domain of knowledge, i.e. natural science. Though natural science has taken a time to get its shape as a discipline, its importance in human life has made it an inevitable and hence a core subject in the school curriculum. There may be various kinds of nature of natural science but as per the author's understanding, there is three major nature of natural science. These are:

1. Science as a product,
2. Science as a process and
3. Science as a social endeavour.

Science produces new knowledge. This can be thought of as science as a product. In the Indian school education system, just after independence, this nature of science was given more importance. For achieving scientific knowledge someone must undergo the scientific process. This is known as science as a process. Nowadays this nature of science is given importance along with the 'science as a product' nature. That is the reason for having various activities in school science textbooks, these days. Understanding science as a process and product further help to understand the impact of science on society and vice versa. The achievement of science would have no value if it has no relation to society. This is the third nature of science that is 'science as a social endeavour'. It has been analyzed that science curriculum is framed based on these natures of science. The content has been designed in such a way that the students are expected to understand the three-fold nature of science. A critical analysis of the aims of science education as stated in the Position Paper by NFG on Teaching of Science (NCERT, 2006) reveals that these objectives are nothing but the reflection of were enable the learners to:

- Know the facts and principles of science and its applications, consistent with the stage of cognitive development,
- Acquire the skills and understand the methods and process that lead to the generation and validation of scientific knowledge,

- Develop a historical and developmental perspective of science and to enable her to view science as a social enterprise,
- Relate to the environment, local as well as global, and appreciate the issues at the interface of science, technology, and society,
- Acquire the requisite theoretical knowledge and practical technical skills to enter the world of work,
- Nurture the natural curiosity, aesthetic sense, and creativity in science and technology,
- Imbibe the values of honesty, integrity, cooperation, concern for life and preservation of the environment, and
- Cultivate 'scientific temper'-objectivity, critical thinking, and freedom from fear and prejudice. (p. 11)

The critical analysis of the above-mentioned aims of science education reveals that these are the reflection of those three-fold nature of science. The author outlined three major goals after analysing the all aims framed in the position paper on Teaching of Science (NCERT, 2006) and also establishes its relation with the three-fold nature of science. The following table will show how these goals are related to the various natures of science.

The relation between the three-fold nature of science with goals of science education

Nature of Science	Goals of science education
Science as a product	To understand the basic concept of science and its application.
Science as a process	To acquire the skills and understand the methods and processes of science and developing and nurturing scientific temper, curiosity, aesthetic sense, inventiveness, creativity, and values.
Science as a social endeavour	To relate science to technology, society, environment, and vocation.

The analysis of the content of the science textbook helps to identify overall and specific curriculum expectations and their relation with the goals mentioned above. The goals could be achieved if the curriculum expectations are achieved. As per Roy and Srivastava (2019), "curriculum expectation can be defined as what the students are expected to learn from the curriculum." Overall curriculum expectations are expectations in a general form that one can expect from a chapter e.g. sound whereas specific expectations are expectations more specific to the topic, in more details (the Ontario Curriculum grades 9 and 10 science, 2008). Suppose, for the unit „sound“ there may be three general aspects (say, knowledge and skill, and ability to relate with daily life) which the students are expected to learn after attaining the unit. These three general aspects will be termed as overall curriculum expectations of unit 'sound'. Each of these overall expectations further helps to derive sets of specific curriculum expectations. In the case of unit 'sound', there are various sub-topics like a wave, reflection of sound, noise pollution, etc. The role of specific expectations is to address each of these sub-topics. Thus it can be said that achieving the specific curriculum expectations of the science curriculum will help to achieve the overall curriculum expectations and hence the goals of science education.

Now the question is what are the activities performed by the science school teachers to achieve these curriculum expectations henceforth the goals of science education. From the review of the related literature, it was found that research had been done on various elements related to science education or issues that affect the quality of science education, both in India and abroad. Those can be classified as (i) issues related to teachers like teachers' attitude toward teaching science (Trivedi, 2011), teachers' competency (de Putter-Smits et. al.,2012), lack of trained teachers (Singh, 2011), the effect of professional development program (Paik et al.,2011) (ii) effect of using various strategies, approach or method in the science class like the use of concept mapping(Sharma, 2014), the significance of constructivism (Jain & Bhardwaj, 2012), activity-based approach (Mehrotra & Koul, 2012), (Mohanty and Panda, 2009), (Tan and Wong, 2012), storytelling as method (Tandon, 2011), pedagogical orientation (Ramnarain and Schuster, 2014), Inquiry-based teaching (Gao, 2014) (iii) effect of practical work like the use of Microscale Lab. Kit (Pareek, Vidyapati & Arya, 2012) (iv) availability of facilities (Mohanty, 2012), (Parashar & Singh, 2011) (v) classroom transaction (Parashar & Singh, 2011), (Tan and Wong, 2012) and other activities (Mohanty, 2012),(Gafoor & Narayan, 2010), (vi) issues related to students like the effect of their home language which differ from school language on their achievement (Laere,

Aesaert & Braak, 2014), the context of students' learning (Lin, Lin, and Tsai, 2014), Multiculturalism (Mujawamariya, Hujaleh, & Lima-Kerckhoff, 2014), (vii) issues related to science curriculum like the perception of the curriculum developer or textbook author about curriculum (Koul and Dana, 1997), comparison between the old and new science curriculum framework (Talanquer & Sevian, 2014), curriculum expectation for the student (Yang, Soprano & McAllister, 2012), (Dreyfus. A, and Jungwirth, 1988).

For the element curriculum expectation researcher found that only two empirical studies had been conducted (Yang, Soprano & McAllister, 2012), (Dreyfus, and Jungwirth, 1988). It was found that,

- None of the studies were conducted in India.
- Both of the studies examined what would student expected to learn (i.e. curriculum expectation) by taking specifically one concept (e.g. concept of cell) or area (e.g. knowledge related Sun and Moon) but not took the science curriculum as a whole.

Therefore it was felt to take up a research study to analyze the inside and outside classroom activities to achieve the curriculum expectations of the science curriculum at the secondary level.

Statement of the Study

The present study is stated as, "Examination of inside and outside classroom practices for achieving Physical Science Curriculum Expectations at secondary level in West Bengal, India"

Operational Definition:

Curriculum Expectation: That knowledge and skills, related to physical science, which is expected to be learned by learners at the secondary level.

Science Education: In this study, Science Education is related to physical science (comprising of physics and chemistry) at the secondary level.

Secondary Students: In this study, students who successfully completed their grade 9 and were studying in 10th grade were defined as secondary students.

Physical Science Teachers: Teachers who taught 'physical science' as a subject at 9th grade were defined as Physical Science teachers.

Objectives of the Study

1. To examine the classroom practices of physical science at the secondary level with reference to curriculum expectations.

2. To examine the outside classroom activities of physical science at the secondary level with reference to curriculum expectations.

Research Questions:

1. What are the teaching methods and other approaches are being used by science teachers to achieve the curriculum expectations?
2. How the teaching methods and other approaches are being used by science teachers to achieve the curriculum expectations?
3. What is the view of science teachers regarding the outside classroom practice at the secondary level concerning curriculum expectations?
4. What is the view of the students on classroom practices of physical science at of secondary level concerning curriculum expectations?
5. What is the view of the students on outside classroom activities of physical science at the secondary level concerning curriculum expectations?

Delimitations of the Study

1. The present study was delimited to 9th-grade students, who have just completed their 9th grade and entered into 10th grade of Secondary level of Government-aided school of West Bengal.
2. The present study was delimited to the physical science curriculum of grade 9 of West Bengal Board of Secondary Education.

Methodology

Method: The researcher adopted the descriptive method as this study's prime concern was to find out the present status of inside and outside classroom activities concerning the curriculum expectations of the physical science curriculum at the secondary level of Government aided Schools of West Bengal.

Population: According to the 8th All India School Education Survey (8th AISES) there were 4823 secondary level schools where 922992 students got admission at the secondary level. For the present study, all the students and physical science teachers of secondary level government-aided schools of West Bengal following the curriculum of the West Bengal Board of Secondary Education (WBBSE) were considered as population.

Sample and sampling: For the present study, a total number of 300 students at the secondary level, 30 physical science teachers from 30 different government-aided schools of West Bengal were taken as a sample. The schools were selected using the cluster sampling technique but at

each stage, the units were selected disproportionately. The districts were divided as per the 5 Administrative Divisions. These are (i) Presidency division, (ii) Burdwan division, (iii) Medinipur division, (iv) Malda division, and (v) Jalpaiguri division. Further, two districts were randomly selected from each administrative Division. Hence, total 10 districts have been selected. Afterward, from each district, 3 schools have been selected randomly. In this way, total 30 schools from West Bengal were selected for the study. 10 students from each school were selected using a random sampling technique.

Tools: For the present study, a self-developed questionnaire containing both closed-ended questions and an open-ended question for secondary level students was prepared. The validity of the questionnaire was confirmed by experts and supervisor opinion. A semi-structured open-ended Interview schedule for physical science teachers was developed. The items of the interview were analysed by the experts and after consultation with the supervisor final draft was made. Both, qualitative and quantitative data were taken from the secondary level students using the questionnaire. The data further triangulated with the qualitative data collected via interviews from the physical science teachers.

Major Findings and Interpretation

- According to the students, the physical science teachers used various techniques in the classroom for teaching. These are the use of examples, blackboard, lecture, textbook, repetition, question-answer discussion, demonstration, giving complete notes, activity, the introduction of the lesson, picture and diagram drawing, and teaching aids.
- According to the students, 43.33 per cent physical science teacher uses an example during teaching where 46.66 per cent teachers have mentioned the same.
- According to the students, the physical science teachers used blackboard for explaining teaching points, solving the numerical problem, drawing diagrams and picture, and question-answer discussion.
- According to the students, in 93.33 per cent of school blackboard was used for teaching by the teacher where all the teachers (100 per cent) had mentioned that they used blackboard during teaching.
- According to the students, in all the schools the physical teachers used lecture as a teaching technique though the degree of use was not the same in every school.

- The physical science teachers had mentioned the following reasons for using lecture in class: (1) To complete the syllabus in time (2) To reach all students at a time as in many cases the teacher: student ratio is much higher (3) Most of the students feel comfortable (4) Students are more concern about getting good marks than knowing science (5) Lack of fund and other resources for using other strategies of teaching (6) Not getting authority's support and motivation.
- According to the students, 46.66 per cent of physical science teachers used textbooks in the classroom. The degree of use was higher in 13.33 per cent schools.
- The teachers had mentioned the following reasons for using the textbook in class: (1) referring to the activity given in the textbook (2) discussing the questions (3) solving and discussing the numerical problems (4) explaining the teaching points.
- According to the students, 40 per cent of physical science teachers used repetition as part of teaching technique while only 13.33 per cent of physical teacher mentioned the same.
- According to the students, 43.33 per cent of physical science teachers did question-answer discussion where 50 per cent of teachers had mentioned the same as part of the explanation.
- The study found that the physical science teachers cited the following reasons for using question-answer discussion: (1) For preparing the poor achievers for the final examination, (2) For engaging the students in the classroom (3) Students' demand for the suggestion (4) To extend the class if the syllabus is covered (5) To find out whether the students understood the discussed topic.
- According to the students, 66.66 per cent of physical science teachers used demonstration for teaching. 40 per cent of the teachers used it once or twice and 26.66 per cent of them used it sometimes but not often.
- According to the students, 20 per cent physical science teachers used to give complete notes in the class while 33.33 per cent of teachers admitted the same.
- The reasons as mentioned by the teachers, for giving complete notes, were, (1) declining achievement levels of students, (2) Demands of the students, (3) Indirect pressure from authority.

- According to the students, 73.33 per cent of physical science teacher did not use any kind of activity for teaching in the physical science classroom while 36.66 per cent of physical science teacher had mentioned the use of activity based teaching in class but not often.
- Only 7 per cent students of 20 per cent of schools mentioned that the teacher introduced the lesson before starting an explanation but no teacher mentioned that the use of introduction of the lesson in their statements.
- 19 per cent of students of 46.66 per cent of schools mentioned that teachers draw pictures and diagram during teaching physical science. The same was mentioned by 50 per cent teachers.
- According to the students, 76.66 per cent of physical science teachers used teaching aid for teaching in class. The same percentage of teachers had a similar view but only 23.33 per cent teachers used it on regular basis.
- The study found that the physical science teachers used charts, models, and a projector as teaching aid in class.
- 44 per cent of students able to relate classroom teaching with daily life and able to cite examples.
- 10.67 per cent students from unit B (Forces and Motion), 5 per cent students from unit C (Matter: Structure and Properties), 13 per cent students from unit D (Matter: atomic structure; physical and chemical properties of matter), 4.33 per cent student from unit E (Energy in action: Work, Power, Energy), 3.33 per cent students from unit F (Heat), 1.33 per cent students from unit G (Sounds) were able to cite examples from daily life experience related to physical science.
- 5.33 per cent of students were also able to cite some examples from daily life experience related to physical science which was not part of grade 9 but grade 10.
- 38 per cent students were felt that the knowledge and skill they were getting through the physical science curriculum at the secondary level will be helpful for the specific vocation in the future and able to name at least one vocation.
- 8.33 per cent of students named teaching, 6 per cent of the student named scientist, 6.33 per cent of students name electrician, and 17.33 per cent of student felt that knowledge of physical science in class would be helpful in becoming engineer. The types of engineering the students

mentioned are electronics engineering, electrical engineering, sound engineering, and mechanical engineering.

- According to the perception of (i) 14 per cent students, science exhibition, (ii) 8 per cent students, science fair, (iii) 8.33 per cent students, project work, (iv) 16 per cent students, science model, (v) 4 per cent students, science magazine, (vi) 10.33 per cent students, laboratory work, (vii) 4.66 per cent students, science seminar, (viii) 3 per cent student, excursion or school trip, (ix) 4 per cent students, science club (x) 1.66 per cent students, the quiz could be added as an outside classroom activity with physical science curriculum at the secondary level.
- The teachers were not so open to organise a science exhibition and science fair. The schools participated with some selected students in any science fair or exhibition when they are invited. Only in two schools, it was found that the teachers organized a science exhibition in the school.
- Project work was one of the activities that the students were assigned as internal formative evaluation.
- It was confirmed by the physical science teachers that the formal laboratory was not part of the secondary physical science curriculum.
- 75.66 per cent of students said they never attended any workshop or seminar related to physical science outside the school.
- 84.66 per cent of students said they never attended any seminar talk or workshop in school where a resource person was invited.
- It was found that the teachers' idea about the field trip was not correct.
- According to the teachers, 10 per cent of schools had a science club and only 3.33 per cent remained active throughout the year.
- All the teachers agreed that sometimes they carried out a quiz in class to break the monotony.

Implications of the Study

1. This study would be useful for the state government to identify the areas to improve for achieving the goals related to physical science education in West Bengal.
2. This study would also be helpful to the central government and its other organization like NCERT to identify the status of science education at the secondary level in West Bengal

3. The findings of the study would be useful for the curriculum developer to bring the necessary changes in the existing curriculum and the process of transaction of the curriculum.
4. The study would be useful to provide certain parameters for curriculum developments to evaluate the curriculum at the macro and micro level as well as for summative evaluation.
5. The study would be useful to provide certain parameters for monitoring the science classes for the school authority as well as for the school inspector of the state government.
6. The present study raised certain issues related to the process of science education at the secondary level and its status at the ground level. Thus the findings of the study will be useful to bring the necessary changes in the in-service science teacher training program accommodating the issues raised by the present study.
7. The findings of the study will also be useful to bring the necessary changes in the in-service science teacher training program as well as for the pre-service science teacher training program.

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3. Implementation of Life Skills Education Programmes: Teachers' Problems

- Dr. R. L. Madhavi, Assistant Professor, Department of Education, The M. S. University of Baroda, Vadodara.

Abstract

Current education system looks for practical exposure to learn than traditional teaching. Knowledge along with skills is the requirement in curriculum. Students need exposure to a number of skills, like, communication skills, soft skills, ICT skills, social media skills and life skills to face competition with ease to win and be successful in life. Life skills acquirement is critical for a student in these tough times to sustain the pressure to survive. 10 life skills are identified by WHO to be incorporated in education system. Adolescents are the main target for these skills as they are at the age of experimentation to know. Peer pressure and other kinds of abuse may spoil their future survival. So life skills education programmes are designed and implemented in secondary schools by educational boards in recent part. These became part of curriculum and evaluation now. The report card consists of the achievement in qualitative aspects for each student in this area. When it became a compulsory non scholastic area, teachers are the focus in implementing this education programme. Secondary level education is focusing on channelizing the interest of student towards future profession. Teachers and parents are more interested in knowing the interest, aptitude of student for selecting streams for higher secondary level. Teachers are also occupied with administrative work along with teaching. Even though life skills are introduced with proper plan and care, it is going to cause some burden for teachers to implement along with normal schedule of school. This paper is interested to understand the problems of implementation from teachers' point of view.

Key Words: Life Skills, Life Skills Education, Problems of implementation, Teachers' views

Introduction

Self-Awareness, Empathy, Decision Making, Problem Solving, Effective Communication, Interpersonal Relations, Creative Thinking, Critical Thinking, Coping with Emotions and Coping with Stress are the life skills identified by World Health Organization (WHO). Life skills enable a person to understand situations from a broader sense and take appropriate decisions. Person can estimate self ability and self limitation to take wise decisions. One cannot claim that the awareness of these skills give huge success and wealth, but person can withstood adversities with semblance, think properly to come out of problems with maturity and lead life with critical estimation of reality with reference to field reality existing for him/her. As it is the wisest decision possible taken with clarity, person has no regrets afterwards. Developing this kind of attitudes in adolescents is possible through a well planned programme of life skills during the secondary education stage.

Importance of Life Skills for Adolescents

Adolescence is a stage of experimentation. Adolescents out of curiosity to know the things want to do the things self. They need information about every doubt which the surroundings may not provide. Then they want to know the truth through self experimentation. There is a crisis for self identity. Peer pressure, parental pressure and limitations drag them into confusion, anxiety about future. In this confusion there is always chance of getting dragged into abusive conditions from which there is no relief afterwards. Therefore, adolescence is one of the critical stages of development for any person. There are bodily changes; social realities becoming obstruction to achieve dreams create tension. In order to come out of the situation adolescents deal with them with half knowledge. This makes situation worse and cause destruction.

It is important to recognize that adolescents need social and emotional support that may require reinforcement of norms of positive behaviour, acquisition of skills essential to cope with the risky situations that they encounter in their lives, manage peer pressure and deal with gender stereotypes. The absence of such support can lead to confusion and misunderstanding about these changes and affect their academic performance and social behaviour. Effective acquisition and application of life skills can influence the way we feel about ourselves and others, and equally will influence the way we are perceived by others. Life skills contribute to our perceptions of self-efficacy, self-confidence and self-esteem. Life skills therefore play an important role in the promotion of mental well being. The promotion of mental well-being contributes to our

motivation to look after ourselves and others, the prevention of mental disorders, and the prevention of health and behaviour problems. (Source: CBSE Hand book)

Schools and Life Skills Education

It is school from where adolescents get opportunities to learn about these skills. Most of the adolescents are thriving in schools by this age, so school is the best place to provide this education. School is a miniature society paving way for interaction with people from different contexts. It is the place where students understand their abilities, limitations, social equalities and inequalities particularly gender issues. Student can deal with complexity of society if life skills awareness is provided at this level. Student has a scope to experiment with own ideas at this juncture in the miniature society to understand the consequences. So school is the right place to provide life skills education and adolescence is the right phase to provide these skills. Therefore, secondary education stage is the appropriate stage to think of life skills education for students.

Importance of Teachers in Life Skills Education

Teachers have a pivotal role in school to achieve the objectives of teaching learning process. They have the status of next to parents in society. Schools and teachers occupy the dominating role to develop students in all the coming up needs and requirements of the society. In the present day global world the role of teacher has increased many folds. Teacher is no more a provider of knowledge, but also a guide, philosopher and role model to lead life for students. In this sense, the onus of taking up life skills education programme also lies with teachers teaching in schools.

Education Programmes Undertaken for Life Skills Education in India

Dr. R. Parthasarathy, Professor in Department of Psychiatric Social Work, the community mental health unit of National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, developed a 'Student Enrichment Programme' with 10 skills listed by WHO in 1993. A comprehensive LSE module subsequently developed by NIMHANS is being used in the country for life skills education.

According to Pillai, 2012, Central Board of Secondary Education (CBSE) had implemented and is continuing with LSE programme for high school children. The National Council of Education Research and Training (NCERT) in collaboration with the Human Resource Development (HRD) ministry and the National AIDS Control Organisation (NACO) had adopted life skills based "Adolescent Education Programme"[Vranda and Rao 2011] as a preventive approach against HIV/AIDS. School of Life Skills Education and Social Harmony, Rajiv Gandhi National Institute

of Youth Development (RGNIYD), Tamil Nadu had initiated an annual international conference and research activities to disseminate and share the perspectives of life skills approach to education and help to stimulate new thinking in the area of education for the 21st century.

Scope for taking up the study

With changing times new inputs are in demand for children to learn and be equipped with. Schools and teachers are in focus for equipping children with these inputs. Changing technology and environment have brought sea changes to the process of education and employment. It is a competitive world ahead and students need physical and psychological balance to face the world. Life skills are one such balance providing tools for students. Especially adolescent period is the tumultuous one shaping the identity for the student. It is better to equip them with life skills to develop a balanced personality.

Even though the traditional role of a teacher has changed for a many fold entity, the influences of teacher in making students learn remain unchanged. To develop life skills awareness the role of teacher is important in the context of school. Teacher is the initiator for learning no matter in what manner. Teachers are occupied with teaching and administrative work and new areas are continuously being added to their burdened workload. With added responsibility of developing life skills awareness in students, what kinds of situations are being faced by teachers? How they are coping with these situations to work with students? The main intention of this research is to understand the problems of teachers in taking up life skills education programmes. Other aspects like training needs, facilities were also touched to understand the whole scenario.

Research Design and Implementation

Descriptive design and survey method were employed to carry on research. The study is delimited to CBSE English medium schools working under private management in Baroda city. Five schools willing to provide data were selected for data collection. Data was collected using a questionnaire. Teachers dealing with the life skills education programmes in the selected schools provided data by answering the questionnaire. The data were content analyzed and presented point wise below.

Findings from the study

A questionnaire was provided to teachers to collect data regarding implementation problems and other aspects. Opinions expressed by 28 teachers on life skills education implementation were presented here point wise.

- Life skills equip students with basic skills to lead life with content. These skills makes them more confident, practical and to relate learning to practical life experiences. They also help to build their character, personality and all round development of students.
- Training to take up these activities were provided through workshops, seminars, certified training programmes, guidance from school authorities, taking help of CBSE manual and exposure to case studies. Training on evaluation of students is also provided.
- Approach followed by teachers to implement these programs included both integrating with subjects taught and separate programmes wherever necessary.
- Teaching learning methods adopted to implement these programme were Class discussions (20); Brainstorming (18); Demonstration and guided practice (4); Role play (21); Small groups (6); Educational games and simulations (9); Case studies (12); Story telling (19); Debates (15); Practicing life skills specific to a particular context with others (13); Audio and visual activities through music, arts, theatre and dance (21) and Decision mapping, problem trees, small group discussions and demonstration and guided practice were least preferred activities. (Number in the parentheses indicates number of teachers said using the approach. Methods are suggested in CBSE Manual.)
- Assessment practices followed for life skills education programmes included Individual teacher assessment and individual peer assessment, assessing class participation and group discussion; grading the worksheets administered, presentation of activity by students, participation in activities; developing criteria of assessment and grading; different evaluation patterns for different activities; preparing rubrics for assessment; writing files; and using the parameters laid down by the CBSE.

- Innovative approaches in teaching- learning and assessment practices mentioned were School Cinema; integrated approach with literature; using inductive-deductive approach to explain topic; starting topic with latest research on it; using open ended questions in work book; and dramatization of the topic;

- Problems faced by teachers while implementing these programmes-

1. Self

- a) Time limitation was the main constraint for teachers. They reported of not taking students to organizations to give more exposure about life skills. Mostly made use of competitions to assess students; only one period for week was allotted, so cannot plan for elaborate activities.
- b) Face problems in evaluating the social and emotional skills. They feel evaluation is very subjective and these skills are immeasurable.
- c) Personally they need to do lot of research work to explain the concept.
- d) Due to proxy and too many other responsibilities they cannot handle these activities with full devotion and satisfaction.

2. School –

- a) The period allotted for life skills was adjusted for other activities if there arise a need.
- b) Infrastructure facilities, encouraging atmosphere and needed equipments availability is also a problem. Self management or adjusting with context is reported.

3. Students –

- a. Student absenteeism, less interest, fear to take part in the activities, adjustment to learn, lack of motivation, leadership and co-ordination in group activities and burden of academic studies were cited as problems from students.

4. Parents –

- a. Problems cited from parents were - parents not aware of these activities, less interested as these activities are not part of grading, give more preference to academic subjects and feel that these activities are responsibility of school.

5. Any other –

- a) CBSE should develop strict guidelines for the conduction of different activities for different areas.

b) In each city organization of activities like, debate, group discussion and extempore competition by CBSE is expected.

- Suggestions provided to further strengthen these programmes were - not allotting the slot given for life skills teaching for other activities; practical involvement of students; practice with real life example; developing activity related to academic studies; giving more weightage to these activities in assessment; organization of interschool competitions; proper training facilities to teachers; employing feasible teaching learning practices; getting help of field experts as resource persons in student workshops; starting implementation from pre-primary level to develop wholistic personality of students; no evaluation of skills only awareness development is to be focused; and providing exposure to parents as trainers in life skills through workshops.

Discussion and Conclusion

Analyzing all the above responses from teachers, it is evident that life skills education programme is struggling with problems of time constraints, proper integration with school subjects, lack of training for teachers to teach and evaluate all life skills, lack of expected cooperation from stakeholders, adjusting with the time and facilities provided from school to deal with topics.

It is difficult to plan and implement any programme with cent percent success. Gradually one can channelize the process towards success. CBSE schools started with enthusiasm to take up life skills education as part of their curriculum but facing problems in properly integrating the programme with normal school teaching learning process. It is also evident that every school is unique in its context and needs specific adjustment. Understanding this idea there must be time to time improvements in implementation of programmes from Boards of Education.

Integration of these skills with academic subjects and including them as part of assessment may help to garner the interest of stakeholders to cooperate with teachers to make teaching learning a success.

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4. Efficiency and Equity in School Education of India

- **Prof. Halima Sadia Rizvi**, Professor and Head, Department of Economics, Jamia Millia Islamia
- **Azharuddin Ansari**, Research Scholars, Department of Economics, Jamia Millia Islamia

Abstract

India has been undergoing a paradigm shift in its educational practice governance. In recent contemporary decade, argument is centred on the issue of whether the education policies focused on equity at same time compromise on the goal of educational efficiency. On the other hand, It is argued that the participation of non-state actors in the name of enhancing efficiency will hamper the principle of equity and social justice in delivering school education to all the children especially those from the economically weaker sections of the society.

At this background, the purpose of this paper is to examine some of the issues around the governance in imparting school education in India. The first part discuss on the moving from government to governance, and from service delivery to contracting. The second part discusses the role of the State, Market, and Civil Society in delivering school education in India. The third part discusses the impact of this changed form of governance in delivering school education on the principle of equity and social justice. At last, the paper concludes with the highlighting on the degree of reliability of the markets in fulfilling the objective of inclusive education, and the challenge of accountability. The conclusion reflects on the dichotomy between efficiency and equity in delivering school education in India.

Keywords: Education, Equity, Efficiency

Introduction

Educational policy is an instrument of social change. This instrumental role of education is reflected in the policies and programme of the Government of India since independence when the literacy level of the country was as low as 18.32% of the total population (Census,1951). The adoption of the Right to Free and Compulsory Education (2009), makes free education until

elementary level a fundamental right and gives the government the primary responsibility to impart education to all the children in the country. However, after 2010-11, private schools have seen significant growth in their presence in the country. According to DISE data, from 2010-11 to 2015-16, number of enrolment in private school rise to 61.8 million from 41.31 million. Also, from 2010-11 to 2015-16, number of private schools registered a huge growth of 35% where as in public schools registered only 1% growth. They are offering number of additional services along with “quality” education in exchange for a heavy fee amount. In a developing country such as India with huge socio-economic imbalance, privatisation of school education will further widen the gap of these socio-economic imbalances as only parents who can afford to pay the fees amount for their children’s school education can access to these schools. There are two views that flow from this situation; one that support privatisation of school education on the account of constant poor performance of government schools in imparting quality education. The other view criticises the continuous privatisation of school education in India on the account of its potential to further marginalise the already deprived sections of the society who are totally depended on the government schools for their right to education.

The paper explores this dichotomy through analysing two major aspects of government, and private schools. On one hand, it explores how the “quality” aspect is taken by the government schools. From quality, it refer to the ten parameters and standards set for all the schools for maintaining the minimum quality standard by the act of Right to Education, 2009. These ten minimum standards or parameters are: Student-Teacher Ratio, Student-Class Ratio, All-weather building, Boundary wall, Ramp for disabled, Separate toilets for girls, Library, Free Uniform, Free textbooks, establishment of School Management Committee (SMC).

One the other hand, how the private schools which collect hefty fees on promise of efficient performance and better learning outcomes than government schools, maintain the equity aspect. From equity, it means education for all how the fee-charging private schools are performing in delivering inclusive education by making the education services accessible to the all i.e. Economically Weaker Section¹ (EWS) and Disadvantaged Groups² (DS) as specified under the clause 12(1)(C)³ of RTE.

¹Economically Weaker Section- As per the RTE Act, 2009, a child whose parents have a total annual income of less than 1 lakh rupees from all sources

At the pretext of this dichotomy, the paper engages with the paradigm shift from government to governance that opened space for the private players, and community to deliver the public services along with the government. Taking evidence from DISE data, the paper presents the discourse on the impact of privatisation of school education on the education of the least advantaged section of the society particularly, the enrolment of Schedule Caste children in private schools. To see the trend, data from 2010 onwards has taken as the year 2010 marks the enactment of the Right to Education Act, 2009.

1. The concept of the governance at the global level and its impact at national policies of India-

The concept of governance gained more importance in the late 1980s with the development community with the aim to explain the developmental outcomes of their own. Good governance in education involved with many set of responsibilities and targeted goals related to education can be achieved through efficient use of resources present and participation in delivering education and decision making by all. It is well known that the term governance with development was first used by the World Bank in 1989 in its report on sub-Saharan Africa. The term was used for sustainability of programme with reference to the structural adjustment programme of the World Bank which was faced with a very weak role of the state and its institutions in implementing these programmes. These situations resulted to focus on administrative and managerial competence as a strategy to improve governance. In this process, World Bank redefined the new role of the state by shifting the focus from government to governance. Also, the international agencies led by the World Bank have defined governance in such a way that it promotes neo-liberal policies. Operationally, it refers to reforms in state institutions. This conception is based on the efficiency criterion which moves away from a well-established notion of state dominance in policy making to a more interactive process involving private players and civil society along with the state. Here, the role of government in decision making will not be monopolistic but rather be dependent on the compliance and acceptance of other actors.

1.1. The role of the State as a key actor in governance in facilitating partnerships-

²Disadvantaged Group- As per RTE Act, 2009, a child belonging to Schedule Caste, Schedule Tribe, Other Backward Castes, not falling in the creamy layer, a child with special needs and suffering from disabilities as described in PwD Act, 1996

³RTE Act 2009 mandates for all private schools to reserve 25 percent of their seats for children belonging to disadvantaged groups and economically weaker sections.

As the government opened its spare to the advice and consultation with the corporate sector, new formal institution stated to emerge. The impact of the economic reforms was seen with the initiation of the board formed by economic ministry with the corporate sector as members to formalise collaboration between the government and the corporate in policy making. Two major organisations were seen in active role with the government; one is the already established Federation of Indian Chambers of Commerce and Industry (FICCI) until 1990s, and second is the Confederation of Indian Industry (CII) which was immersed in 1992 soon after the economic reforms and began to play a critical role in policy formulations.

Soon these partnerships started entering into the development sector mainly health and education. CII actively promoted the idea of Public Private Partnerships (PPPs) in school accreditation and actively worked on the policy recommendations on the right to education, upgradation of existing school education. PPP in school education was also proposed in the eleventh five year plan as important structural change for the development of education but its proposed model does not find suitable for the private sectors. Starting with government aided, many states in India has trial experiment with various forms of PPPs to improve education for all and quality enhancement in education. States like Rajasthan, Punjab, Gujarat and Maharashtra etc. On the other hand FICCI started 'Alliance for Re- Imaging School Education comprises of all stakeholders, only sole purpose of this is to work as catalyst between government and private stakeholders for better learning outcomes and education for all.

1.2 NGOs and communities for implementing and monitoring government programme in Education

NGO in India works at grassroots level to achieve the national commitment of raising literacy and making primary education accessible to all. Many NGO in India like Pratham, Akshara foundation, Oxfam India, World Vision, Save the Children working in the most educationally backward blocks of states like Uttar Pradesh, Jharkhand, Orissa, Bihar to help out vulnerable sections to get access to education and break the vicious circle of Poverty. These NGO's are creating awareness among parents, arrange counselling for better guidance and also arranging gap classes for the drop out students to again cop up with main streams. Here comes the role of NGOs

as a state supportive civil society entering into the space of school education in India. At policy level, they have influenced mainstream education by replicating their models and participating in policy dialogs with the government on this issue. Soon after the 'Centre for Civil Society' launched a choice campaign for school in 2007, they have argued that the educationally backwards groups not only need Right to Education, but also the Right to Education of its choice. In 2009, World Bank, and other private sector stressed the need to provide choices of selecting schools to poor in order to realise the objective of quality education. This voucher system was meant for funding not to schools but to students, and will provide choice to the student to exercise his right to education.

Thus, civil society organisations have demanded greater PPP in education sector. Private players have bending their commitment to provide quality education for all through enactment of RTE 2009 and the government also became receptive to these ideas as it continues to face a more resource crunch and weak administrative capacity for running an efficient educational system.

2. The Role of State, Market, and Civil Society in the current Education System

The contemporary view of the role of the government in a neo-liberal economic framework suggests governance as a managing network of relationships between three key actors- the state, market, and civil society. These better coordinated networks are perceived to make the public delivery system efficient. In the light of RTE, the implementation of the act also put emphasis on hybrid model for implementation. It is amalgamation of top down and bottom up approach. Policy follows Top down approach because all the educational providers are abide by the standard rules and norms formulated at the national level. The policy implementation is also bottom up approach as there is a provision of School Management Committees (SMCs) in all government schools for ensuring a well-functioning school system i.e. responsible for making School Development Plan (SDP) as per the guidelines of RTE act. The SMC committee is also responsible for closely monitoring working of the schools regarding finances, academic progress, distribution of entitlements such as meal, textbooks, uniform etc. Transparency in the working should be maintained with social auditing provision. . The RTE Act specifies the composition of SMC as 75% members of the committee consist of parents of the children studying in the school with separate provisions for children of weaker section groups, weaker section, disadvantaged group

and women. Rest of the 25% shall be from elected representatives of the local authority and school teachers.

There is a mix of **State, Market, and Community** for delivering the Right to Education:

As per the latest data on number of schools by Management-wise:

Government	1102783
Government Aided	83787
Private Unaided	335776
Total	1522346

Source: MHRD, Educational statistics at glance report, 2018

The above data shows the significant share of private players in providing school education in India. Now, in view of RTE, 2009, let us look the mix of state, market and civil society in delivering school education in India.

State: The state is the only legitimate authority to notify for changes in school system and to ensure the working of the act's norms in public as well as private schools. To achieve the desired target, the main contribution towards RTE implementation is through financing. The finances are shared among state and centre in the ratio of 35:65 respectively. The timely continuation of funds ensures the better functioning of schools and its requirements.

Let us look at how the state is fulfilling its commitment for providing quality education to all the children in government school. The following figure 1 presents how the government schools are complying with the guidelines and prescribed mandatory parameters for all the school to ensure minimum quality education.

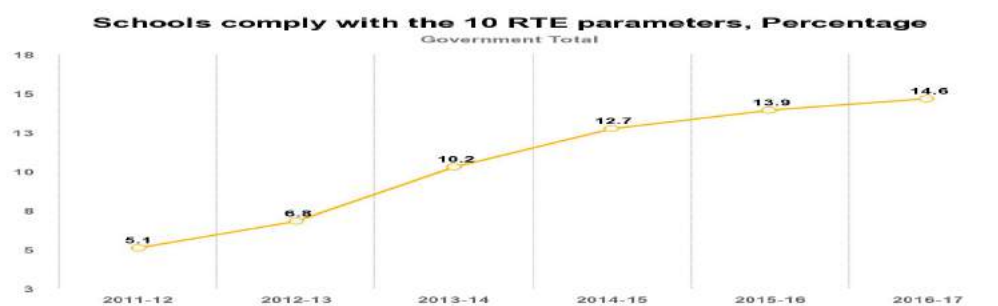


Fig 1: Source: DISE+, MHRD

The above figure shows that not even 15% of the government schools in India are complying with the minimum parameters set by RTE Act, 2009 till the year 2016-17.

Market: RTE Act also specifies the participation of private sector in achieving the goal of the act. In RTE Act, Section 12(1) (C) makes it compulsory for private schools to reserve its 25% of seats for the children from community of Economically Weaker Section (EWS) and Disadvantaged Group (DS) to ensure the goals of quality Education for all. Also, some areas in states involved market participation for helping in timely delivery of mid-day meals to government schools.

Following chart gives a trend of declining stake of the government schools in India from year 2011-12 to year 2016-17. Can we call it a state of withdrawal?

It is to be noted that around 2006 the discourse around privatisation of school education in India started with a strong push from international agencies.

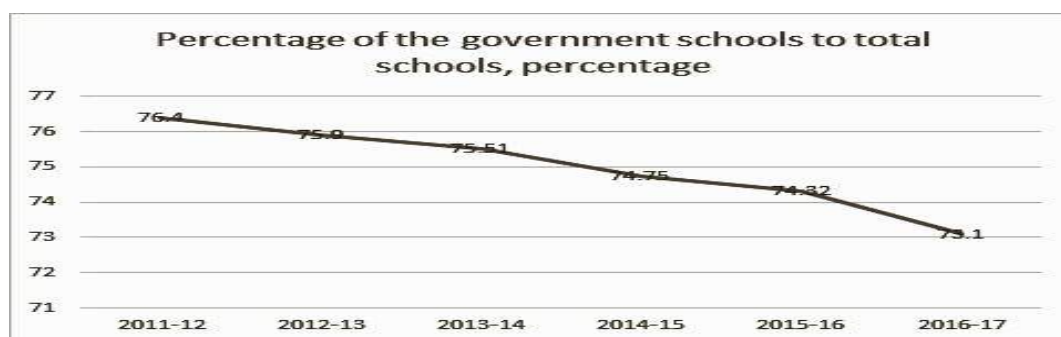


Fig 2: Source: U-DISE

Figure 2 presents the data trends of increased number of private unaided schools in India from year 2011-12 to year 2016-17 in India. Figure 3 shows the proportion of Schedule Caste Children's enrolment in private unaided school at elementary level under section 12(1)(C) of RTE, 2009. The data shows an inverse relationship of privatisation of education and the quotient of social justice and equity in the school education. (in figure3 and 5). On the basis of research conducted by IIM and Square Foundation, in his study, 'State of the Nation: RTE Section 12(1) (C)', it clearly shows that even after five year, provision is poorly implemented only 29% of seat filled of total 21.4 lakh reserved for them in 2013-14. State like Uttar Pradesh with remarkable growth in private schools had a very less 3% of seat filled. Wide variation among the states countered from Top to bottom. Delhi and Madhya Pradesh with maximum 92% and 82% seat

filled for EWS children where as undivided Andhra Pradesh and Uttar Pradesh had very low seat reserved of 0.2% and 3% respectively. (in figure 4)

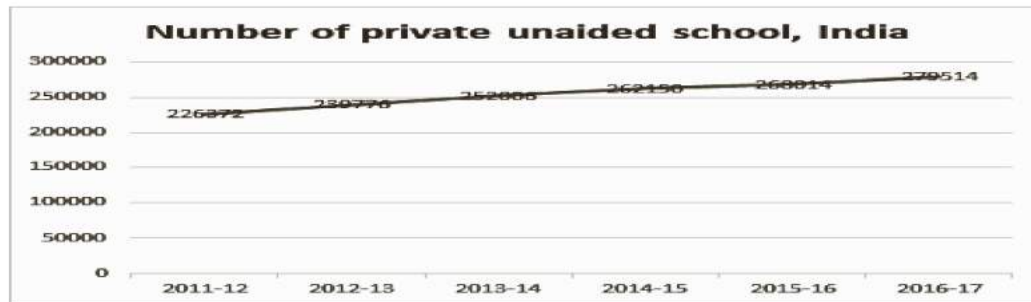


Figure 03. Source: UDISE

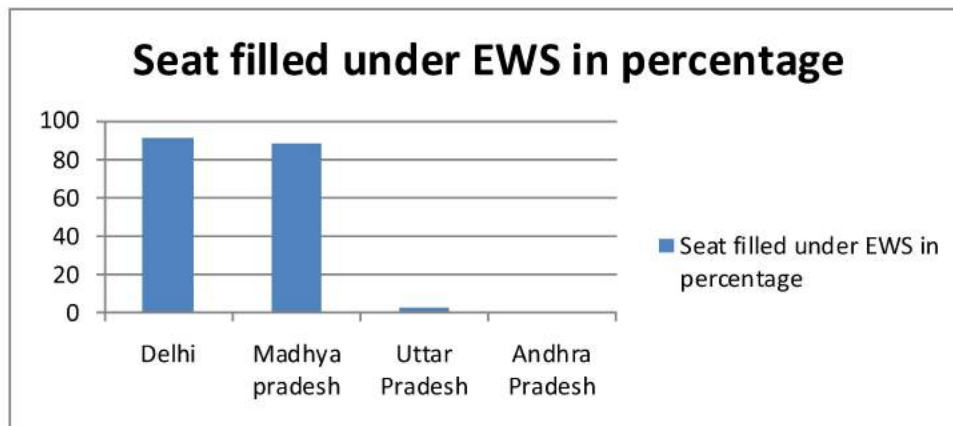


Figure 04. Source: DISE

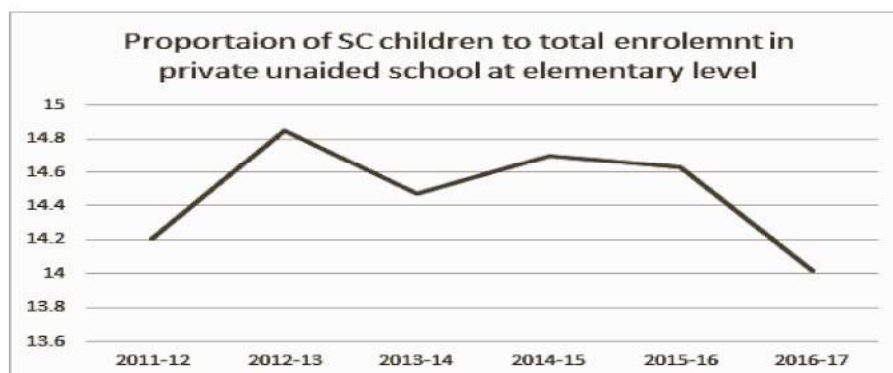


Figure 05. Source: UDISE

The above graphs shows that even after 10 years of RTE implementation, section 12(1)(C) of RTE has not yet implemented to meet the objectives of the act. Even though the private players are gaining major stake in the school education system but they are failing to meet the objectives of our national policy of imparting inclusive education to all. In addition to that, it is important to reflect on the practices of private schools with respect to the clause of 12 (1)(C) of RTE. The intention of the RTE Act for making the provision of section 12(1)(C) is to ensure the participation of private players which is also a key stakeholder in education in realising the goal of free and compulsory education for all the children equitably.

Civil Society in the form of Community: RTE provides a legitimate process for forming SMC committee in all the government schools which gives a legal status to the poor parents. Here, these parents in the form of SMC is participating and contributing in the implementation and monitoring process. There is a provision of continuous meeting of School administration with SMC committee which will be a part of process of regular suggestions and feedback from both the members of schools and community. One of the main key functions of SMC is for regular social audit mechanism and process to maintain transparency in the process of admission and more importantly inclusion of marginalised sections in the schools for ensuring the inclusion of all sections.

The role of civil society in the form of **School Management Committee (SMC)** in every government school under RTE, Act, 2009 ensures overall community participation as a central to the theme and an underlying factor in achieving the goal of universal elementary education. RTE provision requires a SMC to be functioning in every school through a accountable manner for working of the school and help in making school development plan. Out of which 75% of the SMC members should be parents consist of 50% Women and rest of 25% include School principal as a Chairperson, a teacher, a social worker and an educationist.

According to National coalition of Education 2017 report, most of the states have very less number of meeting conducted by SMC usually once in 6 month especially North Eastern states. The available reports of RTE forum on the functioning of SMCs brings out the serious loopholes in the implementation of this clause. Following are some of the prominent problems discussed in

the National School Management Committee Convention-2016, and in the public hearing organised on the implementation of RTE by the Right to Education forum in New Delhi in year 2015:

Lack of proper accountability: There is lack of proper accountability set on the schools for not abide with act or procedure following instructions formulated by the government to form SMCs. If SMC pointed out about poor infrastructural development of the school then there is usual response of limited fund from the higher authorities.

Dysfunctional top to bottom Hierarchy: The major drawback is that the principal is the defacto chairman of SMC. It may be possible principal does not allow to point out his/her own shortcomings by conducting meetings.

Absence of Autonomy: Sometimes school doesn't works on suggestions of SMC members, for that there is no autonomous grievances redressal mechanism for follow up their complaints or no autonomous body to respond to SMC members. The act doesn't mentioned about any strong grievances redressal mechanism which indulge community though an active participant but ineffective participant as the committee feel powerless without an autonomous authority to listen to them.

Information and awareness/training: No proper training or information about the roles and responsibilities of SMC members is provided by the schools. Informally NGOs in their limited capacity are providing information and training to the SMC members.

Conflict of interest against school administration: Parent also part of SMC membership always have this fear that if they interfere much in school working then their children would have to suffer the consequences of it. Parents do not want to get into any trouble with the School administration when it come it their children.

This section highlighted the loopholes in the functioning of the network governance on ground. The next section will a reflection how the concept of network governance under the broader scope of neo-liberal paradigm, which is promoting private sector's involvement in school education is adversely impacting the very objective of equity and social justice.

Conclusion

To conclude, the paper explores the concept of governance as networks where the relationships among the State, Market, and civil society in India is seen in the pretext of the transformed role of the state in the newly introduced economic framework of neo-liberalization where privatisation as a reform is favoured. With the emergence of the new reforms advocating privatization, the role of the dominant state will directly reduce, and limit this self-centred tendency of the ruler. However, the question on the degree of reliability of the markets in serving the public interest in the best possible way remains. Based on the evidences which are highlighting the cases that are adversely impacting the principle of social justice and equity in delivering free and compulsory education in India, it is important to questions the very objective of privatization and reflect on the desirability of wholesale privatisation. As in India, backwardness is not defined only by the economic factor and major goal of any public policy is equity and justice, it is important to think, will the profit driven privatisation policies can deliver equity and justice? In addition to that, the push coming from the international development agencies such as World Bank or the ADB for making the loan available on the condition of carrying the projects in PPP mode as PPP is central to their development strategy. On the other hand, the third actor- the NGOs are recognised for micro-level interventions and for actualising the goal of universal elementary education. Perhaps, the bureaucratic deficiencies are also a reasons for these partnerships apart from seeking private resources to deliver the government services.

At last, it is concluded that there is an elusive trade-off between efficiency and equity in delivering school education by government and private schools in India. On one hand the government schools which caterer the education need of economically poor and socially backward people for free of cost fails to meet the basic minimum parameters of quality education set by RTE Act. On the other hand, the private unaided schools which are popular for delivering better quality education fails to meet the objective of inclusive education. Therefore, there is a challenge of accountability with network relationship in the education sector as even after an expanded networks of private players and NGOs the quality of education remains poor.

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5. Pre-service Teachers' Constructivist Beliefs towards Teaching Learning: An Empirical Analysis

- **Chanchal Maity**, Ph.D. Scholar, Dept. of Education, Bankura University, Purandarpur, Bankura
- **Dr. Mrinal Mukherjee**, Assistant Professor & Coordinator, Department of Teacher Education, The West Bengal University of Teachers' Training, Education Planning and Administration (WBUTTEPA) Kolkata.

Abstract

In view of learner's centred approach undoubtedly constructivist pedagogy of a teacher has attained a leading position to make learning environment more sustainable. As the pre-service teachers are the future inputs in the learning situation surely their belief system about constructivism is a key impetus to take every learning strategy in the classroom. Thus, the study aimed here to explore the constructivist beliefs of pre-service science teachers in respect to their gender, place of residence and management nature of the teacher education institution they belong to. The respondents are pre-service science teachers of B.Ed. programme and purposive sampling technique is adopted. For collection of the data a Likert type scale was used after standardization. The data analysis showed that the participants have moderate constructivist beliefs towards teaching learning. The Mann Whitney U test revealed the constructivist beliefs of pre-service teachers differ significantly with respect to gender and management nature of institutes. On contrary the stream of teaching of pre-service teachers has no significant influence on their constructivist beliefs system. The study tried to throw a light to restructuring curriculum in pre-service teachers' education programme.

Keywords: Learners' centred approach, constructivist beliefs, learning environment, constructivist pedagogy, pre-service teacher, teacher education programme.

Introduction

Only the transfer of knowledge among children is not a trustworthy approach in teaching-learning particularly in school settings. Paradigm shift in learning from teacher centric to child centric manner has already been happened to make it an active classroom. Apart from the rote learning through memorization of facts and information the educators greatly emphasized in knowledge creation in teaching-learning. As because of the creation of knowledge by the student is associated with more cognitive engagements and gives greater sustainability of teaching-

learning (Fischer & Hanze, 2019). To adopt those elements into the instructional strategies within an activity based learning environment the constructivist approach of learning is the best method particularly for early and middle school students. The uniqueness of this child centric learning approach is to diffuse learners in the process of knowledge construction (Kalpana, 2014). Apart from this, constructivism requires prior experience of learners that is to be manifested in new situation to construct new ideas and students would learn how to learn (Alanzi, 2017). It also fosters in personalization, collaboration, productivity and creativity which are necessary to develop the skill and competencies among children for 21st century learning (Redecker and Punie, 2013). Instead of “bottom up” strategy the constructivism embraces a “top-down” approach in which students discover main idea rather than allow providing the information (Aljohani, 2017). Hence, the pedagogical approach and the constructivist learning demands a special kind of quality and efficacy of the teacher who should acts as facilitator and negotiator, not a “sage on the stage” (Morrison, 2014). Another factor is also considered here that the teacher must accept the students’ alternative conceptions to make their own learning.

The constructivist pedagogy plays a pivotal role in teaching learning especially in formative stage of development of learners in school. It allows to create a joyful interactive learning environment where every learner would eager to interact with their peers and the teacher and in turn, this will provide them the opportunity to construct new knowledge (Yilmaz and Sahin, 2011). As the budding teachers who are pursuing the teacher education course to enter into the teaching profession are the future inputs in the stage of teaching learning so their beliefs towards constructivism will greatly impact on constructivist teaching practice. And it is also desirable that they would be able to assess learning specially the formative aspect in classroom in future. So, the teacher education programme around the globe moulds the learning factors among the pre-service or trainee teachers to make competencies and skill related to constructivist teaching learning (Bozet *et al.*, 2019). Though the template of curricular design of programmes of different teacher education are basically same and the trainee teachers undergo through similar capacity building process while their apprenticeship that is engagement in teaching may vary from each other. Here teachers’ constructivist beliefs are an important factor not only for pedagogical understandings but also for adoption of new pedagogy to be used in future classrooms.

Pre-service teachers applying constructivist instructional strategies in classroom teaching learning is need of the time. Hence, before they applied in classroom, pre-service teachers had learned content knowledge and pedagogical knowledge and gained important skills they could need (Efendioğlu et al., 2013). There is a body of research about philosophical foundation on constructivism and associated belief of in-service and pre-service teachers, majority of which addressed the relationship of the internal factors related to teacher's constructivism in teaching practice. But there is no empirical evidence in research with any quantitative estimation regarding constructivist beliefs of the pre-service teachers in reference to their gender variation, variation in instructional subjects and nature of management (i.e. private and public) institute of their teacher education institution the trainee belong to. The policy of promotion of privatization is in question in terms of quality issue. Henceforth considering the nature of management of teacher education institute might be an important factor needed to be study as inculcation of constructivist belief system among pre-service teachers depends upon the teacher education institution.

OBJECTIVES OF THE STUDY

The major objectives of the study are as followings:

- a. To study the impact of gender on pre-service teachers' constructivist beliefs towards teaching learning.
- b. To study the impact of stream of teaching of pre-service teachers' constructivist beliefs towards teaching learning.
- c. To study the impact of the nature of management of Teacher Education Institution on pre-service teachers' constructivist beliefs towards teaching learning.

HYPOTHESES

Following hypotheses were framed to conduct the study:

- **H₀1:** There is no significant difference of constructivist beliefs towards teaching learning between male and female pre-service teachers.
- **H₀2:** There is no significant difference of constructivist beliefs towards teaching learning between arts and science group of pre-service teachers.

- **H₀₃:** There is no significant difference of constructivist beliefs towards teaching learning between pre-service teachers belong to public and private teacher education institute.

RESEARCH METHODS

Design of the study

The study employs a quantitative approach by using survey method to collect data to study the beliefs of pre-service teachers towards constructivism in reference to gender, stream of teaching and the nature of management of teacher education institutes.

Participants

The study was conducted on pre-service teachers who were enrolled for two years B.Ed. programme in various private and public teachers' training institute of Bankura district of West Bengal. The sample respondents were in final semester and completed school internship as well as practice teaching. Purposive sampling technique was used. 171 pre-service teachers were selected as samples from the four teachers training institutes. The samples were categorized into gender (male & female), stream of teaching (arts & science) depending on the method subject chosen by them for practice teaching, and nature of the management of the teachers' training institute (public and private).

Table 1: Distribution Pattern of the participants

Category	Public		Private		Total
	Male	Female	Male	Female	
Arts	14	15	22	52	103
Science	7	7	17	37	68
Total	21	22	39	89	171

Instrument

The constructivist beliefs towards the process of teaching learning was measured by the "Constructivist Teaching Beliefs Scale" (CTBS) developed by Wolley et al.(2004). The scale was

adapted and standardized locally for the sake of the present study. The initial scale was translated in Bengali by back translation method (Brislin, andFreimanis, 2001). The content validity of the translated scale was established through the experts’ opinion. Then the scale was pilot tested on the pre-service teachers of west Bengal. The test-retest reliability of the scale found 0.71 which is fairly reliable to use the scale in a study. There were 16 items in the scale and each item of the scale followed Likert type five consecutive options i.e. “strongly disagree”, “disagree”, “undecided”, “agree” and “strongly agree”.

RESULTS AND INTERPRETATION

In the present study the major variable is constructivist beliefs of pre-service teachers in their teaching learning and the demographic variables include gender, stream of teaching and management nature of institutes in which the trainee teachers were attached for their B.Ed. programme. Descriptive statistics is employed to measure the demographic characteristics and Mann Whitney U test is applied through SPSS version-16.0 (IBM Corporation) to test the hypotheses.

Analysis of Demographic Details

The study was meant to evaluate the constructivist beliefs of the pre-service teachers with respect to their gender, stream of teaching, and types of the institute in which they were belonged to. As the study included purposive sample the subjects in the group were not randomized the demographic characteristics of the pre-service teacher were essential to test the hypotheses.

Table 2: Demographic Details of the Sample for the Study

Variable	Category	No. of Participants	Percentage (%)
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Gender	Male	60	35.09
	Female	111	64.91
Stream of teaching	Arts	103	60.23
	Science	68	39.77
Management nature of Institute	Government	43	25.15
	Private	128	74.85

The demographic details indicate that with respect to the gender as variable, the male and female participants are 35.09% and 64.91% respectively. The stream of teaching that means the participants taught the discipline in their teaching practice is categorised into arts and science constituted the representatives of 60.23% and 39.77% respectively. And the last variable i.e. types of institute which represent the management body who overall takes care of the institute. The government managed institutes constitutes 25.15% of representatives and the same way private managed institute constitutes 74.85% of samples here (Refer to Table 2 and Figure 1, 2 & 3).

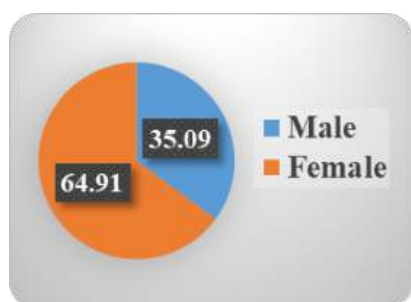


Figure 1: % analysis with respect to gender

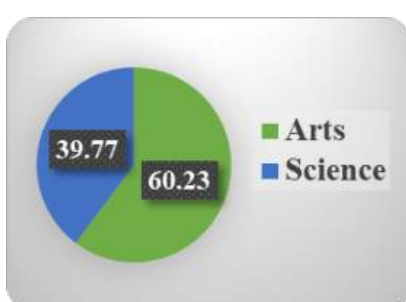


Figure 2: % analysis with respect to stream of teaching



Figure 3: % analysis with respect to management nature of institute

Analysis of Constructivist Beliefs of Pre-Service Teachers in General

The constructivist beliefs of the pre-service teachers in the study were subdivided into three categories: strong constructivist beliefs, moderate constructivist beliefs and low constructivist beliefs by following de Vaus's "Distributional Recording Method" (de Vaus, 2002). The analysis of the whole data (N=171) is represented in the following table-3 and chart-2.

Table 3: Overall Constructivist Beliefs of Pre-Service Teachers

N	Min. Score	Max. Score	Mean (M)	SD	Categorical Distribution of the Participants		
					Strong	Moderate	Low
171	1.06	5	3.70	0.73	46	73	52

Table 3 shows here that the mean score of the 171 respondents is 3.70 in which minimum score is 1.06 and maximum score is 5 for the constructivist beliefs of pre-service teachers. Among the 171 pre-service teachers 46 showed strong constructivist beliefs, 73 showed moderate constructivist beliefs and 52 representatives showed low constructivist beliefs in their teaching learning after completion of their teaching practice in different schools.

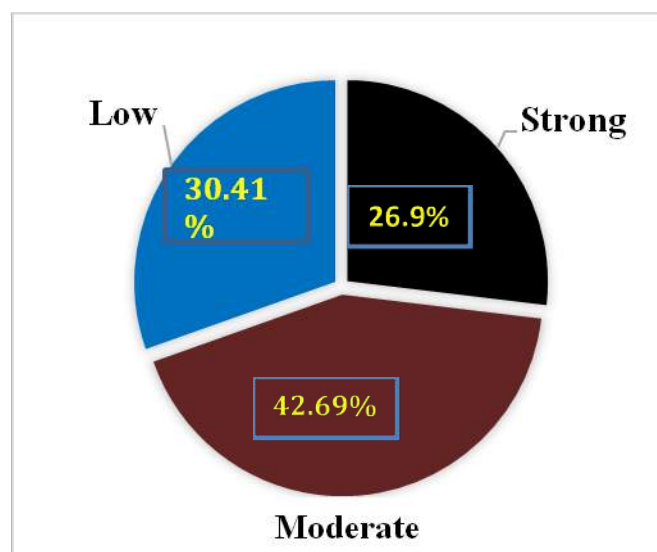


Figure 4: *Overall Percentage Analysis of Constructivist Beliefs of Pre-Service Teachers*

The percentage analysis revealed that 26.90% and 42.69% of respondent's constructivist beliefs were strong and moderate respectively and on contrary, 30.41% of pre-service teachers' constructivist beliefs were low for teaching learning. The Figure 4 indicates most of the participants in the study showed moderate to strong beliefs. So it can be predicted that the overall constructivist beliefs of respondents couldn't be termed as too strong, though of course it was not too low either.

Pre-Service Teachers' Constructivist Beliefs with Respect to All categories

The results of the Mann Whitney U test is in pertinent to the hypotheses of the study are tabulated here. The constructivist beliefs of the pre-service teachers are category wise are mentioned accordingly.

Table 4: Mann Whitney U Test with Respect to Gender

Groups	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	p
Male	60	68.22	4093.50	2.264E3	-3.46	0.00*
Female	111	95.61	10612.50			
*Significant						

The above table, vide Table 4, shows the mean rank of the pre-service teachers with respect to gender varies greatly. It has come 68.22 for the male and 95.61 for female. The mean rank of female is much higher than the male teachers. The Mann Whitney U test strongly revealed a statistical difference ($Z = -3.46$ and $p = 0.00 < 0.05$) in the findings. So the null hypothesis **H₀1** is

rejected and it can be said that there is significant difference exists in constructivist beliefs between male and female pre-service teachers.

Table-5: Pre-Service Teachers' Constructivist Beliefs with Respect to Streams of Teaching

Groups	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	p
Arts	103	82.85	8533.50	3.178E3	-1.03	0.31
Science	68	90.77	6172.50			

The table-5 indicates that the mean rank of the pre-service teachers of arts group and science group for constructivist beliefs have come into 82.85 and 90.77 respectively. Obviously the results shows a little variation with respect to different streams of teaching where science Teachers shows an edge over the Arts Teachers, but this difference statistically insignificant ($Z = -1.03$ and $p = 0.31 > 0.05$). Hence the null hypothesis H_0 is accepted here. So the constructivist beliefs between the arts and science pre-service teachers do not differ significantly as predicted before.

Table 6: Pre-Service Teachers' Constructivist Beliefs with Respect to Types of Institute

Groups	N	Mean Rank	Sum of Ranks	Mann Whitney U	Z	p
Public	43	105.36	4530.50	1.920E3	2.97	0.00*
Private	118	79.50	10175.50			
*Significant						

The table-6 indicates the mean rank of the pre-service teachers with respect to types of institute also varies greatly. The mean ranks for pre-service teachers belong to public institution and private institutions have come into 105.36 and 79.50. The mean rank of government institution's pre-service teachers is much higher than the pre-service teachers of private institutes. The Mann Whitney U test here prominently revealed a statistical difference ($Z= 2.97$ and $p= 0.00<0.05$). So the null hypothesis **H₀3 is rejected** in such case. And it can be suggested that there is significant difference exists in constructivist beliefs between pre-service teachers of government and private institutes.

DISCUSSION

Overall constructivist belief of the pre-service teachers of secondary level in west Bengal was found to be moderate and a few showed strong constructivist beliefs towards teaching learning. But nearly more than 30 percent respondent shows low constructivist beliefs towards teaching learning is an alarming symptom for practice in a classroom. For adopting of effective pedagogy in terms of making active engagement, collaboration, creativity and inculcating the value of empathy among the students, it should be necessary for pre-service teachers to have strong beliefs in favour of constructivism for practice in classrooms.

The constructivist beliefs of the female trainee teachers showed significantly higher than the male. This result was very opposite to the study of Yilmaz&Sahin (2011) in which male was significantly higher than female. From last two decades the research revealed that the female has been showing more positive attitude, beliefs, perception and competencies towards teaching profession in comparison to male (Devi &Meenakshi, 2019; Riaz et al., 2017; Kelleher, 2011). May be it is due to more attachment, engagement and better rapport of the female with children. It might be a reason that males are much more worried about their job prospect than their counter part about ongoing crisis and uncertainty in the context of present socio-economic condition.

On contrary to the gender, the different streams of teaching as variable did not affect significantly the pre-service teachers' constructivist beliefs in teaching learning. Whatever the

academic background and choice of teaching stream, namely in arts or science have no influence on their constructivist beliefs system as far as in pedagogical practice is concern. Such similarity in pedagogical believe system to pre-service teachers of all stream of teaching indicates that constructivism is not stream or subject restricted rather irrespective of boundary of subject it is most beneficial practices in teaching learning.

Different natures of management of teacher education institution have crucial influence in implementing the curriculum of secondary teacher education. The study established that significant difference exist in between public and private pre-service teachers' beliefs towards constructivist practice in teaching learning. The pre-service teachers of public institute showed more strong beliefs in favouring of constructivism in compare to the pre-service teachers belong to privately managed institute. It gives a clear indication that though both the category of institute, whether public or private follow NCTE accredited same B.Ed. curriculum, adapted by the university, but the privately managed institute to same extent lagging behind the public institute in delivering the curriculum which is meant to promote the belief of constructivism. As constructivism has been advocated not only in global scale but also in our national curriculum for School Education and Teacher Education, hence this findings giving a clear hints towards quality of education in private run teacher education institute, which need to be addressed.

Educational Implications& Conclusion

Though the study is delimited as because it is conducted only in Bankura District of West Bengal and the samples undertaken is quiet small in size, still the findings revealed few crucial issues regarding to the constructivist beliefs of the pre-service teachers those who already trained in teaching practice. So the study might have multiple implications in teacher education programme.

From the analysis it is found that most of the pre-service teachers have stronger belief system towards constructivism so it is an important input for pedagogical intervention in classroom instruction in future. Though a number teacher respondents still lacking adequate beliefs that is understanding of constructivist teaching learning, thus there need to re-look the present secondary teacher education curriculum and need orientation for implementation of the curriculum to explore the components which might promote constructivist believe.

As the results shows trainee teachers of private institute have lower constructivist beliefs in compare to public or government trainee teachers so there is urgently need to evaluate the

private or self-financing teachers' training institutes whether these institute are competent to address the present Secondary Teacher Education programme (B.Ed.). And the appropriate authority needs to intervene in monitoring of such institute.

Though there is need a more in-depth study to deliver a concrete assumption about the constructivist beliefs of pre-service teachers in Indian perspectives, while this academic exercise might be a forerunner in highlighting an area of concern which needs sincere attention.

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6. Exploring Financial Literacy among the Urban Classes: Concept and Praxis

- **Dharmendra Yadav**, D. Phil. Scholar in Commerce, G. B. Pant Social Science Institute, Prayagraj, Email- dharmendra.au.bhu@gmail.com
- **S K Pant**, Professor in Economics, G B Pant Social Science Institute, Prayagraj, E Mail: skpant@rediffmail.co

Abstract

The onset of globalization also heralded a series of new paradigm changes both in the social as well as economic domain of human perspectives. Now with the onset of the process of digitization picking up, the financial world too is witnessing a revolutionary change! We have now entered into an era where the planners, social activists and scholars are envisaging to conceptualize the concept of a paperless society viz. transactions not taking place on paper but through electronic mode; the concept of financial literacy is fast gaining currency. On account of its efficiency, accuracy, speed and transparency the process of digitization has taken the world of financial transaction by storm. Hence has become quite necessary that the people should be properly sensitized, motivated and made well aware of the concept and subsequently be encouraged to practice this mode of transaction to enable them to garner the benefits of digitization.

The ensuing study has been conducted with the purpose of understanding how the concept of financial literacy is being understood and what has been the status of financial literacy among the urban classes. The study shows that the level of financial literacy among the employees has been quite low that also prohibits them to avail the benefits of online transactions and therefore it recommends that employees be motivated and sensitized to learn and use digital transaction to optimize their benefit. The selection of urban classes has been purposively made with the premise that the literacy and awareness level among them would be higher than their rural counterpart and that would perhaps help us to understand what has been the current status of their financial literacy in the urban domain.

Key words: Financial literacy, Financial Education, Digitization, Urban class

Introduction

As the economy of the world is changing at a rapid pace, there has been a sea change in the mode of financial transactions all over. No more one is required to go to the market for the purchase or sale of their products, instead now the entire process of physical and financial transactions is carried out by the people through their computers, laptops and even on smart phones. No doubt, the concept of digitization has taken the financial world by storm! However, the consequences of these needs to be thoroughly examined and explored as the use of technology also come with an element of rationality and responsibility. What one must also needs to understand is that technology is just a means or a tool and not an end in itself and therefore needs to be handled with utmost care. The optimum use of technology can only be harnessed when the people using it are fully equipped to handle it. Therefore, it becomes imperative to study and examine how much they have understood the concept of digitization in general and its use in financial transactions in particular.

It may be relevant to recall that with digitization, there has also been a rapid change in the world of financial transactions with the emergence of a new concept of financial literacy gaining acceptance quite rapidly.

Financial Literacy

Financial literacy has become a buzz word in today's financial transactions and consequently been perceived as the most revolutionary step with a huge potential to changing the profile of financial world by the click of the button. This naturally has attracted the attention of the scholars world-wide. Accordingly, the concept has been defined by the scholars differently; while some view it to be a skill that enables the people to take financial decisions efficiently; others refer it to the ability to read, analyze, manage and communicate about personal financial conditions that affects the material well-being (Huston, 2010; Hogarth 2002, 2006). Likewise, some scholars also feel that individuals can only be considered to be financial literate if they are competent and can demonstrate the knowledge that they have acquired. However, they also believe that financial literacy cannot be measured directly hence proxies must be used for their measurement (Moore, 2003). Financial literacy has also been accepted to be the ability to make informed judgment and take effective action regarding current and future use and management of

money (US Financial Literacy and Education commission, 2006). In addition, financial literacy has also been viewed as the person's familiarity with basic economic concepts to help him to make sensible saving and investment decisions (Lusardi & Mitchell, 2007c).

Scholars have also attempted to relate financial literacy with gender of the people and have come up with some interesting observations. Some scholars feel that women were not interested in investment and personal financial issues, hence were less capable than males (Gold Smith, 1997, 2006). Women were less familiar with financial literacy questions as compared to their male counterpart (Lusardi and Michell, 2014). Some also feel that the women have historically remained dependent on men for financial security (Schmidt & Sevak, 2006). According to some, the males are more financially literate than female and conclude that gender difference is quite conspicuous in financial literacy (Chen & Volpe, 2002). Women also possess less awareness about financial market and investment avenues and in case of markets and investments, they are less informed than their male counterparts (Ford & Kent, 2010). Likewise, the scholars have also tried to relate the financial literacy with age factor. According to some scholar the level of financial literacy falls with growing age as the confidence of the people in making their own financial decisions increases (Almenberg & Save-Soderbergh, 2011). Scholars have also found out that age and work experience are positively related to financial literacy. In addition, the mother's education is seen to be positively correlated with respondents' financial literacy (Ansong & Gyensare, 2012). Women get grade worse than men in their assessment test since women are not very much interested in investment and personal finance issues (Goldsmith, Goldsmith, & Heaney, 1997) (Goldsmith & Goldsmith, 2006). Women are less likely to answer financial literacy question correctly than men, they are also far more likely to say they, do not know an answer to a question result that is strikingly consistent across countries (Lusardi and Mitchell, 2006, 2014).

Financial Literacy and Financial Education

The scholars have also made a distinction between the two concepts. While financial literacy is often deemed to be necessary in order to make financial decision; financial literacy, on the other hand, is referred to as the ability or the skill to understand the financial decisions. Thus, in this way, financial education has an important role to play in achieving high financial literacy.

In general, it could be safely argued that there exists a positive relationship between financial literacy and financial education (Shaari, Husain, Mohammad, & Sabri, 2013). Financial literacy is also about enabling the people to make informed and confident decisions regarding all aspects of their budgeting, spending and saving and their use of financial product and services, from every day banking through to borrowing, investing and planning for the future (Roy Morgan Research, 2003). Likewise, financial literacy is also seen as the familiarity with the most basic economic concepts needed to make sensible saving and investment decisions (Lusardi and Mitchell (2007c).

Some scholars also relate the concept of financial literacy with growing age of the individuals and have observed that the individuals with in the age of 51 to 56 years are the least financially literate people which means the actual financial literacy falls with age and the people's confidence in their own financial decision-making abilities actually increases with age (Lusardi and Mitchell, 2006). The others feel that the people in Sweden between the age of 35 and 50 demonstrate the highest level of financial literacy and those from 65 years and above have the poor performance (Almenberg & Save-Soderbergh, 2011). There is another school of scholars who see that the age and work experience are positively related to financial literacy. Also, mother's education is positively correlated with respondents' financial literacy (Ansong & Gyensare, 2012).

Financial education, on the other hand, has also been visualized as an important component for the society as it protects and safe guards the individuals from financial risks and also helps them to contribute to enhance the liquidity for financial markets. With the opening up of the economy and increasing role played by market forces; the enhanced knowledge about financial literacy enables the people to harness the fruits of competition. Further, in an era, when we are envisaging the concept of a paperless society to balance environment or ecological degradation and focusing on making all kinds of transactions through internet and other electronic devices; the knowledge of financial education and financial literacy assumes utmost importance. People with no knowledge of financial literacy and financial education may find themselves being gradually isolated, marginalized and pushed out of the main stream of development. Some foresee financial literacy as the ability to make informed judgements and to take effective actions regarding current and future use and management of money (US Financial Literacy and Education commission, 2006).

The ensuing study, therefore, attempts to examine and understand what has been the status of financial literacy of the people and how do they manage their savings and funds. Since the concept of financial literacy involves the use of financial skills, the present exercise classified the concept of financial literacy into nine point ordinal scale as follows: basic literacy, that contains three questions; on banking, inflation and financial numeracy; while advance literacy section consists of six questions that cover the functioning of stock markets, transactions in stock markets, awareness regarding the concept of mutual funds, stock market bonds, knowledge about investment on long term basis and awareness regarding the element of risk in the stock markets. Further, these nine questions were subsequently scaled down to four distinct classes as financially illiterate, low on financial literacy, medium on financial literacy and high on financial literacy. The other details have been provided in notes section of the paper.

Objectives

The present exercise primarily aims to study the status of financial literacy among the urban classes of Allahabad Central University and how as it being used by them to harness digitization technology for optimizing their financial recourses. More precisely, it focuses on the following:

1. How the people perceive financial literacy?
2. Has the financial literacy helped them to manage their funds efficiently?
3. Identify and analyze the determinants of financial literacy,
4. To study the impact of these factors on the financial literacy of the employees, and

Hypothesis

The following set of hypotheses would be tested in the course of the study:

1. H_0 : Age has no bearing on financial literacy level.
2. H_0 : Gender of the people and the use of financial literacy are not correlated.
3. H_0 : Occupational pattern of the people have no bearing on their use of financial literacy skills.
4. H_0 : Marital status and financial literacy level have no relationship.
5. H_0 : Literacy levels of the people have no bearing on the use of financial skills.

6. H_0 : Nature of family structure of households has no impact on their financial literacy skills.
7. H_0 : Income levels of the households and financial literacy are independent of each other.
8. H_0 : Saving levels of households have no bearing on their use of financial literacy skills.

The Study Area

The study has been carried out in Allahabad district for the following reasons:

- a) It has been regarded as the traditional seat of learning since time immemorial.
- b) Attracts thousands of students and scholars not only from the nearby districts but also from other states as well.
- c) It has a fairly well developed social infra-structure.
- d) Allahabad University was once regarded as the Oxford of the east.
- e) It has a sizeable number of government and non-government institutions of eminence.

Therefore, with the presence of sizeable proportion of elite class, it was presumed that the people would be aware of the concept and their financial literacy skills would be higher. The study would, thus, provide a better opportunity to analyze and understand how the people have conceived the concept of financial literacy and have been practicing to optimize their financial resources.

Database and Methodology

As has already been stated earlier, that the study has been carried out on the employees of Allahabad central University with the premise that the incidence of literacy being high that helped them to utilize their financial skills efficiently to enhance their financial status. Accordingly, the sample contained a total of one hundred ten employees drawn from different occupational categories. Disproportionate random sampling was used to select the employees from various classes and categories. A brief methodology has been summarized below:

Table 1: Showing the strength of Employees

Sl. No.	Category	Total Number	Number Selected
(i)	Academic	282	56
(ii)	Non-Academic	939	54
Total		1221	110

Source: University Annual Report, 2017-18

Data collection and Analysis: The data was collected using multiple choice options that was based on Lusardi(2008a). The analysis was computed using one-way ANOVA and results were analysed on 1percent, 5percent, and 10 percent of level of significance.

Results and Discussion

The socio-economic profile of the sample employees drawn provides an interesting account of itself and presents an opportunity to test the hypothesis set up during the course of study. The perusal of table shows that about 4 percent of the employees were between 20-30 years of age, another about 33 percent were between 30-45 years and over 57 percent between 45 to 60 years. The sample also had about 6 percent of employees who were over 60 years of age (Table A1). Further, the study also shows that over 14 percent of the employees were financially illiterate, of which over 87 percent were in the age group of 45-60 years. The proportion of employees having low, medium and high levels of financial literacy skills in the sample was reported to be 37 percent, 21 percent and 27 percent respectively (Table A2). The application of one-way ANOVA test confirms that the difference between the levels of financial literacy and the age was found to statistically significant at 1 percent level. In other words, the study also confirms that as the age of employees grows, their awareness towards financial literacy also enhances. In

other words, variables age and financial literacy were positively correlated which rejects our first null hypothesis (Table 2).

**Table 2: Demographic Profile and Level of Financial Literacy
of the Sample Employees**

Age (Year)	Level of Financial Literacy				Total	F Value	P Value
	Illiterate	Low	Medium	High			
20-30	-	4 (3.6)	-	-	4 (3.6)	6.143***	0.001
30-45	2 (12.5)	10(24.4)	11 (47.8)	13 (43.3)	36 (32.7)		
45-60	14 (87.5)	26 (63.4)	11 (47.8)	12 (40.0)	63 (57.3)		
Above 60	-	1(2.4)	1 (4.3)	5 (16.7)	7 (6.4)		
Total	16 (100.0)	41 (100.0)	23(100.0)	30(100.0)	110(100.0)		

Source: Field Survey, 2017-18

Independent variable: Age of respondents, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage.

The mean difference was found to be statistically significant at 1 percent level.

***The smaller value of p ($p < 0.01$) denotes rejection of null hypothesis. Therefore, alternative hypothesis has been accepted.

Gender and Financial Literacy

The study shows that the sample contained over 72 percent of males and about 28 percent as females. The perusal of table shows that the incidence of financial illiteracy was more pronounced among the males where over 69 percent of them were found to be financially illiterate against 31 percent for males. Likewise, in the lower segment also over 78 percent of the male

employees were found to be low level against 22 percent of females. It was only in the medium and high segments; the proportion of males was significantly higher than the females. The use of one-wayANOVA test shows that there was no significant difference between gender and their levels of financial literacy. The F value was not found to be statistically significant while the p value was larger than the prescribed limits ($p < 0.05$) which therefore rejects the alternate hypothesis and subsequently approves the null hypothesis. Therefore, it can be stated that gender and financial literacy were not dependent on each other (Table 3).

Table 3: Pattern of Financial Literacy among Male and Females

	Level of Financial Literacy Level				Total	F Value	P Value
	Illiterate	Low	Medium	High		0.184	0.668
Male	11 (68.8)	32 (78.0)	15 (5.2)	21 (0.0)	79 (71.8)		
Female	5 (31.2)	9 (22.0)	8 (34.8)	9 (30.0)	31 (28.2)		
Total	16(100.0)	41(100.0)	23 100.0)	30(100.0)	110(100.0)		

Source: Field Survey, 2017

Independent variable: Gender, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage.

The mean difference was not found to be statistically significant. The high value of p ($p < 0.05$) subsequently rejects the alternative hypothesis.

Financial Literacy and Occupational Pattern

The analysis of financial literacy and occupational of the sample employees shows that while the sample contained 49 percent of them from non-teaching category, this proportion was worked out to be over 51 percent for teaching class. Further, the study shows that the incidence of financial illiteracy among the non-teaching staff was marginally higher than teaching class, however, in the subsequent higher categories, financial literacy among the teaching classes was substantially higher and was worked out to be over 37 percent against 17

percent for non-teaching staff. The use of one-way ANOVA analysis shows that the difference between the level of financial literacy and the occupational profile was found to be statistically significant at 5 percent of level. The high F value shows that the difference between the mean values between the two occupational groups was found to be statistically significant at 5 percent level and the low p value also supports the alternative hypothesis. All this substantiates that occupational pattern too has a sizeable bearing on the level of financial literacy and subsequently rejects our third null hypothesis of their being independent of each other (Table 4).

Table 4: Pattern of Financial Literacy and Occupational Profile of Sample Employees

Level of Financial Literacy	Occupation		Total	F Value	P Value
	Non-Teaching	Teaching			
Illiterate	8 (15.0)	8 (14.3)	16 (14.5)	5.821**	0.018
Low	27 (50.00)	14 (25.0)	41 (37.2)		
Medium	10 (19.0)	13 (23.0)	23 (20.9)		
High	9 (19.00)	21 (23.0)	30 (27.3)		
Total	54 (100.0)	56 (100.0)	110(100.0)		

Source: Field Survey, 2017

Independent variable: Occupation, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage

The low p value ($p < 0.05$) denotes rejection of null hypothesis, Alternative hypothesis has been accepted

Marital Status and Financial Literacy

The study between the marital status and financial literacy of the employees provides an interesting account. It could be seen that while the overall incidence of illiteracy for the sample was about 15 percent, for married employees, while it was around 12 per cent in non-married category. However, in the subsequent classifications, the incidence of financial literacy was much higher among the married employees where about 29 percent were also having the advanced financial literacy skills compared to 18 percent for non-married employees. The one-way ANNOVA analysis proves that there was no difference between the marital status of the employees and their level of financial literacy which incidentally accepts the fourth null hypothesis of the study. The low F value was not found to be statistically sign at 5 percent which is also supported by the high p value ($p < 0.05$). Therefore, it can be stated that marital status of the employees and their financial literacy status, were independent of each other and subsequently rejects the alternative hypothesis (Table 5).

Table 5: Financial Literacy and Marital Status of Sample Employees

Level of Financial Literacy	Marital Status		Total	F Value	P Value
	Married	Unmarried			
Illiterate	14 (15.0)	2 (12.00)	16 (14.5)	0.022	0.978
Low	35 (38.0)	6 (35.0)	41 (37.2)		
Medium	17 (18.0)	6 (35.0.0)	23 (20.9)		
High	27 (29.0)	3 (17.6)	30 (27.3)		
Total	93 (100.0)	17 (100.0)	110 (100)		

Source: Field Survey, 2017

Independent variable: Marital status of respondents, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage

The mean difference was not found to be statistically significant.

The high p value ($P < 0.05$) corresponds to rejection of alternative hypothesis and null hypothesis accepted.

Literacy Level and Functional Literacy

It is generally presumed that literacy or formal education enables the individuals to perform better in every walk of life because it helps them to rationalize their action. It was with this premise, the study also analyzed how literacy helps the individuals to rationalize and optimize their financial resources. The study shows that the educational level of the sample employee and their functional literacy status have a positive relationship which gradually incline as the level of literacy goes up. The study also shows that the incidence of illiteracy for employees having educational qualification up to tenth was about 55 percent which subsequently declined to 16.0 percent for employees having doctorate degree. Likewise, level of advanced financial literacy which was reported to be zero for tenth class employees, steadily enhanced to over 37 percent. The one-way ANOVA analysis shows that there was significant difference between education level of the employees and their financial literacy level. The F value was found to be statistically significant at 5 percent level and the subsequent low p value rejects the null hypothesis. Therefore, it can be stated that formal literacy enables the employees to sharpen their financial literacy skills and thus rejects our fifth null hypothesis which declares literacy and financial literacy to be independent of each other (Table 6).

Table 6: Financial Literacy and Educational Qualifications of Sample Employees

Level of Financial Literacy	Educational Qualifications	Total	F Value	P Value

cy								
	Tenth standa rd	Twelft h standa rd	Graduat ion	Post- Graduat ion	Doctor ate	Professio nal Course		
Illiterat e	6 (55.0)	1(14.0)	-	-	9 (16.0)	-	16 (14.5)	3.617* **
Low	4 (36.0)	4 (36.0)	12 (75.0)	6(38.0)	14 (25.0)	1 (25.0)	41 (37.2)	
Mediu m	1 (9.0)	1(9.0)	1 (6.0)	6(38.0)	12 (21.0)	2 (50.0)	23 (20.9)	
High	-	1(9.0)	3 (18.8)	4(25.0)	21 (38.0)	1 (25.0)	30 (27.3)	
Total	11(100 .0)	7 (100.0)	16 (100.0)	16 (100.0)	56 (100.0)	4 (100.0)	110(10 0.0)	
								0.00 5

Source: Field Survey, 2017

Independent variable: Educational qualification, Dependent variable: Level of financial Literacy

***The low value of p ($p < 0.01$) corresponds to rejection of null hypothesis.

Figures in the parenthesis are column wise percentage.

Family Structure and Functional Literacy

Family structure of the family, it is said, has a significant role to play in shaping the individual socio-economic status and joint family structure was accepted to be the pivot around whom the family members revolve. Now with the onset of modernization, joint family structure is

gradually being replaced by nuclear family structure. How has this change on the social front has affected the individuals and their financial status?

The study shows that 44 percent of the employees had nuclear family while remaining 56 percent had joint family system. The overall incidence of illiteracy was worked out to be 15 percent and the comparison between nuclear and joint family shows that about 17 percent of them were financial illiterate in nuclear family while this ratio was reported to be 13 percent in joint family. However, the analysis also shows that in the subsequent classifications the incidence of financial literacy was more pronounced in the nuclear family where over 31 percent of the employees were having advance financial literacy skills against 24 percent in joint family structure. The one-way ANOVA analysis finds no difference between the family structure and financial literacy status of the employees. The F value was also not found to be statistically significant. The high p value, thereby, accepts the implementation of null hypothesis. All this clearly substantiates and accepts sixth null hypothesis of the study which states that financial literacy and family structure were independent of each other (Table 7).

Table 7: Financial Literacy and Family Structure of the Sample Employees

Financial Literacy status	Family Structure		Total	F Value	P Value
	Nuclear	Joint			
Illiterate	8 (17.0)	8 (13.0)	16 (14.5)	0.105	0.746
Low	16 (33.0)	25 (14.0)	41 (37.2)		
Medium	9 (19.0)	14 (23.0)	23 (20.9)		
High	15 (31.0)	15 (24.0)	30 (27.3)		

	48(100.0)	62 (100.0)	110 (100.0)		
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Source: Field Survey, 2017

Independent variable: Family Structure, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage.

The mean difference was not found to be statistically significant at 5 percent level.

The high p value ($p < 0.05$) corresponds to acceptance of null hypothesis.

Financial Literacy and Income Level

It is also believed that the Income level and financial literacy have a close nexus. Higher income level always corresponds to higher level of savings and vice-versa. The study of the sample employees' income level with their financial literacy skills has also been attempted. The income of the employees was classified into three categories as low, medium and high. Income below Rs. 5.00 lakh per annum was taken to be low, income between Rs. 5 lakhs to 10 lakhs as medium and income above Rs. 10 lakhs as high. The study of the sample employees shows that over 44 percent had low income; another 29 percent had medium level income while about 26 percent had high income level. The study with the financial literacy skills shows that while about 16 percent of the employees had high financial skills, in low category, it subsequently rises to over 37 percent in middle and about 35 percent in high level income category. The proportion of employees having low financial literacy skills remained the same in all the three categories. The one-way ANOVA analysis also shows that there was a significant difference between the income level of the employees and their level of financial literacy. The F value was found to be statistically significant at 10 percent level substantiated by low p value which gives credence to rejection of seventh null hypothesis. This also substantiates the fact that financial literacy skills and the level of income have strong prima facie connection (Table 8).

Table 8: Level of Income Pattern of the Sample Employees(Lakh per annum)

Level of Financial Literacy	Income of the Employees			Total	F Value	P Value
	Below 5	5 -10	Above 10			
Illiterate	8 (16.0)	4 (13.00)	4 (14.0)	16 (14.5)	2.917*	0.058
Low	24 (49.0)	9 (28.0)	8 (28.0)	41 (37.2)		
Medium	9 (18.0)	7 (22.0)	7 (24.0)	23 (20.9)		
High	8 (16.0)	12 (37.0)	10 (34.0)	30 (27.3)		
Total	49 (100.0)	32 (100.0)	29 (100.0)	110 (100.0)		

Source: Field Survey, 2017

Independent variable: Income, Dependent variable: Level of financial Literacy

Figures in the brackets are column wise percentage.

*The mean difference was not found to be statistically significant.

The high p value ($p < 0.10$), rejects the null hypothesis.

Financial Literacy and Saving Levels

It is expected and presumed that efficient utilization of financial skills leads to higher level of savings. The study of the savings of employees on the front provides an interesting account. Further, the saving levels have been classified into three broad categories as low, medium and high. Savings up to Rs. 20,000 per annum has been identified as low, savings between Rs. 20,000 - Rs. 40,000 as middle while savings above Rs. 40,000 as high. The study of the employees' savings pattern shows that 83 percent had poor level of savings, about 13 percent had middle and remaining about 4 percent had high level of savings. Thus, it can be said that majority of the employees in the sample had poor level of savings. However, when this scenario was compared with their financial literacy skills, the study shows the employees with high financial literacy skills were consistently higher on all the three categories 20 about 22 percent in low, 50 percent in the middle and 75.0 percent in the higher category. The one-way ANOVA analysis confirms that the financial literacy level and the savings of the employees were significantly different. The F

value between the group and within the group was also found to be statistically significant substantiated by the low p ($p < 0.05$) value that supports the rejection of null hypothesis (Table 9).

Table 9: Financial Literacy and the Saving levels of the Sample Employees

(Rs. Per annum)

Financial Literacy	Savings of the Employees			Total	F Value	P Value
	Below 20000	20000-40000	Above 40000			
Illiterate	13 (14.0)	3(21.0)	-	16 (14.5)	2.964*	0.056
Low	39 (42.0)	1 (7.0)	1 (25.0)	41 (37.2)		
Medium	20 (22.0)	3 (21.00)	-	23 (20.9)		
High	20 (22.0)	7 (50.0)	3 (75.0)	30 (27.3)		
Total	92 (100.0)	14 (100.0)	4 (100.0)	110 (100.0)		

Source: Field Survey, 2017

Independent variable: Savings amount, Dependent variable: Level of financial Literacy

Figures in the parenthesis are column wise percentage

*The mean difference was found to be statistically significant 10 percent level.

The low p value ($p < 0.05$) correspondence to rejection of null hypothesis.

.Conclusion, Suggestions and Policy implications

The study provides somewhat disappointing but useful observations of the situation. It may be recalled that the study was intended to study the status of financial literacy among the urban classes with the intention to see to what extent the urban class have been able to avail the benefits of digitization to optimize their financial resources. It also helped to test out certain conceptions or pre-conceived notions associated with gender, literacy level, marital status, occupational pattern and family composition etc. on the use of financial literacy skills to augment their resources.

The analysis shows that hardly over 27 percent of the employees were fully financially literate whereas over 51 percent of the employees were either illiterate or were having low financial skills. Thus, with a sizeable of the employees lacking financial skills, the performance of financial literacy cannot be expected to high which also deprives them to optimize their financial resources. What has been a subject of worry is that if the situation in the urban areas is so disappointing, what could be the situation in the rural areas where majority of the population resides! As stated earlier, the technology can only succeed if it gets the acceptance by the masses. It can be argued that therefore, the masses need to be educated, sensitized, motivated and galvanized to accept the new skill and for this appropriate and relevant social intervention need to be undertaken at regular and on sustained basis. The help of professional bodies with requisite experience could be taken at the initial stages.

Similarly, the study also demolishes many preconceived notions about financial literacy that have been conceptualized in our hypothesis. The first being that demographically the level of financial literacy also enhances as the age of person grows and employees with high age were seen, practicing financial skills to shore up their resources compared to the younger ones. Likewise, it also disapproves the notion that gender and financial literacy were independent of each other, on the other hand, both male and female evenly matched on financial skills. Similarly, it also rejects the proposition that occupation has no bearing on the use of financial literacy. The study also disapproves that marital status of the employees has no bearing on the use of financial skill that on the contrary grows with employees' marital status.

The study also shows that the incidence of financial illiteracy in the sample households was about 15 percent, of which about 13 percent of the illiterates were in the age group of 20-45

years and another over 87 percent in 45 and over age group. The impact of financial literacy can only be realized until this segment is also trained to avail the benefits of digitization leading to enhancement of their skills on financial literacy.

Similarly, the financial illiteracy among the females in particular and also to some extent among the males was quite substantial. For achieving optimum impact of the use of financial literacy, this left out segment also needs to be encouraged and motivated to participate in financial literacy network.

Another very important dimension the study brings out is that financial literacy and educational levels of the respondents have a close bearing with each other. Low educational level also leads to poor utilization of financial skills and therefore efforts are needed to encourage, motivate and sensitize the left out segment towards availing the multiple benefits that use of financial literacy skills brings us.

It needs to be understood that with the advancement in technology and its adaptation in financial and other sectors, the conventional modes would soon be replaced with modern modes of transactions. We can no longer sit back and watch helplessly as our competitors get passed from availing the benefits. Therefore, there is an urgent need to sensitize the people to learn and participate in the financial transactions and for this the government should initiate relevant and appropriate interventions both in the urban as well as rural areas so that the benefit may be availed by the masses.

Notes

The concept of financial literacy is related to the use of financial skills, accordingly, the concept has been classified into nine ordinal scales. The nine questions revolve around persons familiarly towards basic functioning of banking, and stock market. Thus, if the sample households are not familiar with any question, they are termed as financial illiterate, likewise the one who are familiar with first questions are declared as low level financial literate, similar the classification is elevated to other higher levels as medium financial learners and advanced financial learners as their familiarity with question goes up. To summarize the classification:

Table N1: Classifications of Financial literacy

S.N.	Correct Response of respondents	Scores	Level of Financial Literacy
1.	Not any questions correctly answered	0	Illiterate
2.	One to three questions correctly answered	1-3	Low
3.	Four to six questions Correctly answered	4 – 6	Medium
4.	Seven to nine questions correctly answered	7 - 9	High

Sources: Computed by Authors. Based on collected data.

Appendix

Table A1: Demographic Characteristics of Respondents (%)

	Characteristics	Frequency (%)
Sex		
	Male	71.8
	Female	28.2
Age(Year)		
	20 – 30	3.6
	30 - 45	32.7
	45 – 60	57.3
	Above 60	6.4
Occupation		

	Teaching	49.09
	Non-Teaching	50.90
Marital Status		
	Married	84.54
	Unmarried	15.45
Family Structure		
	Nuclear	43.63
	Joint	56.36
Educational Status		
	Tenth	10
	Twelfth	6.36
	Graduation	14.54
	Post- Graduation	14.54
	Doctoral	50.90
	Professional Courses	3.63
Income (Lakh, Per Annum)		
	Below 5	44.54
	5 – 10	29.09
	Above 10	26.36
Savings (Per Annum)		
	Below 20,000	83.63
	20,000 – 40,000	12.72
	Above 40,000	3.63

Source: Field Survey, 2017. Total sample size= 110

Table A3: Financial Literacy Level

Financial Literacy Level	Number	Frequency (%)
Illiteracy	16	14.54
Low	41	37.27
Medium	23	20.90
High	30	27.27

Sources: Computed by Authors. Based on collected data.

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7. Reasoning Ability and Science Achievement: A study on Tribal Adolescence of Madhya Pradesh

- **Dr. Devi Prasad Singh** ,Assistant Professor, Department of Education, Indira Gandhi National Tribal University, Amarkantak (MP), Email: devi.singh@igntu.ac.in
- **Prof. Sandhya G.**,Dean, Faculty of Education, Indira Gandhi National Tribal University, Amarkantak(MP), Email: dean.education@igntu.ac.in

Abstract

The present study sought to find out the relationship between reasoning ability and science achievement among the tribal adolescents of district Anuppur of Madhya Pradesh, India. Present study was a descriptive survey research. The purpose of present study was to access the status of reasoning ability, status of achievement in science and correlation between reasoning ability and science achievement among the tribal adolescents of secondary stage. A sample of 214 tribal adolescents was selected by using random sampling method. Collected data was analyzed by using mean, SD, t-test and correlation. Researchers found that tribal adolescents are not good in reasoning ability and science achievement. Achievement in science and reasoning ability of tribal adolescents are positively correlated.

Keywords: Reasoning Ability, Science Achievement, Tribal Adolescence

Introduction

As the prime minister of India, Narendra Modi has stated, “21st century is the century of knowledge. Knowledge, science and education will have the power and strength to embrace the entire universe.” Today, life is totally surrounded by the inventions of science.

According to Webster’s New Collegiate Dictionary, “Science is knowledge covering general truths of the operation of general laws, esp. as obtained and tested through scientific method and concerned with the physical world.” For science teachers it is important to encourage a critical thinking and scientific attitude in adolescents at secondary stage about interconnectivity of science, technology and nation so that a healthy and sustainable society can be made. Science is a system of attaining knowledge through observation and experiments to explain natural phenomenon. Adolescence is a period of maturation

process. It is an inbetween time period of psychological and physical development from childhood to adulthood. According to Stanley hall, “adolescents is a period of strain and storm.” From the point of growth and development is a crucial time period. This period befalls from 12 to 20 years old. Due to the complex and challenging life situations it is the need of the adolescents to learn how to face these changes. With the help of reasoning ability, they can face these challenges with bravery and confidence. If the adolescents have reasoning ability, they can deal effectively with adversity and stressful conditions of life. Though the adolescents appear to be the most vulnerable behavioral problems, reasoning ability is needed for proper development of adolescents.

India has a large variety of native citizens. The scheduled Tribes are indigenous and one of the most economically impoverished and relegated people of India (Singh et al 2019). The Imperial Gazetteer of India, 1911 defines tribe as a “collection of families bearing a common name, speaking a common dialect, occupying or professing to occupy a common territory and is not usually endogamous though originally it might have been so” (Nithya 2014). India has more than 10.2 crores of tribal population which is 8.6 per-cent of total population (census of India, 2011). The Kothari Commission has also highlighted that these tribes deserve education with great emphasis and attention (Kothari 1966). Madhya Pradesh has 14.69% of tribal population. Bhil, Birhor, Damar, Kharia, Majhi, Munda, Oraon, Parathi (Nithya 2014), Baiga, Agariya, Gond, Kol, Saharia, Korku etc group of tribes are moolvasi of Madhya Pradesh.

One of the aims of the education is to enable the students to take their decisions based on their logic and reasoning. Reasoning is the base of right knowledge and it helps the students to acquire real and true knowledge. It enables them to solve problems, to take decisions, to analyze critically, to establish a relationship between cause and effect, to make generalizations and to achieve good academic achievements. Reasoning ability is very important for the academic achievement of students (Rani K V, 2018). Secondary level students belong to early adolescent period. Reasoning is a certain way of solving intellectual problems (Sarsani M R, 2007). There is a close relation between learning and reasoning. Both learning and reasoning depend on each other. By reasoning man learns to solve problems and to take decisions. The capacity of reasoning and problem solving have made human being superior to all

species. According to Kulshreshtha (1997), “all inventions, discoveries, art, literature and advances in culture and civilization are based on thinking, reasoning and problem-solving capacity of human beings.”

Science education is an important path to upgrade the social and economic status of tribal communities. These indigenous people live in remote areas and far away from the main stream of society and education. These communities are economically and educationally deprived from decades, they don't have much knowledge and information about the modern career scope in science and technology. Present learner is a citizen of tomorrow. These learners should be inspired to have a scientific vision and critical thinking about various issues, about the acquisition and processing of different information, about the inventions of science and technology and its importance in life and society.

In our country, there are many compulsory subjects at school level and science is one of them. Many students do not learn science properly due to the lack of inspiration and curiosity that results in low achievement in science. Many reasons are responsible for this condition as inappropriate teaching methods of teaching science, shortage of lab facilities, lack of experimental work etc. All modern educationists and governments have given emphasis on science education and they have advocated to improve scientific temperament and achievement in science. In India, need to improve science education was announced in Kothari Commission (1964-66). Education Commission was of the view that “if science is poorly taught and badly learnt, then it will become a burden for the learner's mind”.

Secondary level education prepares the students for higher education and vocational education. Academic achievement of this level decides the stream of higher secondary and also the future career. For that purpose, they need to go out from the remote places where they live. They will have to face competitive exams and tests for taking admission. In such conditions they will need reasoning skills. Central government as well as state government has reserved certain number of seats for tribal students in IITs, IIMs, NEET and different courses. In spite of having opportunities and reservation to study in these awesome institutions and make their bright career, lack of interest in science and necessary skills like

reasoning, many times these reserved seats remain vacant. Most of tribal students do not take/attempt science at higher secondary level or leave science after secondary stage. Thus, it is necessary to examine the achievement in science of tribal adolescents at secondary level.

Objectives of the Study: Prime objectives of present study are

- 1.To access the level of reasoning ability among tribal adolescents of Anuppur district.
- 2.To access the level of science achievement among tribal adolescents of Anuppur district.
- 3.To find out the difference in science achievement among tribal adolescents of Anuppur district on gender basis.
- 4.To explore correlation between reasoning ability and science achievement of tribal adolescents of Anuppur district.

Hypotheses

- 1.Level of reasoning ability among tribal adolescents is average.
- 2.Level of science achievement among tribal adolescents is average.
- 3.There is no significance difference in science achievement among tribal adolescents of Anuppur district on gender basis.
- 4.There exists no correlation between reasoning ability and achievement in science of tribal adolescents of Anuppur district.

Research Methodology

This study was a descriptive survey study. Secondary level tribal adolescents studying in government schools of Anuppur district (Madhya Pradesh) were the population of this study.

Sample and Sampling Technique

Random sampling method was used by the investigator to select the sample. A sample of 214 tribal students (104 boys and 110 girls) studying in secondary level, was selected for data collection.

Table 1: Sample Size of Study

S.N.	Name of school	Gender		Total number of Students
		Male	Female	

1	Govt Higher Secondary School Pondki	33	29	62
2	Govt Higher Secondary School Lakhaura	37	46	83
3	Govt Higher Secondary School Bhejari	34	35	69
	Total	104	110	214

Tools and Statists used

Data was collected by using

(i) RAT-Reasoning Ability Test by L. N. Dubey

(ii) SAT-Science Achievement Test, self-constructed by Investigator.

In reasoning Scale, there are seven groups of reasoning ability- Extremely High, High, Above Average, Average/Moderate, Below Average, Low, Extremely Low. SAT-Science Achievement Test has also seven level groups viz- Extremely High, High, Above Average, Average/Moderate, Below Average, Low, Extremely Low. Collected data were analysed by mean, SD, t-test and correlation.

Data Analysis and Result

Objective(i): *To access the level of reasoning ability among tribal adolescents of Anuppur district.*

Hypothesis (i): *Level of reasoning ability among tribal adolescents is average.*

To access the level of reasoning ability of tribal adolescents of secondary level, all responses were analysed. Statistical data analysis was done by SPSS. Table-2 shows the result:

Table-2: Showing the level of Reasoning Ability of Tribal Adolescents.

S. No	Range of z- score	Gra de	Level of Reasoning Ability	No of Students			% of studen ts
				Boys	Girls	Total	

1	+2.01 and above	A	Extremely High	0	0	0	0.00 %
2	+1.26 to +2.00	B	High	0	0	0	0.00 %
3	+0.51 to +1.25	C	Above Average	4	5	9	4.21 %
4	-0.50 to +0.50	D	Average/Moderate	9	7	16	7.48 %
5	-0.51 to -1.25	E	Below Average	21	23	44	20.56 %
6	-1.26 to -2.00	F	Low	25	29	54	25.23 %
7	-2.01 and above	G	Extremely Low	45	46	91	42.52 %
Total				104	110	214	100 %

As shown in table-2 out of 214 tribal adolescents, 91 students have grade-G (Extremely Low level) of reasoning ability, 54 adolescents have grade-F (Low level) of reasoning ability, 44 adolescents have grade-E (Below Average level) of reasoning ability, 16 adolescents have grade-D (Average level) of reasoning ability and 9 students have grade-C (Above Average) of reasoning ability. Any adolescents don't have grade-B or grade-A (High or Extremely High) of reasoning ability.

Above result shows that the maximum number of the adolescents are below average level of reasoning ability. Any adolescents do not have high or extremely high level of reasoning ability. Therefore, it is indicated that tribal adolescents of secondary level are not good in reasoning ability and it is needed to train them for the development of reasoning ability.

Table-2 indicates that 42.52 % of tribal adolescents are possessing grade-G (Extremely Low level) of reasoning ability, 25.23 % of adolescents are possessing grade-F (Low level) of reasoning ability, 20.56 % of students are possessing grade-E (Below Average level) of reasoning ability, 7.48 % of adolescents are possessing grade-D (Average or Moderate level) of reasoning ability and 4.21 % of tribal adolescents are possessing grade-C (Above Average) of reasoning Ability. There are no adolescents

possessing grade-B or grade-A(High or Extremely High level) of reasoning ability out of 214 adolescents selected for the study. It has been graphically shown below:

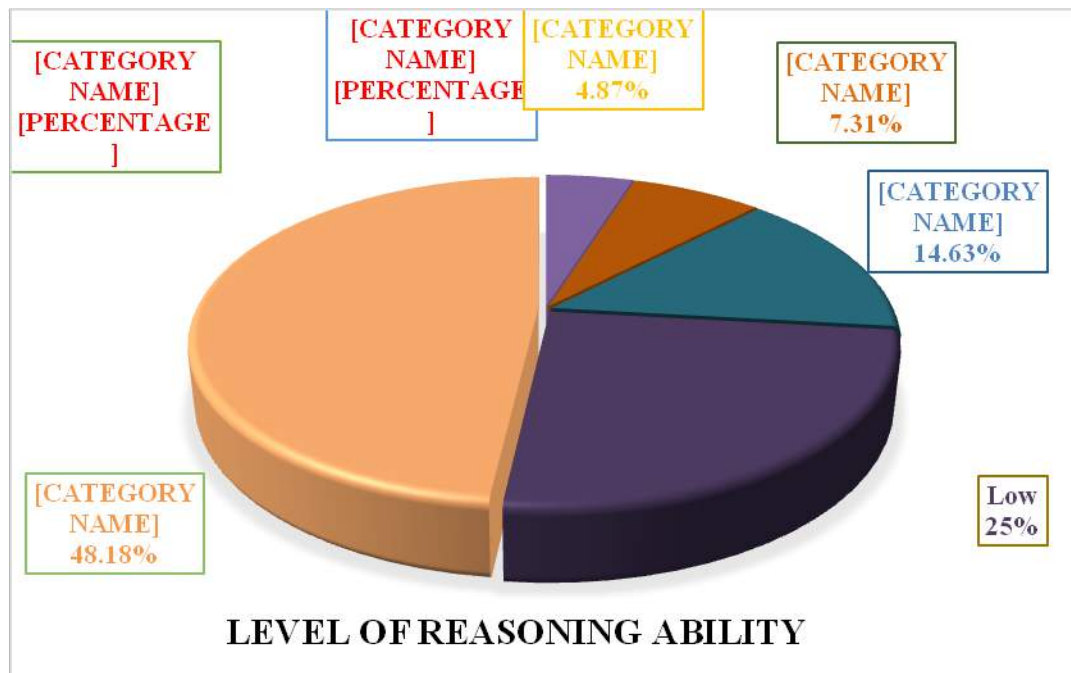


Figure 1-Reasoning Ability level of Tribal Adolescents.

Objective(ii): *To find out the level of science achievement among tribal adolescents of Anuppur district.*

Hypothesis (ii): *Level of science achievement among tribal adolescents is average.*

Table-3: showing the level of Achievement in Science of tribal adolescents.

S.No	Range of z-score	Grade	Level of Achievement in Science	No of Students			% of Students
				Boys	Girls	Total	
1	+2.01 and above	A	Extremely High	2	1	3	1.40 %
2	+1.26 to +2.00	B	High	2	2	4	1.87 %
3	+0.51 to +1.25	C	Above Average	4	7	11	5.14%
4	-0.50 to +0.50	D	Average/Moderate	15	10	25	11.68 %
5	-0.51 to -1.25	E	Below Average	21	27	48	22.43 %
6	-1.26 to -2.00	F	Low	27	29	56	26.17 %
7	-2.01 and above	G	Extremely Low	33	34	67	31.31%
Total				104	110	214	100 %

As shown in table-3 out of 214 tribal adolescents, 67 students have grade-G(Extremely Low level) of Achievement in Science, 56 adolescents have grade-F(Low level) of Achievement in Science, 48 adolescents have grade-E(Below Average level) of Achievement in Science, 25 adolescents have grade-D(Average or Moderate level) of Achievement in Science, 11 students have grade-C(Above Average level) of Achievement in Science, 4 students have grade-B(High level) of Achievement in Science and 3 students have grade-A(Extremely High level) of Achievement in Science. Above result shows that the maximum number of adolescents are below average level of Achievement in Science. There are only 7 adolescents have grade-B or grade-A(High or Extremely high level) of Achievement in Science. Therefore, it is indicated that tribal adolescents of secondary level are not good in Achievement in Science and it is needed to train them for the development of Achievement in Science.

Table-3 indicates that 31.31 % of tribal adolescents are possessing grade-G(Extremely Low level) of Achievement in Science, 26.17 % of adolescents are possessing grade-F(Low level) of Achievement in Science, 22.43 % of students are possessing grade-E(Below Average level) of Achievement in Science, 11.68 % of adolescents are possessing grade-D(Average or Moderate level) of Achievement in

Science, 5.14 % of tribal adolescents are possessing grade-C (Above Average level) of Achievement in Science, 1.87 % of tribal adolescents are possessing grade-B (High level) of Achievement in Science and 1.40 % of tribal adolescents are possessing grade-A (Extremely High level) of Achievement in Science. It has been graphically shown in below:

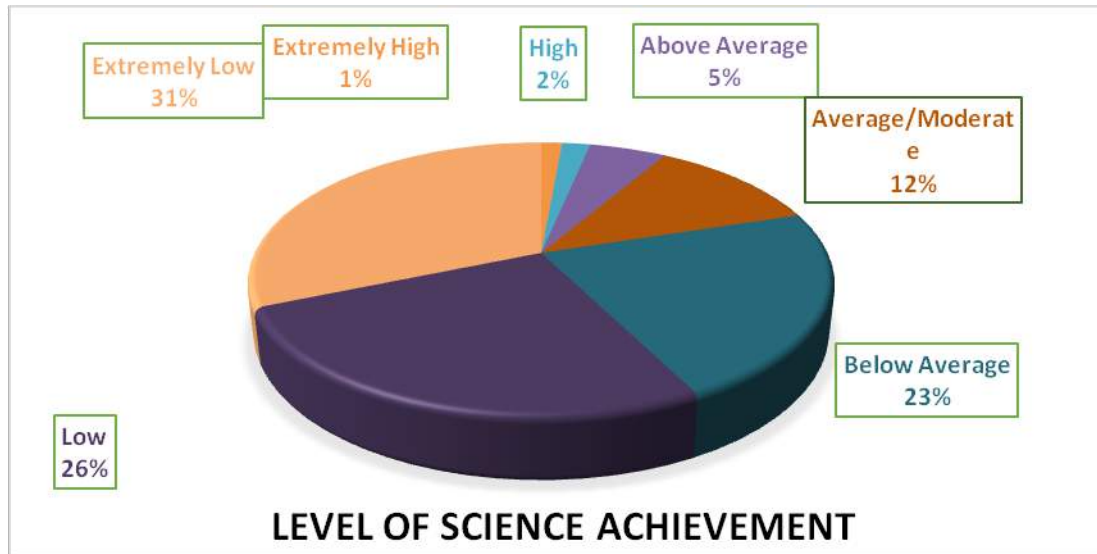


Figure-2: The level of Science Achievement of Tribal Adolescents

Objective(iii): *To find out the difference in science achievement among tribal adolescents of Anuppur district on gender basis.*

Hypothesis(iii): *There is no significance difference in science achievement among tribal adolescents of Anuppur district on gender basis.*

Table-4: Comparison of Achievement in Science of secondary level of Tribal Male and Female adolescents

Gender	N	Mean	SD	df	t-value	p-value	Result
Male	104	22.81	7.508	212	0.312	0.756	NS*
Female	110	22.49	7.354				

Table-4 shows that the mean score of Achievement in Science of male and female tribal adolescents are 22.81 and 22.49 respectively. The standard deviation of the

male and female tribal adolescents is 7.508 and 7.354 respectively. The measured t-value is 0.312 and p-value is 0.756(> 0.05) which is not significant at 0.05 level of significance. Therefore, the above hypothesis is accepted at 0.05 level of significance. This shows that the male and female tribal adolescents are not significantly different in their Achievement in Science. The percentage of male and female tribal adolescents in Science Achievement are shown below:

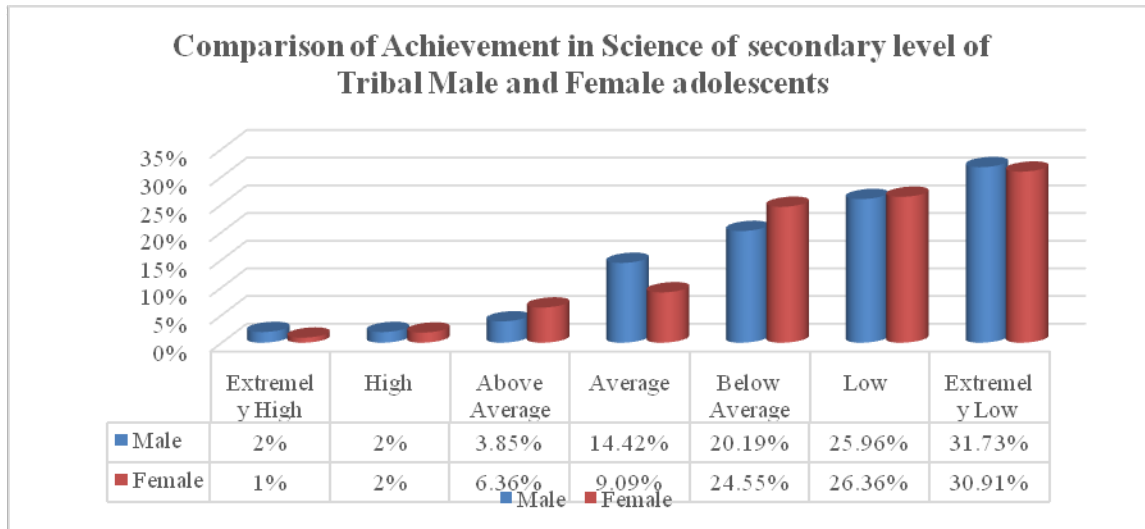


Figure-3: Comparison of Achievement in Science of secondary level of Tribal Male and Female adolescents

Figure-3 represent that the percentage of female tribal adolescents are slightly lesser than the male tribal adolescents in Extremely High, Average and Extremely Low level of Science Achievement but female tribal adolescents are slightly greater than the male tribal adolescents in Above Average, Average, Below Average and Low level of Science Achievement. The percentage of male and female tribal adolescent are equal in High level of Achievement in Science.

Objective(iv): *To explore correlation between reasoning ability and science achievement of tribal adolescents of Anuppur district.*

Hypothesis (iv): *There exists no correlation between reasoning ability and achievement in science of tribal adolescents of Anuppur district.*

Table-5: Correlation between Science Achievement and Reasoning Ability

Gender	N	Mean	SD	Pearson r	p-value	Result
Reasoning Ability	214	43.68	13.943	0.955	0.000	S**
Achievement in Science	214	22.64	7.414			

Table-5 shows that the mean score of Reasoning Ability and Science Achievement of tribal adolescents are 43.68 and 22.64 respectively. The standard deviation of Reasoning Ability and Achievement in Science of tribal adolescents are 13.943 and 7.414 respectively. The calculated Pearson r is 0.955 ($r > 0.7$) and p-value is 0.000 (< 0.05) which is significant at 0.01 level of significance. Therefore, the above hypothesis is rejected at 0.01 level of significance. This shows that Reasoning Ability and Science Achievement of Tribal Adolescents are strongly correlated to each other. The relationship between Reasoning Ability and Science Achievement are represented by scattered-graph given below:

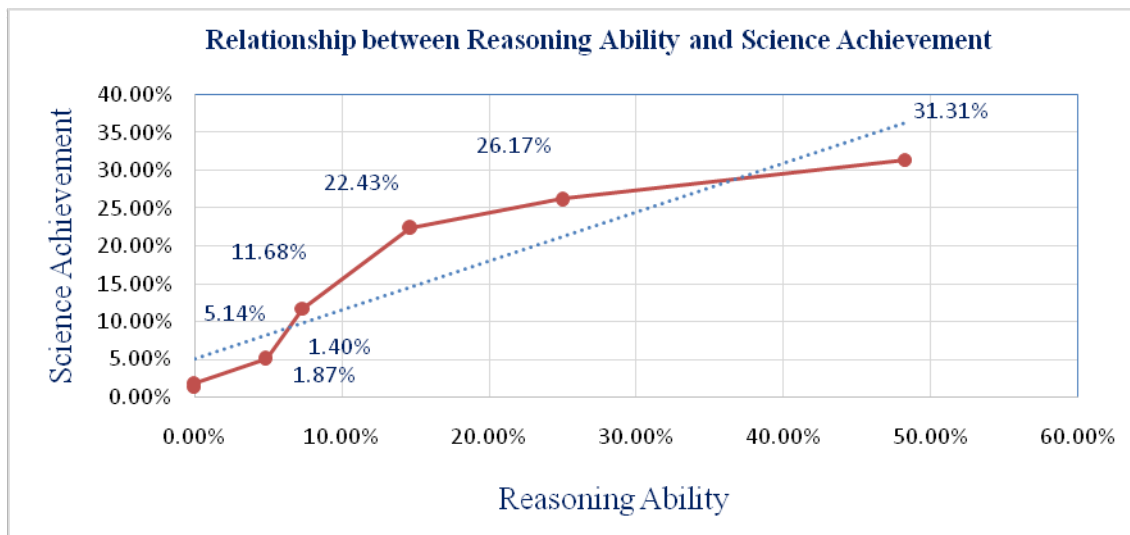


Figure-4: Relationship between Reasoning Ability and Science Achievement of Tribal Adolescents

Figure- shows that the sign of the correlation coefficient is positive and shape of the relationship is linear therefore Reasoning Ability and Science Achievement of Tribal Adolescents are strongly correlated to each other.

Discussion

This study has indicated that maximum number of tribal adolescents have grade-G, grade-F and grade-E(Extremely low, low and below average level) of reasoning ability and a least number of adolescents have grade-D and grade-C(Average and Above Average level) of reasoning ability. Any adolescents are not having grade-Bor grade-A(High or Extremely High level) of reasoning ability which is very important for competitive exams. The findings show that tribal adolescents of secondary level have not performed good in reasoning ability and it is required to facilitate them such exercises and practices. This evidence is consistent with the research findings of Singh et al, (2019).

The findings are in the same line of a study on the effect of reasoning skills on student's achievement in Biology (Nnorom N R, 2013) which indicates that the students with high reasoning ability of skills done better performance in Biology than those students who had low level of reasoning ability. This study is congruence with the study of Kanimozhi P (2015) that shows positive correlation between reasoning ability and mathematical achievement of higher secondary students.

The findings of the study reveal that the maximum number of the students have grade-G, grade-F and grade-E(Extremely low, Low and Below Average level) of Science Achievement and a few students have grade-D, grade-C, grade-B and grade-A(Average, Above Average, High and Extremely High level) of Science Achievement. Therefore, it is concluded that tribal adolescents of secondary stage are not good in Science knowledge. Furthermore, this study also revealed that gender does not have any effect on Science Achievement. Both male and female students are even in Science Achievement. Finding of the study reveals that there is no interaction between science Achievement and gender. Achievement in Science does not depend on gender (Piraksa C et al, 2014).

Conclusion

Today India is known as the young country in terms of youth population. Major portion of our young population is working in science and technology and in terms of

scientific manpower and brainpower our country has become a strong country. But a notable number of our population is not representing his part in this scenario. Tribal adolescents are not expressing much interest in science subjects. They must be encouraged and taught to come up to the level of main stream society. They should encourage not only to understand the technologies but to create their own technology with extensive participations of native origin. Now science has given significant contribution to the national development and it can play an important role to bring these indigenous and deprived people to the main stream society. Policy makers, school teachers and other stakeholders should pay attentions and make effort to motivate tribal adolescents.

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8. Envisioning Future Model of the Four-Year Teacher Education Programme in the light of the National Education Policy-2020

- **Kaushal Kishore** , Professor, Head, Department of Teacher Education& Dean, School of Education, Central University of South Bihar, Gaya. Email: klkr78@gmail.com
- **Chandan Shrivastava** , Assistant Professor, Department of Teacher Education, School of Education, Central University of South Bihar, Gaya. Email: chandan.cusb@gmail.com
- **Manish Kumar Gautam** , Assistant Professor, Department of Teacher Education, School of Education, Central University of South Bihar, Gaya. Email: sana.manish@gmail.com

Abstract

As per changing world of the 21st century learners, there is an urgent need to strengthen the professional role of teachers in India. Recently, the National Education Policy (NEP)-2020 has also come up with new pedagogical and curricular restructuring for the school education. Thus, the existing teacher education programmes have to be revisited, reformed, and reoriented again to meet these contemporary changes. On this line, the NEP-2020 has taken a bold step to completely revamp the existing models of Teacher Education Programmes and come out with new progressive programmes for preparing teachers. Towards this, the policy document strongly recommends to develop a new model of 4-year B.Ed. programme as essential for becoming a teacher in future and has identified several contemporary issues related to Teacher Education which must be addressed through the future model. But, before developing such model, there are many concerns which need to be taken into consideration. Hence, this paper intends to discuss some major concerns of Teacher Education at contemporary time and to visualise the future model of 4-year B.Ed. programme in the light of NEP-2020. The paper begins with a brief note on the present scenario of teacher education in the country, followed by highlighting the key expectations of NEP-2020 for the future model. Then, the paper discusses a framework for the future model of 4-year teacher programme, on the basis of previous experiences and the NEP expectations.

Key words: Teacher Education, Professional Development, NEP-2020, 4-Year B.Ed. Model

Introduction:

In last two decades of 21st Century, the Indian classrooms have become every diverse in nature with the huge entry of learners from different socio-cultural backgrounds. To address this scenario, more focus needs to be laid on nurturing teachers who would be effective facilitators, reflective in approach and sensitive toward their social realities. The National Curriculum

Framework for Teacher Education(NCFTE, 2009) has already expressed its serious concern over the quality aspect of teacher education in India. The existing system is still not meeting the required need of providing professionally competent and committed teachers after completing the initial teacher preparation programmes. In addition, the changing world of 21st century learners and the societal needs expect remarkable transformation in the professional role of a teacher. Thus, teacher education programme has to be revisited, reformed, and reoriented again to meet new demands. In this context, the National Education Policy (NEP)-2020 has taken a big step to completely revamp the existing models of Teacher Education Programmes and come out with new progressive models for preparing teachers. Towards this, the NEP-2020 strongly recommends to develop a new model of 4-year B.Ed. programme as essential for becoming a teacher in future. But, before developing such model, there are many concerns which need to be taken into consideration. The NEP-2020 has also identified several contemporary issues related to Teacher Education which must be addressed through the new 4-year B.Ed. programme model. This paper intends to discuss some major concerns of Teacher Education at contemporary time and to visualise the future model of 4-year B.Ed. programme in the light of NEP-2020.

Present Concerns in Teacher Education:

It is noteworthy that India has one of the largest systems of Teacher Education in the world (Juneja, 2010).With the growing population, the demand for quality teachers in the country is always high. The contemporary developments infer that Teacher Education in India is in a thoughtful process of revitalisation. With the paradigm change, Teacher education in this twenty-first century is not about just teacher training. It is also about developing professional leaders in the field of education who would be proactive problem-solvers and empowered researchers. Teachers are expected not only to have the knowledge and competence to teach well but also need to have a strong commitment and passion to the profession and to the students (Darling-Hammond, 2000). Teachers need to develop not only content and pedagogical mastery, but also the mastery of understanding their learners and facilitating their learning. Desai (2012) pointed out that main issue with the teacher-education programmes is their inclination towards memory-based content for the trainees. This leads to inactive involvement of students in the Teacher Education programmes. As an outcome, there is lack in the development of life skills among the trainees, which are essential for their all-round professional preparation.

In order to give teachers, the opportunity of sound professional development along with content & methodology, Kumar & Kumar (2016) recommended that there is a strong need to integrate teaching competencies and life skills with the curriculum of teacher education programmes. Goel & Goel (2012) remarked that now several innovative practices are being tried out inside as well as outside the classroom which include project-based learning, development of thinking skills and discovery learning approaches. They added that many teachers are not even familiar about the recently introduced concepts of the curriculum and many are not equipped to properly implement them. Similarly, this has been also observed by Justice Verma Commission that teacher educators are neither professionally qualified nor committed to their profession. The quality of pre-service teacher education is not encouraging in terms of productivity and enhancing the overall learning of the students (Govt. of India, 2012).

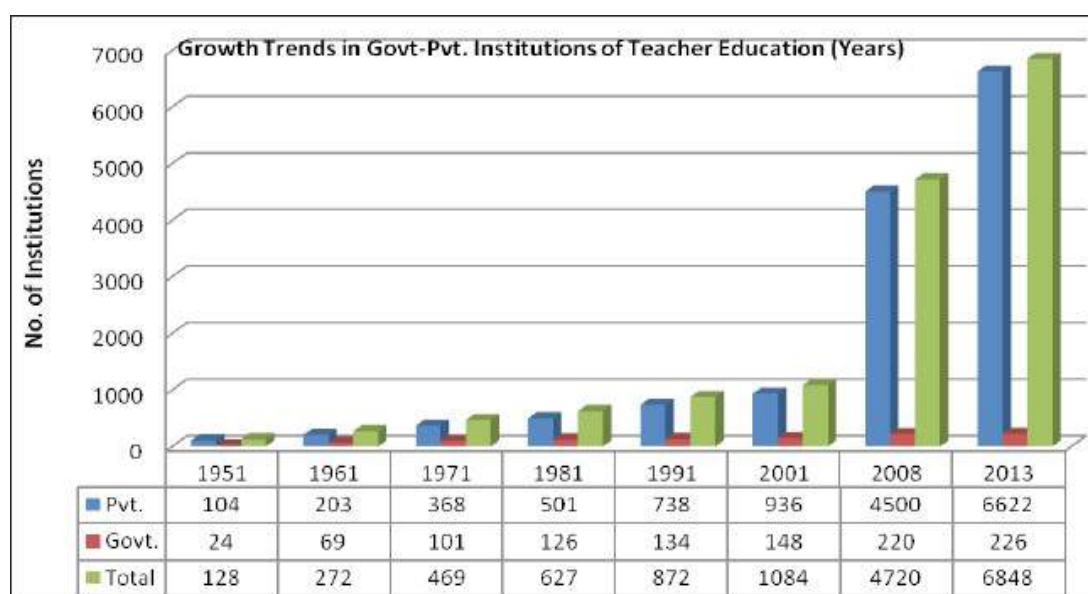


Figure: Regional diversity in the growth of teacher education institutions

Source: All India Survey of Higher Education (MHRD, 2013)

Earlier, the report of the National Commission on teachers-I (1985) emphasised that there is an urgent need to break the existing isolation of teacher training institutions from universities. In order to strengthen its bond with the university, the teacher education programmes may be introduced in an integrated manner. And, the nature of Teacher Education programmes should be recognized as interdisciplinary (Chauhan, 2004). Another issue is that Teacher Education has also become isolated from the educational system of schools to a greater extent. Chauhan (2004)

further emphasised that in order to break this isolation of Teacher Education from schools, immediate steps may be taken to strengthen extension services of Teacher Education Departments. In fact, extension services should be established in every Teacher Education Institution, be it of any level- pre-primary, primary, secondary or higher. Justice Verma Commission's Report (2012) has also highlighted the need of locating teacher education institutions in multi and interdisciplinary academic environment by bringing in a great deal of interdisciplinary thinking and inviting interdisciplinary personnel to contribute toward educating teachers and educationists. This approach has been in practice at the Regional Institutes of Education, affiliated to NCERT, Indian Institute of Education, Pune and Central University of South Bihar, Gaya, and in some other institutions wherein interdisciplinary faculties are collaboratively involved in teaching-learning processes and research activities.

Education has to meet current needs while anticipating emerging trends and challenges for the future. The twenty-first century is a time of rapid change in an increasingly diverse and complex world. Now, the schools will need to operate with different paradigms of learning. It is difficult to predict how the world will look like in the next decade, yet teachers need to prepare their students to meet the challenges of the global workplace and society in this new millennium. The coming generation of students will be more equipped with new technologies and global knowledge. Therefore, Elmore (2010) describes the new generation as being overwhelmed, overconnected, overprotected and overserved. In this light, the NEP stresses that teachers have to upgrade themselves so that they may be competent enough to introduce contemporary subjects such as Design Thinking, Artificial Intelligence, Organic Living, Holistic Health, Environmental Education, Global Citizenship Education etc. to the learners. These are still neglected in our Teacher Education Curriculum. This can also be observed that the present curriculum of Teacher Education programmes is hardly giving any space to Indian values, culture and Indigenous knowledge system which must be inculcated in teachers first to further inculcate them in our children. In lack of this, the children are unable to appreciate their Indian tradition and feel proud on it.

Therefore, the NEP-2020 clearly expects teachers to be at the centre of the fundamental transformations in the education system. The big structural change in school education will demand prospective teachers to be prepared by keeping these changes in mind and they must be capacitated to fulfil these new demands. And, the aim of education will not be focused on

cognitive development only, but also to build character and productive individuals equipped with the key 21st century skills, with new approach of critical thinking and more holistic, discovery-based, discussion-based, inquiry-based, and analysis-based learning. But, how to prepare such teachers, this is a big question before us for which the NEP recommends to develop a new model of 4-year B.Ed. programme.

What NEP says about the 4-Year B.Ed. Programme:

The NEP-2020 is proposing a 4-year integrated B.Ed. dual major holistic bachelor programme as essential for becoming a teacher in future that will offer a variety of knowledge content and pedagogy, and will include robust practicum training/internship in the form of student-teaching at local schools. It declares that this programme will be the minimal degree qualification for School teachers by 2030. As mentioned in the policy document, the future 4-year integrated B.Ed. programme will be a dual-major holistic Bachelor's degree, in Education as well as in a specialized subject such as a language, history, music, mathematics, computer science, chemistry, economics, art, physical education, etc. Beyond the teaching of cutting-edge pedagogy, the NEP demands Teacher Education to be grounded in sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more (NEP 2020).

The NEP-2020 has also clearly mentioned that this 4-year integrated B.Ed. programme will be only offered in multi-disciplinary Higher Education Institutions. The document says that teacher education will gradually be moved into multidisciplinary colleges and universities by 2030. The new 4-year integrated B.Ed. programme will include training in time-tested as well as the most recent techniques in pedagogy, including pedagogy with respect to foundational literacy and numeracy, multi-level teaching and evaluation, teaching children with disabilities, teaching children with special interests or talents, use of educational technology, and learner-centred and collaborative learning. This should also emphasize the practice of the Fundamental Duties (Article 51A) of the Indian Constitution along with other Constitutional provisions while teaching any subject or performing any activity. In addition, the programme should also appropriately integrate environmental awareness and sensitivity towards its conservation and sustainable development. This will help in making environmental education as an integral part of school curricula too.

It is noteworthy that the NEP-2020 is stressing about multi-disciplinary model of Higher Education Programmes with CBCS approach. So, the 4-year B.Ed. programme has to be also developed on the same line which is lacking now. For example, the students entering into this programme have relevant choices of courses which really address their interest and enhance their skills. This basket of courses can't be possible to offer by a single department. Therefore, CBCS is the preferred approach to meet the objective. To mention, the existing teacher education programmes are mainly theoretical in content and less experiential in nature. There is little scope of flexibility, creativity and innovation in such programmes due to heavy load of content. Focus on developing effective skills in prospective teachers is largely missing in such programme. In absence of such skills and knowledge, the new teachers are becoming unfit for providing quality teaching in present schools. Therefore, the NEP expects the new model to overcome these limitations.

Now, the key issue is to re-design the 4-year integrated B.Ed. programme in the light of the expectations placed by NEP-2020 since none of the existing programmes are completely fulfilling its parameters. Uniformity and clarity of structure is largely missing in the current 4-year B.Ed. programmes due to emergence of multiple formats. For example, the NCTE (Recognition Norms and Procedure) Regulations-2014 in its Appendix-13 has given norms and standards for 4-year integrated programme leading to B.A.B.Ed./B.Sc.B.Ed. degree. Again, in 2018, the NCTE has added two new appendix 16 and 17 related to another format of Four years Integrated Teacher Education Programme for Pre-primary to Primary and Upper-primary to Secondary. Then, in 2019, the NCTE has brought another revised version of the appendix-16 and 17. In this way, two different types of formats are existing at present for the 4-year integrated B.Ed. programme. Now, which one is more suitable to be further developed as stated in the NEP is a big concern. To decide upon this, we need to analyse various points in coordination such as what will be the preferred approach for the integration of programmes to develop the new model of 4-year integrated B.Ed. programme? What will be the key line of thought to develop structure and content of the new model? Which kinds of innovations can be brought in the future model, keeping different issues in mind? These questions are very complex to answer which needs a lot of discussion and academic discourse. However, the next section tries to address these questions evidently and to provide a framework for the new model of 4-year B.Ed. programme.

Envisioning the new model of 4-year B.Ed. Programme:

It is very important to develop a clear approach of integration for the two programmes i.e., UG Programme (3 years) and B.Ed. Programme (2 years). In this context, a model of integration for the aforesaid degree programmes is being proposed here on the basis of the experience gained from the implementation of current four-year integrated B.A.B.Ed./B.Sc.B.Ed. programme at the Department of Teacher Education, Central University of South Bihar, Gaya (India). The learning from such experience tells that the proposed model of integration should acknowledge the 4-year integrated B.Ed. programme with individual identity of the two concerned programmes. It is also proposed that the content of this integrated programme should be re-designed in a multidisciplinary approach. As per our understanding, the NEP-2020 is also in favour of integrating two programmes with dual degree approach. This is also supported by the UGC specification of degrees, 2014.

There is need to also understand that there are certain skills and competencies expected by the NEP-2020 from the prospective teachers which cannot be inculcated/developed by putting them in the format of semester-based courses. Rather, the pedagogical approach to teach these courses demand to keep them free from the boundaries of semester and monotonous fixed approach of assessment. Our learning from the existing 4-year B.A.B.Ed./B.Sc.B.Ed. model is that we need to think beyond semester limit for certain skill-based and competency-based courses. This may be like ‘Courses across the Curriculum’ where the students have flexibility to effectively complete them with their pace and the grade will add to the final evaluation sheet. Such as, the courses related to ICT, language proficiency, teaching skills demonstration may come into this category of courses.

It is also proposed to change this existing approach of ‘Teacher-led Learning’ to ‘Learner-led Teaching’. In the former approach, the teacher usually teaches all content and students have to learn them accordingly. Whereas, in the later approach, the teacher will provide the basic core contents in the form of Digital and Text materials in organised way. Then, the students will have to study them first according to their own pace and the teacher will mainly focus on teaching of those contents where students need teacher’s support. This will reduce the teaching load as well as content load, and the time will be creatively used by the teachers for further strengthening the content of their courses and other academic works.

As a Nation of hope, we are able to see great opportunities in the global crisis of COVID19 pandemic. We have quickly shifted many of our works to digital platforms which have not only made our work easy but also provided many scopes of innovation and development. This opportunity should also be gained to the teaching-learning process of the new 4-year B.Ed. programme. Those contents which are suitable for digitalization should be efficiently mapped and offered to students. One of the significant additions in the new programme should be the learning of Online Etiquettes for teaching-learning. This is highly required and presently missing in our teachers as well as learners since we have recently accepted this online mode of teaching.

We must move towards Choice based Credit system (CBCS) for the 4-year B.Ed. dual degree course with a big basket of electives so that the students can really have choice of courses. The courses on Educational Leadership, Community participation, Art-integrated Learning, Artificial Intelligence, Coding, Mental Health, Talent identification in learners, Indian Education Heritage etc. may come into this big basket of electives. The conventional approach of classroom teaching should also be enriched with new ideas of blended learning, flipped learning, workshop-mode class, project-based learning, experiential learning etc. The misconception about these new approaches is that they take time.

Conclusion:

For visualizing a new model of Teacher Education, we must think differently. The new model should be designed with new approaches and with a clarity of difference from the existing model. However, this doesn't mean that the new model will not have any such content which is exiting now. The idea is to visualize the new model in the changing world of new learners. Therefore, the new pedagogical modes demand to teach many concepts at a time with durable learning outcomes in the learners. We strongly believe that what we expect to be done in a school, should be primarily expected to be done in a Teacher Education Institution. Hence, a Teacher Education Programme must be organically practicing such activities as suggested in the NEP-2020, for example Bag-less day or week, learning craft work from local people etc. Therefore, these practices should not be neglected in a Teacher education institution. An approach of holistic and collaborative learning will effectively assimilate these practices in the behaviour of prospective teachers through the new model of 4-year integrated B.Ed. programme.

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9. Cyber Crime Awareness among B.Ed. Students - A Study

- **Dr. T. Manichander**, Assistant Professor, Department of Education, Assam University (A Central University), Silchar, Assam

Abstract

The present study was explored to find out the cybercrime awareness among B.Ed. students in terms of area of residence, age and methodology. Survey method was used in the present study. The purposive sample consisted of 80 B.Ed. students. The data were collected through Cyber Crime Awareness Scale (CCAS-RS) developed by S. Rajasekar. In order to analyse the data, t-test, F-test and Scheffe's post hoc test were used. Results indicated that there was significant difference in cyber crime awareness of B.Ed. students with regard to their area of residence, age, and methodology.

Keywords: Cyber Crime Awareness, B.Ed. Students.

Introduction

Cybercrime, or computer-oriented crime, is a crime that involves a computer and a network. The computer may have been used in the commission of a crime, or it may be the target. Cybercrime is the crime that is done utilizing computer and internet. Cybercrime is the quickly developing area of crime. Both the computer and individual can be the victim of cybercrime. Criminals are exploiting the fast internet speed and convenience provided by the internet to perform huge and distinctive crimes. Cybercrime tends to be any crime related to information theft, hacking, virus, Trojan attack, stealing money while transactions and so on.

Need and Significance of the Study

Cybercrime is a term utilized comprehensively to depict criminal activity in which computers or networks are a tool, a target, or a position of crime and incorporate everything from electronic cracking to forswearing of service assaults. It is additionally used to include traditional crimes in which computers or networks are utilized to empower the illicit activity. The amount of research on cybercrime awareness has recently increased, since this growing problem is turning into a significant issue. Now-a-days, the use of internet is inevitable, as the number of Internet users increases, so does the occurrence of cybercrimes. The students can be victims of

cybercrimes, just like all other users of Internet. The purpose of this research is to protect them by giving empirical evidence from the policy makers in combating the assaults of the cybercrime and to recommend few precautions for its prevention. The results of the present study will be beneficial to the teacher educators and academicians aware their students about cyber crimes in the digital world and how their behaviour affects them. It could also assist the society with understanding how to use Internet shrewdly and securely. So, there is a felt a desperate need to make B.Ed. students aware of cybercrimes. Since no research has been done on cybercrime awareness among B.Ed. students in Karimnagar, hence, the present study has contemplated.

Literature Review

Pankajbhai Suvera and Priteshkumar R. Tailor (2020) attempted with cyber-crime awareness: a comparative study of male and female B.Ed. trainees. For this purpose, a sample of 360 B.Ed. trainees was chosen from Navsari district in Gujarat. Cyber Crime Awareness Scale by S. Rajasekar was used for data collection. t-test was used for data analysis. Findings revealed that there was significant difference between cyber-crime awareness of male and female B.Ed. trainees; there was significant difference between cyber-crime awareness of rural and urban B.Ed. trainees; and there was significant difference between cyber-crime awareness of OPEN, SEBC and ST-SC B.Ed. trainees.

Moanes H. Tibi, Kholod Hadeje and Bashier Watted (2019) studied cybercrime awareness among students at a teacher training college. Survey method was conducted on a sample of 73 Arab students from a teacher education college in the center of Israel. A questionnaire, which was developed by the researchers with Google Forms, was used as for data collection. The data were analysed using Mean and SD. Result indicated that the level of cybercrime awareness among the students was inadequate. Findings also showed that year of study, major subject, and prior computer knowledge didn't yield any statistically significant differences. Further, the study revealed that there was no correlation between students' prior computer knowledge and their susceptibility to being victims of cybercrimes.

Kumaravelu (2018) attempted with awareness of cyber crime among B.Ed. teacher trainees in Puducherry region. Normative survey method was conducted on a simple random sample of 327 B.Ed. teacher trainees from Puducherry region. In order to collect data, Cyber Crime Awareness Scale (CCAS-RS) by S. Rajasekar was used. t-test revealed that there was

significant difference in cyber crime awareness of B.Ed. teacher trainees in terms of sex, locality, educational qualification, exposure to computer, and own computer. F-test revealed that there was significant difference in cyber crime awareness of B.Ed. teacher trainees with respect to type of management.

Chandra Shekhar and Samriti Nathyal (2018) conducted a study on cybercrime awareness among B.Ed. teacher trainees. Survey method was used for the study. The sample consisted of 80 teacher trainees from two B.Ed. colleges in the Jammu region. Cyber Crime Awareness Scale (CCAS-RS) developed by Rajasekar, S. (2011) was used to collect the data. The data were analysed employing by Mean, SD, and t-test. Results found that insignificant role of gender and significant role of locality in cybercrime awareness among B.Ed. teacher trainees.

Taruna Malhotra and Mona Malhotra (2017) investigated cyber crime awareness among teacher trainees. A random sample of 240 teacher trainees was chosen from 6 colleges in Haryana. Cyber Crime Awareness Scale (CCAS-RS) developed by Rajasekar, S. (2011) was used for data collection. The obtained data were analyzed by employing criterion Mean \pm SD, t-test and 2-way ANOVA (2x2 factorial design). Result showed that most of the teacher trainees had moderate level of cybercrime awareness. Findings also indicated that there was a significant influence on the level of cyber crime awareness among teacher trainees with respect to their gender and locality. Further, the study revealed that there was a significant two factor interactive effect of variables on the level of cyber crime awareness among teacher trainees.

Anupam Bansal (2017) analysed comparison of cyber crime awareness among science and social science perspective teachers. In this study, survey method was adopted. A sample of 50 B.Ed. students was chosen from KIIT College of Education, Gurugram through purposive sampling technique. Cyber Crime Awareness Scale by S. Rajasekar (2011) was used for data collection. t-test revealed that there was significant difference between B.Ed. science and social science students in their cyber crime awareness.

Objectives of The Study

- To study the cyber crime awareness among B.Ed. students based on area of residence.
- To study the cyber crime awareness among B.Ed. students based on age.
- To study the cyber crime awareness among B.Ed. students based on methodology.

Hypotheses

1. There is no significant difference in cybercrime awareness among B.Ed. students with regard to their area of residence.
2. There is no significant difference in cybercrime awareness among B.Ed. students with regard to their age.
3. There is no significant difference in cybercrime awareness among B.Ed. students with regard to their methodology.

Methodology

Normative survey method was adopted for the present study. A sample of 80 B.Ed. students was selected in Karimnagar, Telangana state through purposive sampling technique. Cyber Crime Awareness Scale (CCAS-RS) developed by S. Rajasekar was used in order to collect data. The data were analysed through SPSS by employing t-test, F-test and post hoc test.

DATA ANALYSIS AND INTERPRETATION

Table 1: Cyber Crime Awareness among B.Ed. Students based on Area of Residence

Area of Residence	N	Mean	Std. Deviation	t-value
Rural	47	158.49	13.108	4.386**
Urban	33	172.21	14.686	

Note: **Significant at 0.01 level.

Table-1 reveals that the calculated t-value 4.386 is significant at 0.01 level. This value is due to the mean scores difference as the mean value of rural students is 158.49 and it is 172.21 for urban students. This shows that there is significant difference in cybercrime awareness among B.Ed. students in respect of area of residence. Therefore, the hypothesis-1 is rejected. The study conducted by Pankajbhai Suvera and Priteshkumar R. Tailor (2020) supported the result of the present study.

Table 2: Cyber Crime Awareness among B.Ed. Students based on Age

Age	N	Mean	Std. Deviation	t-value
Upto 22 years	49	166.94	15.412	2.134*
Above 22 years	31	159.74	14.227	

Note: *Significant at 0.05 level.

Table-2 shows that the calculated t-value 2.134 is significant at 0.05 level. This value is due to the mean scores difference as the mean value of the age group upto 22 years is 166.94 and it is 159.74 for age group above 22 years. This shows that there is significant difference in

cybercrime awareness among B.Ed. students in respect of age. Therefore, the hypothesis-2 is rejected.

Table 3: Cyber Crime Awareness among B.Ed. Students based on Methodology

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2421.426	2	1210.713	5.814**	.004
Within Groups	16034.774	77	208.244		
Total	18456.200	79			

*Note: **Significant at 0.01 level.*

From Table-4, the calculated F-value 5.814 is significant at 0.01 level. This indicates that there is significant difference in cybercrime awareness among B.Ed. students in respect of methodology. Therefore, the hypothesis-3 is rejected.

Further to know which group has more influence on cybercrime awareness, post hoc test was applied and the results are given below in Table 3.1.

Table 3.1: Post hoc Test of Cyber Crime Awareness among B.Ed. Students based on Methodology

Methodology (I)	Methodology (J)	Mean Difference (I-J)	Std. Error	Sig.
Mathematics	Biological Science	2.783	4.843	.848
	Social Science	11.732*	3.574	.006
Biological Science	Mathematics	-2.783	4.843	.848
	Social Science	8.949	4.622	.160
Social Science	Mathematics	-11.732*	3.574	.006
	Biological Science	-8.949	4.622	.160

*The mean difference is significant at 0.05 level.

From Table-3.1, it can be seen that there is mean difference between mathematics methodology and social science methodology students in their cybercrime awareness at 0.05 level of significance. This reflects that mathematics methodology students are significantly higher than social science methodology students with respect to their cybercrime awareness.

Findings and Discussion

Urban students have high cybercrime awareness than rural students. The greater part of the offenses in act are familiar to the urban students. Yet, rural area students are absolutely least bothered about this awareness of demonstration. students of both the localities are equally educated about the digital loopholes and cybercrime and the laws that can forestall them. There is by all account's slight distinction in their mindfulness part. They likewise have a thought regarding safety efforts to be taken to utilize Internet on as well. The students of Urban area are almost always with their internet gadgets whereas the students of rural area have their limitation for that.

The age group upto 22 years are better than the age group which is above 22 years in their cybercrime awareness. Cybercrime insights alongside an expanding number of trials considers demonstrate that youngsters don't generally act morally in online exercises and thus, there is an opportunity of each web client turning into a victim. Being exposed to such news, younger age group is well aware of the fact of consequences. Actually, people of lesser age group's discernment will assist them with choosing their activities while chipping away at PCs and utilizing web. All the people who use web know about the crimes occurring on the internet. Hence, these younger age group have a very good awareness level than the older group.

Mathematics methodology students are significantly higher than social science students in their cybercrime awareness. Students with more prominent mindfulness and view of cybercrime are more careful about the equivalent. Students who keep on in close touch with internet additionally have better attention to the cybercrime. The finding calls attention to that students of social science methodology didn't perceive the potential of internet as an entry for internet learning, e-consequences, e-library and etc. Whereas the use of web by the approach of mathematics methodology students are a level high in spite of the dangers, the Internet can likewise be a positive device for students learning just as the empowerment and prosperity. Albeit promising, the benefits are not unbounded. More established students appear to profit more from online guides than more youthful who are under the studies of methodology of social sciences.

The most youthful of students really do more terrible in digital configurations contrasted and conventional formats. There is likewise proof that the Internet may assist with engaging youth, especially those in impeded conditions.

Recommendations

The present study has the following educational implications for B.Ed. students.

- Higher educational institutions ought to embrace an active approach to developing cybercrime awareness among the students in order to develop their knowledge of cybercrimes and about how to secure themselves from potential cyber-attacks.
- Awareness must be created among students to manage web-based media setting to keep data secured.
- Create awareness and conduct more programs related to making reinforcements of significant records and envelopes to ensure significant documents and records remain safe without any glitches or is wrecked by an effective aggressor.
- Students can protect themselves from spam, hacking, identity theft, phishing and so forth.
- As cybercrime is the significant danger to all, certain means ought to be taken at the level for forestalling the digital wrongdoing.

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10. An Evaluation of Programme for Enhancing Academic and Behavioural Learning Skills (PEABLS) for Enhancing Behavioral and Cognitive Skills among Students with Learning Difficulty

- Dr. Pratima Kaushik, Assistant Professor, Department of Psychology, Jesus and Mary College, University of Delhi, New Delhi-110021, India.
- Dr. S.P.K. Jena, Professor, Department of Applied Psychology, South Campus Unit, University of Delhi, New Delhi-110021, India.

Abstract

The present study aimed to develop behavioral and cognitive aspects of self-regulation and resilience in students with learning difficulty using the Program for Enhancing Academic and Behavioural Learning Skills (PEABLS). This study is a quasi-experimental pre-test post-test research design that included fifty-four school-going children, in the age range of 6-12 years, identified with learning difficulty and behavioral issues for the past two years. Each student participated in the PEABLS intervention (both group and individual) for two months (15 sessions). The PEABLS focused on enhancing self-regulation, resilience, and academic performance by strengthening their executive functions, coping skills, and goal-directed behavior. Results suggest significant positive changes in psychosocial and cognitive domains among students in the experimental group. The post-intervention assessment showed improvements in Visual and Auditory-Perceptual Components, Cognitive and Behavioral Components. Self-Regulation and Resilience Domains proved to be significant predictors in academic performance. The study also suggests that the PEABLS program can render strong social support to students with learning difficulty.

Keywords: Learning difficulty, PEABLS intervention, Low academic performance, cognitive and behavioral skills, Self-regulation, Resilience

Introduction

Learning difficulty is seen as difficulties in learning one or more of the basic academic skills and identified through academic grades below the anticipated scores for students of the same age, class, and school environment. Studies suggest that low socioeconomic and cultural status harm the academic performance of children. Such unfavourable circumstances negatively impact their cognitive and academic performance leading to cumulative failures causing a higher risk of developing learning difficulty (Fonseca, 2008; Fletcher, 2009).

Personal, emotional, and socio-contextual factors are strong determinants of students' academic performance. Students engage best in learning when they have a choice and can control their context. Students' engagement in their learning context helps them gain self-regulation over their thinking and learning processes (McCombs & Miller, 2008; Jukes, McCain, & Crockett, 2011). Training self-regulatory strategies involve goal-setting, self-instruction, self-monitoring, and self-reinforcement. Such training helps students build upon their metacognitive and task-specific processes to find solutions to problems. Academic achievement and better socio-emotional skills act as a protective factor, a useful component for enhancing students' resilience (Elbaum & Vaughn, 2001). Improving self-regulation and resilience skills in students having difficulty learning empowers them to become emotionally competent, self-motivated to plan strategically towards smart goals.

Program for Enhancing Academic and Behavioural Learning Skills (PEABLS) is an indigenized intervention plan inclusive of activities/ tasks closely related to students, which helps teach cognitive skills. It was planned to understand and provide a practical solution to students with difficulty in learning. This accessible school-based intervention served to enhance their self-regulation skills, resiliency, and academic remediation.

The PEABLS

This program is a holistic one, focused on enhancing the following components:

(i) *Self-Regulation*: It is a constituent of executive functioning that strengthens self-monitoring, regulates emotions and impulsivity, and encourages goal-directed behavior. In this process, the student learns to identify their negative beliefs and negative experiences. The metacognitive skills enable them to do better planning and multitasking. By fostering self-regulation in students with learning difficulties, they can acquire a positive attitude towards learning developed through feedback within teaching-learning relationships that influenced their ability to learn (Mather, Goldstein & Eklund, 2015).

(ii) *Resilience Building*: It focused on inculcation of optimism, realistic thinking, enhancing self-esteem, coping skills, and goal setting. The program focused on teaching how to resolve interpersonal conflicts, make assertive communication and deal effectively with conditions of aggressive spells, passivity and make effective decisions in daily states. This component's development referred to LeDoux's hierarchical model (LeDoux, 2000), promoting effective decision-making in different everyday situations. Resilience building helped students enhance

emotional reactions by focusing on the interaction's affective and behavioral components to manage behaviors such as aggression, impulsivity, and social withdrawal.

(iii) *Academic Remediation*: This involved the Individualized Education Programme, which was conducted after school hours at a university lab situated near their residence to cater to the conceptual deficits and cope with the school curriculum. It is comprised of identifying the baseline performance of students and design teaching according to their specific needs. It included classroom teaching, home assignments, and art-based activities.

The Structure:

The PEABLS was carried out for 15 sessions, 60-minute lessons twice a week. The PEABLS consists of three components- (i) self-regulation therapy, (ii) resilience-building training, and (iii) academic remediation. The sessions started with the Yogic practice of *Surya Namaskaar* and ended with 10 minutes of Om Chanting meditation. The first two components of the program were conducted at school premises during school hours. With the help of several theme-based role-play, animated short films, plays recitation of moral stories, behavioral rehearsals, behavioral contingencies, and coping self-statements. The third component of academic remediation involved the Individualized Education Programme, scheduled after school hours to cater to their conceptual deficits and cope with the school curriculum. Table 1 depicts the detailed PEABLS session plan layout.

Individual Education Programme (IEP) is a cornerstone of academic remediation strategy for students. IEP helped to foster academic skills and cope with the related scholarly deficits. Each student's current academic performance and abilities in the concerned area were assessed. After baseline assessment, each child's goal achievement was specified, including educational and other relevant functioning skills. After attending the program, students' advancements were evaluated to get a clear idea about the student's objective and goal achievement.

Table 1: Session Plan Layout

No. of Sessions	Module Title	Detailed Description of Module Activities
Session 1	<i>Thoughts and Feelings Check</i>	The students are encouraged to discuss their thoughts and come out with their recent activating events and what they "said to themselves."
Session 2	<i>Thinking Style</i>	Short stories of Panchatantra were recited with themes related to optimism, hopefulness, grit, and gratitude. They also enacted those characters.
Session	<i>Challenging Beliefs</i>	Students performed role play of ByomkeshBakshi, a famous Indian detective, and reached

3		the actual cause of the situation/problem to develop self-control and reduce emotions escalating.
Session 4	<i>Mindfulness-Based Self-Regulation Training</i>	Students learned to evaluate and categorize their thoughts related to a problematic situation and putting them in perspective. Using difficult real-life conditions, they learned to step back from emotionally charged states and appraise themselves to control their intense emotions and behaviors.
Session 5	<i>Self-Reflection</i>	During this metacognitive learning session, students learned to identify their specific behavior that needs change through self-monitoring and develop self-control by reducing escalation of emotion and later self-rewarding on the attainment of goals.
Session 6	<i>Encouraging Neurologically Based Executive Functioning Skills</i>	This session focused on promoting response-inhibition, strategic planning, and working memory. The specific skills to attain these tasks include planning, organization, time management, self-control, task initiation, metacognitive skills, flexibility, and attention. Activities such as board games, musical chairs, my leader say games, and freeze dance was demonstrated.
Session 7	<i>Organization Skills</i>	Students were involved in the group tasks such as; wordplay, puzzles/mazes for directions, color moves, treasure hunt, drawing.
Session 8	<i>Outdoor Physical Activities</i>	Students were taken to the open green ground with direct interaction with themselves, others, and the environment under the mentioned rule conditions. They played outdoor games that helped them to learn team ethics and act strategically.
Session 9	<i>Enhancing Working Memory</i>	Students were involved in brainstorming activities, which required mental flexibility to work on the knowledge in an active and quickly retrievable state. It involved games such as chess, sudoku, and crossword.
Session 10	<i>Enhancing Assertiveness and Negotiation Skills</i>	This session taught to stand up for their own and other people's right. Students did role play for situations like aggressive (bullying), passive (pushover), assertive (straight forward speaking). Details explanation of Acronym of DEAL was explained: Describe the problem, Explain how you feel, Ask for change, List of improvement the change would make.
Session 11	<i>Coping Strategies</i>	The importance of coping mechanisms was explained using decreased emotional intensity, goal setting, practice meditation. Peer tutoring was encouraged.
Session 12	<i>Social Skill Training and Graded Tasks</i>	Students learned about breaking tasks into smaller units and make them manageable to reduce procrastination. The importance of self-care was explained.
Session 13	<i>Enhancing Emotional Intelligence</i>	Students were encouraged to make compassionate decisions for themselves and others. Pictures of different emotions via facial expression were shown to understand different emotions. They were also asked to verbally complete an incomplete sentence with five ideas on "I can be kind to others by_____."

Session 14	<i>Problem Solving Skills</i>	Students Learned to solve a problem with a famous story like- 'The Thirsty Crow.' Storytelling sessions enabled to reduce impulsivity or passivity. Take away lessons: (i) Stop and think about the problem, (ii) Identify goals, (iii) Brainstorming, (iv) Decision making based on outcomes, (v) Enacting the solution.
Session 15	<i>Practice Problem-Solving Skills with Personal Situations</i>	Students came up with their problematic situation and followed learnings from session 14 to solve their problems themselves.

Method

Sample

The present study is following a pre-test post-test research design. After taking permission from the authorities, the Principal of the school was approached to facilitate the process. Student's progress report of last two years, teacher's feedback, and parent's account were considered to identify students with a learning difficulty. Students whose ages ranged from 6-12 years (3rd to 7th grade), have average IQ scores, fail in class for two consecutive years, have low classroom participation and co-curricular activity, and have behavioral issues were included in the study. In contrast, students with any physical disability, intellectual subnormality, sensory impairments, or any other developmental disorder were excluded from the study. The enlisted students' parents were briefed about the research, and consent was taken to participate in the study. Fifty-four students were selected to participate in the experimental group. None of them withdrew from the study after the intervention started. The intervention was provided in two locations, i.e., school premises and Psychophysiology Lab, Department of Applied Psychology, University of Delhi.

Procedure:

The participants were screened using the Diagnostic Tool for Learning Disability (DTLD) (Swarup and Mehta, 1993) to rule out the possibility of learning disability. Later, their IQ was estimated using Raven's Colored Progressive Matrices (RCPM) (Raven, 1998). Students who scored ≥ 40 on DTLD and ≥ 50 percentile on RCPM were then subjected to Bender Gestalt Test (BGT) to evaluate for neurological dysfunction (if any) (Koppitz, 1964). Digit Span Test (forward and backward), a subtest of Malin's Intelligence Test for Indian Children (Malin, 1977), was administered to assess working memory status and Problem Behavior Checklist (Veeraraghwan and Durga, 2005) filled by student's respective parent to screen their behavioral and emotional problems. Body Mass Index (BMI) was also calculated. Students were also subjected to self-regulation scale (Hrbáčková & Vávrová, 2014) and resiliency scale for children and adolescents

(Prince-Embury, 2010). The experimental group participants went through three phases, viz. baseline assessment, intervention, and post-assessment.

Results:

Multiple linear regression analysis was applied to participants' cognitive and behavioral data after attending the intervention for two months. It predicted Academic performance (DV) based on DTLD domains (visual and auditory perception) (Table 2), cognitive and behavioral components (Table 3), self-regulation, and resilience subscales (Table 4).

A significant regression equation was found ($R=0.659$, $F(11, 38) = 2.69$, $p < 0.012$), with an R^2 of 43.5 (43.5%). Subjects anticipated Academic performance is equal to $58.85 - 5.02$ (DTLD T) + 6.04 (expressive language) + 5.36 (cognitive abilities) + 5.17 (auditory perception), 5.17 (position in space), and 5.28 (eye hand coordination) (Figure 2). Academic performance (in %) for each participant increased significantly for each predictor unit. EHC, PS, AP, CA, EL and total score on DTLD were significant predictors of academic performance of students with learning difficulty (Table 2).

Table 2: Visual and Auditory Perceptual Components as Predictors of Academic Performance in Students with Learning Difficulty

Predictor Variables	B	Std. Error	β coeff.	t-value
Eye Hand Coordination	5.286	3.056	.872	2.73*
Figure Ground Perception	3.265	3.067	.514	1.065
Figure Constancy	3.643	3.278	.310	1.111
Position in Space	5.175	3.055	.905	2.69*
Spatial Relation	4.560	3.037	.899	1.501
Auditory Perception	5.175	3.055	.905	2.69*
Cognitive Abilities	5.366	3.081	.922	2.74*
Memory	3.849	3.021	.702	1.274
Receptive Language	5.190	3.181	.572	1.631
Expressive Language	6.049	2.935	1.057	2.06*
DTLD T	-5.028	2.903	-4.159	2.73*

Note: (DTLD T) Total score on Diagnostic tool for learning disability. * p value ≤ 0.05 level, ** p value ≤ 0.01 level

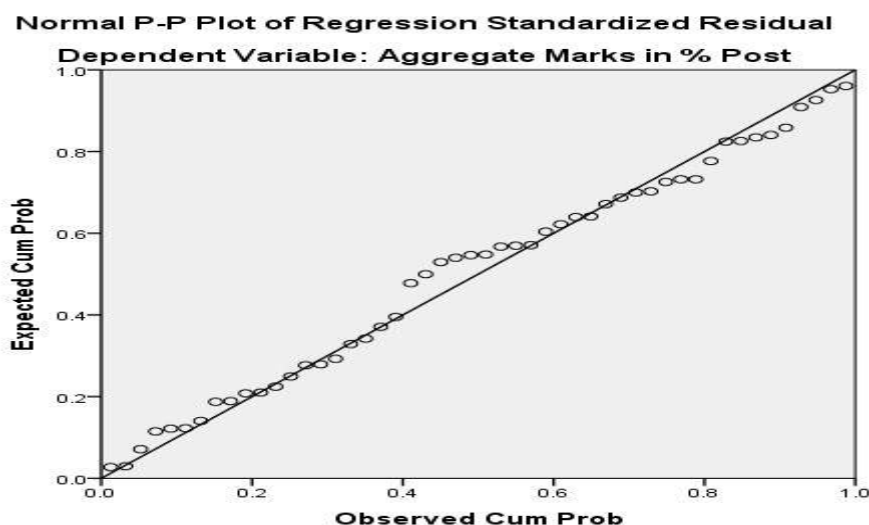


Figure 1 Normal Probability Plot of Regression Standardized Residual of Visual and Auditory Perceptual Components (DTLD) (IV) and Academic Performance (Aggregate marks in %) (DV)

Observing post intervention impact of cognitive and behavioral variables (IVs) such as Body mass index, Digit span forward (for working memory), Bender gestalt test scores (for visual- motor functioning and visual perceptual skills), scores on Problem behaviour checklist on academic performance. The results indicated that Academic performance ($R = 0.43$, $F(6,43) = 4.71$, $p < 0.01$) explained 44% of variance in predicting well-being (Figure 2). Academic performance was significantly predicted 52.03 + by BMI scores ($b = 0.84$, $t(5.9)$, $p < 0.05$) + Digit span Forward ($b = 0.44$, $t = 2.58$), $p < 0.05$) + BGT scores ($b = -1.01$, $t = 2.74$), $p < 0.01$) + PBCL scores ($b = -0.21$, $t = 2.86$, $p < 0.01$) (Table 3).

Table 3: Cognitive and Behavioral Components as Predictors of Academic Performance in students with Learning Difficulty

Predictor Variables	B	Std. Error	β coeff	t-value
Body Mass Index	.846	.472	.251	2.59* (6)
IQ	.074	.135	.078	.54 (1)
Digit span (F)	.443	.211	.332	2.58* (2)
Digit span (B)	-.082	.349	-.037	.23 (2)
BGT	-1.015	.370	-.368	2.74** (1)
PBCL	-.218	.077	-.377	2.86** (1)

Note: IQ= Intelligence quotient assessed on RCPM, Digit span (F, B) = Digit span forward and backward assessed from subtest of MISIC, BGT= Bender Gestalt test, PBCL= Problem behavior checklist

* p-value ≤ 0.05 level, ** p-value ≤ 0.01 level

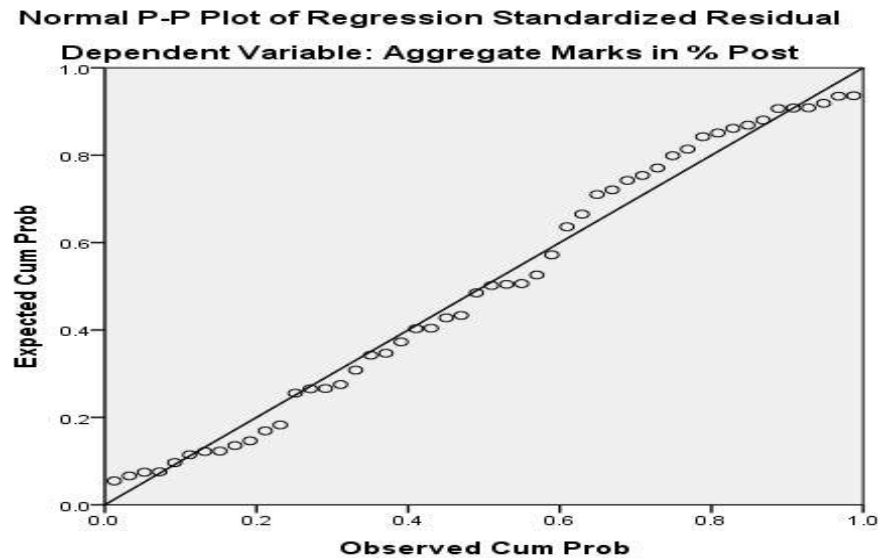


Figure 2 Normal Probability Plot of Regression Standardized Residual of Cognitive and Behavioral Components (IV) and Academic Performance (Aggregate marks in %) (DV)

Table 4: Self-Regulation and Resilience Domains as Predictors of Academic Performance in students with Learning Difficulty

Predictor Variables	B	Std. Error	β coeff	t-value (df=11)
SR Affect	-1.393	.747	-.413	2.32* (4)
SR Awareness	-.386	.883	-.096	.43 (4)
SR Empowerment	-1.362	.828	-.401	1.64 (4)
SR Total	1.205	.608	.764	2.21* (4)
RES Sense of Mastery	.462	.193	.514	2.89** (5)
RES Sense of Relatedness	-.069	.264	-.066	.26 (5)
RES Resource Index	-.527	.302	-.586	2.41* (5)
RES Emotional Reactivity	-.272	.222	-.265	1.26 (5)
RES Vulnerability Index	.406	.203	.432	2.31* (5)

Note: SR= Self-regulation RES= Resilience

* p-value ≤ 0.05 level, ** p-value ≤ 0.01 level

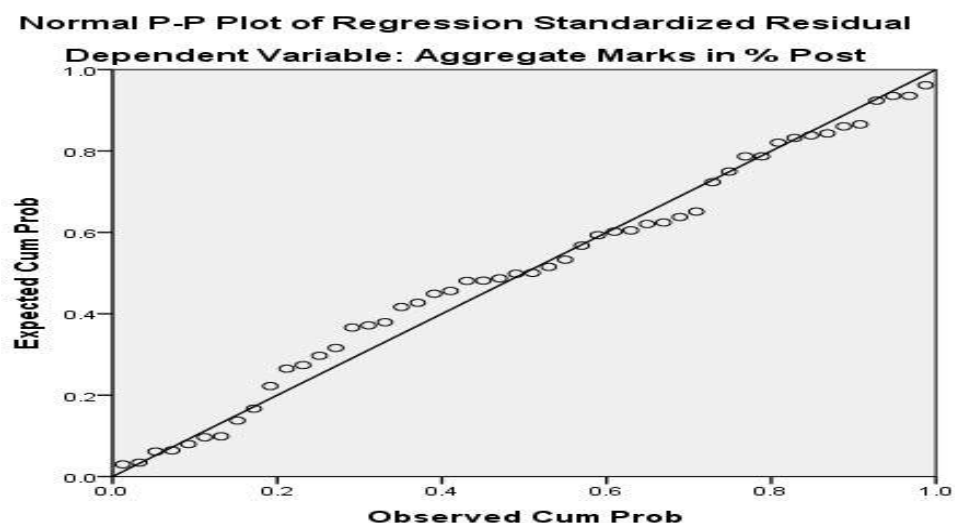


Figure 3 Normal Probability Plot of Regression Standardized Residual of Self-regulation and Resilience domains (IV) and Academic Performance (Aggregate marks in %) (DV)

Independent variables such as Self-regulation domains- Affect, Awareness, Empowerment and Resilience subscales mastery, relatedness, Resilience resource index, affective reactivity on and Resilience vulnerability index depicted significant regression equation with academic performance of students. A significant regression equation was found ($\Gamma=0.44$, $F(9, 40) = 3.74$, $p < 0.01$), with $R^2 = .20$ (20%). Subjects anticipated Academic performance is equal to $48.87 + b = 0.40$, $t = 2.31$, $p < 0.01$ (Resilience vulnerability index) - $b = -0.52$, $t = 2.41$, $p < 0.05$ (Resilience resource index) + $b = 5.36$, $t = 2.89$, $p < 0.01$ (Resilience sense of mastery) + $b = 1.2$, $t = 2.21$, $p < 0.05$ (Self-regulation total score), - $b = -1.39$, $t = 2.32$, $p < 0.05$ (Self-regulation –Affect domain) (Figure 3. Academic performance (in %) for each participant increased significantly for each predictor unit. Self-regulation (Affect), Self-regulation (Total), Resilience Sense of Mastery, Resilience resource Index were significant predictors of academic performance of students with learning difficulty (Table 4).

Discussion:

The present study developed a school-based intervention plan for students with difficulty in learning. It helped them overcome their cognitive paucity by involving them in activities/tasks within therapeutic sessions. The study also examined the significant predictors of their academic performance after attending PEABLS. Multiple linear regression analysis was calculated to identify psychosocial and cognitive-behavioral factors affecting students' academic performance

after going through an intervention process. A significant regression equation was found that visual and auditory components (DTLD domains) predicted students' academic performance with learning difficulty. A high level of eye-hand coordination, auditory perception, cognitive functions, and expressive linguistics were significant predictors of better academic performance in students with learning difficulties. Similar to our findings, several studies indicated that cognitive-behavioral interventions and individualized educational plans are better for children who experience learning problems (Winter & O'Raw, 2010; Rix et al., 2013). Care and support encourage children with learning problems to overcome adversities, increase autonomy, and increase self-regulatory strategies (Downer et al., 2010).

Not only domains of DTLD but other cognitive and behavioral components also significantly improved after students participated in PEABLS activities. The study results were suggestive of high B.M.I. and Working memory (Digit span Forward), while low BGT scores and PBCL scores predicted better academic scores.

Similarly, Bindu (1998) studied the relationship of learning difficulties to constitutional factors of visual perceptual development, expressive language development, visual and verbal sequential memory, auditory discrimination, and fine motor development. Their findings were suggestive of low expressive language development to be a primary factor leading to learning difficulty. In an experimental study, it was revealed that low B.M.I. adversely affects children's perception and cognition (Kaul, Singh & Malhotra, 1985; Verma et al., 1980).

Findings from the present study also depicted psychosocial variables such as self-regulation (affect domain) and resilience (sense of mastery and resource index). Subscales are significant predictors of students' academic performance with learning difficulty. Empathetic communication from adults (from parents and teachers) becomes a useful tool to integrate self-regulation among school children (Housman, 2017). Studies have correlated young children's emotional regulation with better scholastic performance (Leerkes et al. 2008), and self-regulation is positively connected with children's emotional intelligence (Diamond, 2012). It is also a prerequisite for effective learning and building a better socio-emotional relationship (Murray et al. 2016). Studies revealed a positive association of self-regulated learning with better scholastic performance (Ho, 2004). Guided interventions help children maximally utilize self-regulated learning strategies for academic learning (Hong et al., 2009). Therefore, it is recommended that self-awareness and self-control are essential preconditions to overcome distractions caused due to

social and environmental unfavorable conditions, and thus, its nurturance becomes inevitable (Nalavany, Carawan, & Rennick, 2011).

Limitation:

Despite the best effort made to control the variables under study, the present study has some limitations. The student participants were taken only from two schools, which restricts the scope of its generalization. Further, the students mostly belonged to urban slums. The PEABLS did bring considerable enhancement in self-regulated behavior, promoting resiliency and improving their academic skills.

Conclusion

The students with learning difficulty display various forms of challenging behavior. Due to repeated academic failure, they become less motivated, have poor self-esteem, and lower self-concept. Learning strategy instruction is a tremendous positive in building educational potential for students with learning problems to empowers them to retain the use of strategies in promoting effective performance in academic and social activities. PEABLS is an intervention program that positively impacts students' psychosocial, cognitive, and psychophysiological aspects with difficulties in learning. The study aimed to improve students' efficiency through intervention to strengthen their self-regulation learning strategies and resiliency skills to enhance academic performance. This study anticipates educators and other resource persons with pragmatic solutions for integrating instruction to develop self-regulatory and resiliency skills in their curricula. This study will shed light on unattended students' areas and help build insight to manage students' learning problems creatively.

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11. Reengineering of Higher Education in India through NEP 2020: A Reflection

- **Dr. Subhash Misra** ,Assistant Professor, Department of Education, Babasaheb Bhimrao Ambedkar University, Lucknow email: dr.subhash@bbau.ac.in
- **Prof. Arbind Kumar Jha**, Professor, Department of Education, Babasaheb Bhimrao Ambedkar University, Lucknow arbindk.jha@bbau.ac.in

Abstract

National Education Policy 2020 categorically identifies the gaps and lacunas of our present education system and provides a clear vision for curricular, pedagogical, and systemic reforms at every stage of the education ranging from school education with prioritizing early childhood care and education as an integral part of school education to higher education, teacher education, professional education, technical and vocational education, adult education, and life-long learning to achieve sustainable development goals. Holistic development; multidisciplinary and multilingual, synergetic and coherent teaching-learning environment; curricular reforms, restructuring of educational organizations and patterns, developing the institutional development plan, flexible and open education system , multiple entries and multiple exits, reforms in assessment and evaluation, choice-based credit system, academic bank of credit (ABC), establishment of training, development and research centers, high priority to research and community engagement, human resource management; transformation of regulatory bodies, revamping the stand-alone institutions, making vocational education as an integral part of school education and professional education as an integral part of the overall higher education system are the key components of NEP-2020 through which a radical paradigm shift is envisaged to transform the education system of the country. The present paper explores and provides a critical reflection on these aspects of NEP 2020 through which the Government of India is visualizing the reengineering of the education system in general and higher education in particular in India.

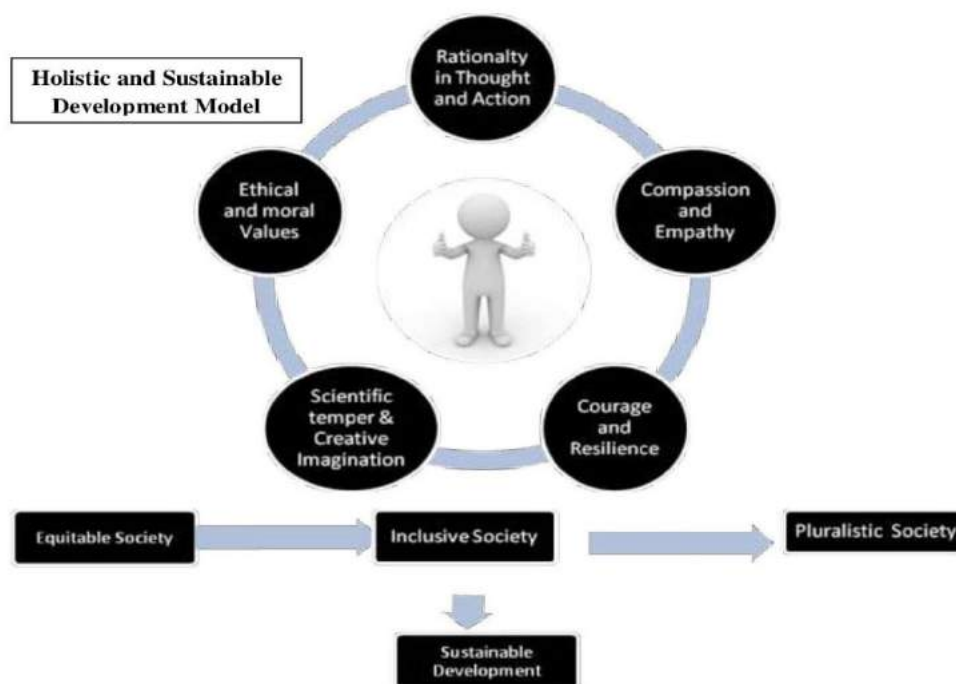
Key Words: National Education Policy (NEP), Higher Education, Reforms, Restructuring.

Introduction:

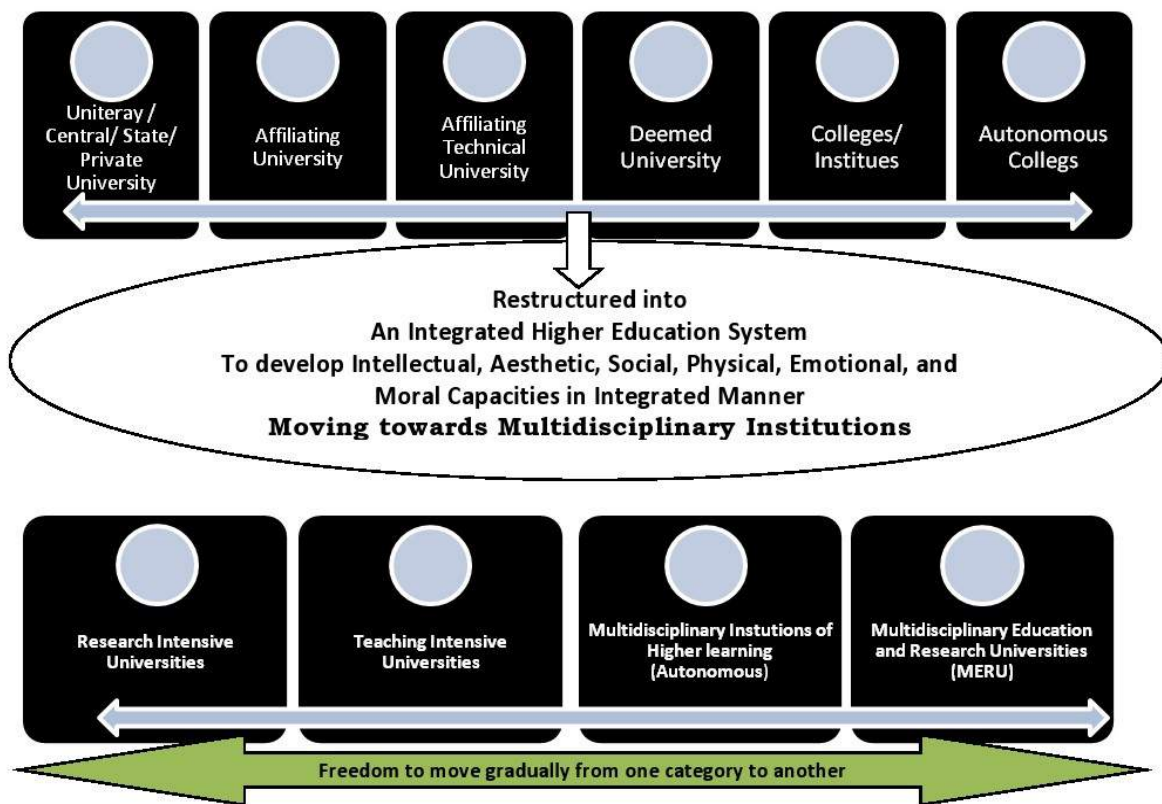
Development of National Education System had been a key component of educational reforms in the previous National Policies of Education. Since independence, more than seven decades have been spent to bring about educational reforms. However, despite several efforts at the level of policies and programmes, we could not develop an indigenous national educational model; deeply rooted in Indian knowledge and culture, suitable for promoting national development and making

the country self-reliant and globally competent. The Globally accepted Sustainable Development Goal of 2030 has emphasized on ensuring inclusive and equitable quality education for all. These challenging goals have created a need to revamp the entire education system of the country. The National Education Policy (NEP) 2020 adopted by the Government of India has replaced the previous education policies with broad vision and clear mandate reflected in nomenclature of the policy having more emphasis on Education naming National Education Policy (NEP) in place of National Policy on Education (NPE). The locus of the present policy is education which will determine and dictate the policy, emphasizing on the development of cohesive and integrated holistic National Education System. Given the radical shift in approach and practice, the National Education Policy 2020 has categorically identified the gaps and lacunas of our present education system. To bridge the gap and remove recklessness of our education system, the New Education Policy 2020 provides a vision for curricular, pedagogical and systemic reforms at every stage of the education. Ranging from School Education with prioritizing Early Childhood Care and Education as an integral part of School Education to Higher Education, Teacher Education, Professional Education, Technical and Vocational Education, Adult Education and Life-Long Learning to achieve sustainable development goal. The National Education Policy 2020 clearly indicates its fundamental principles for providing a sound basis of educational reforms with emphasis on

holistic development by recognizing, identifying, and fostering the unique capabilities of each student, providing flexibility to the learners to set their learning pace based on their interest and talent, emphasizing multidisciplinary and multilingual synergetic and coherent teaching-learning environment with high respect for diversity and local context; and equity and inclusion.



Among all the segments of Education, Higher education is instrumental for human and societal well being. The major shift is in visualizing higher education institutions through different conceptual and perceptual understanding. The focus is on the nature of their environment and performance, not on their administrative role as was being done earlier by identifying the institutions such as a central university, state university, deemed university, college, autonomous college and higher education institutions with their isolated unique identity. Now the higher education institutions have to identify their resources, priorities and prospects and accordingly determine their nature from a vast spectrum of institutions based on their plans, actions and effectiveness ranging from those that place equal emphasis on teaching and research, i.e., Research-intensive Universities, those that place greater emphasis on teaching but still conduct significant research, i.e., Teaching-intensive Universities, Autonomous colleges as multidisciplinary institutions as a miniature of the university clearly declaring their mandate of Teaching-intensive or Research intensive institution. Later on, these multidisciplinary universities and institutions having a spirit of excellence with high quality and global standards may move towards holistic and multidisciplinary education institution by establishing Multidisciplinary Education and Research Universities (MERU).



For an envisaged transformation of the higher education institutions based on the chosen mandate, the higher education institutions are expected to develop "Institutional Development Plan" (IDP) by formulating Institutional Development and Management Policy (IDMP) in a phase-wise manner with all the stakeholders' help to ensure the graded quality assurance.

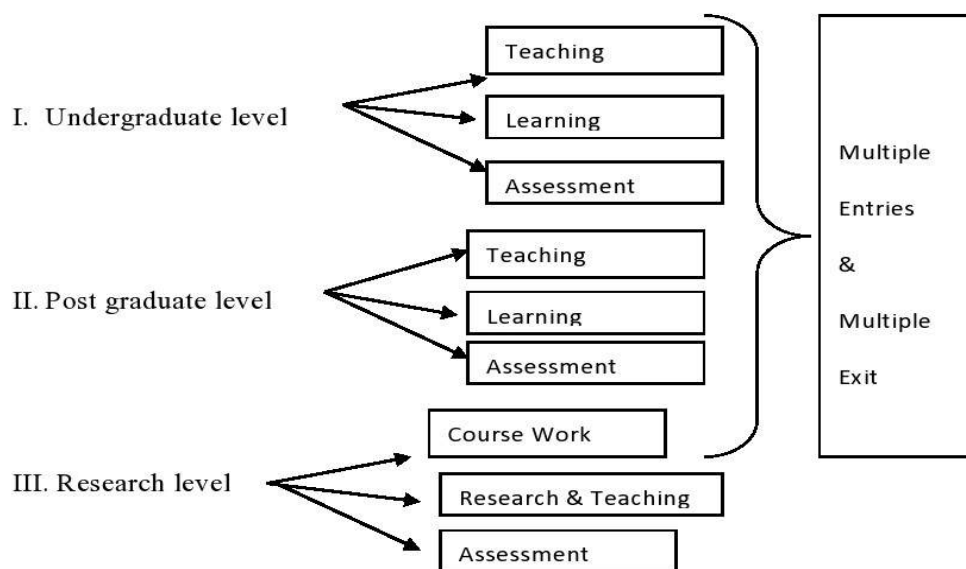
Institutional Development and Management Policy (IDMP):

The higher education institutions have to identify their potentials, prospects and requirements through SOAR (Strengths, Opportunities, Aspiration and Results) analysis to implement these transformational changes across the institution in all the courses and programmes. They need to justify the rationalized requirements and budget proposal along with the plan of action for management of the resources. Accordingly, they may develop Departmental Development Plan

(DDP) at the department level, School Development Plan (SDP) at school level and Institutional Development Plan (IDP) along with Plan of Action (PoA) for implementing the development and management policy of the institution. In the development of the plans, the following aspects should be kept in mind:

Curricular Reforms: Adopting the grassroots model of the curriculum development, the grass-root players, i.e. the departments are expected to exercise the curricular reforms with the help of academia of the concerned subjects and allied subjects in consonance with the guidelines of “Academic Standard Setting” body - General Education Council (GEC) and Professional Standard Setting Body (PSSB) at three levels- Undergraduate Level, Post Graduate Level and Research Level with greater emphasis on Curriculum, Pedagogy, Assessment & Student support through stimulating and engaging learning environment intended towards community engagement in the vicinity.

Aspects of Model Developmental Plan:



The above mentioned curricular reforms may be initiated in the following aspects-

- Curriculum Design and Development
- Curriculum Implementation/Transaction
- Curriculum Monitoring
- Curriculum Evaluation

To implement the curricular reforms, there is a need to restructure the duration, course structure, content and pedagogical practices of each undergraduate and postgraduate programme. The course duration and course structure may be adjusted as follows:

Restructuring of Programmes:

Under Graduate Level: (With Multiple Entries and Multiple Exits)

- a. 3-year Bachelor's programme with the second year devoted entirely to research
- b. 4-year Bachelor's programme with research.

Post Graduate Level:(With Multiple Entries and Multiple Exits)

- a. 2-years Masters Programme with the second year devoted entirely to research for those who have completed the 3-year Bachelor's programme.
- b. 1-year Master's programme for students completing a 4-year Bachelor's programme with research.
- c. 5-years Integrated Programme (Bachelor's-Master's Integrated Programme

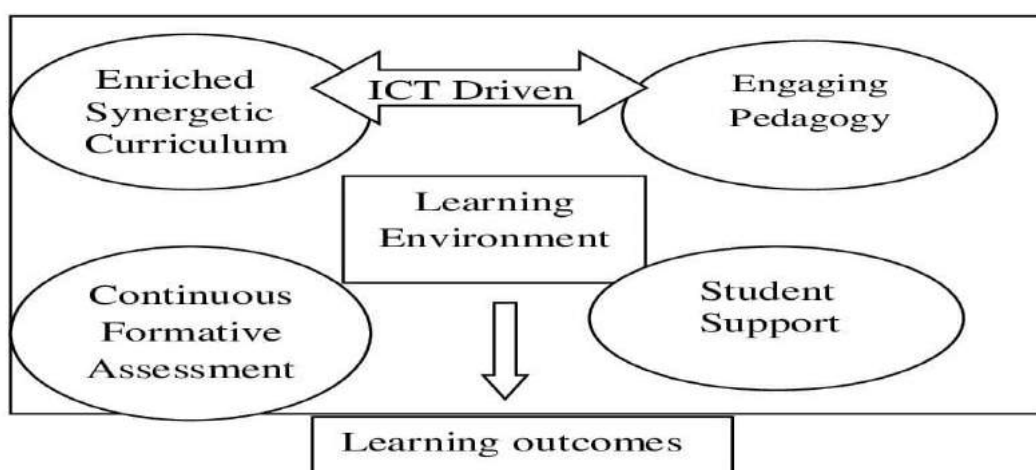
Research Level:

For Ph.D., the eligibility for admission is suggested to be either a Master's degree with three years Bachelor's degree or 4-years Bachelor's degree with research. The option of Multiple Entry and Multiple Exits may be provided in the course work for subjects following the same research methodology for research. For example, a scholar having post graduate degree in sociology or 4-years Bachelor's degree with research specialization in sociology may be exempted from the course work of education discipline if s/he is willing to do research in the field of sociological foundation of education.

Optimal Learning Environment:

The higher education institutions are expected to provide optimal learning environment and student support services at each level. Particular emphasis should be on the development of multidisciplinary culture and creation of a research environment. With the help of ICT driven enriched synergetic curriculum and engaging pedagogy, formative assessment mechanism, student support services and involvement of different activity centered clubs as- Literary Club, Science Club, Mathematics club, Sports club, Cultural club, Environmental club, Community Club etc. the engaging learning environment should be created for students. Members of the Faculty should be encouraged by providing incentives in different forms to design and execute

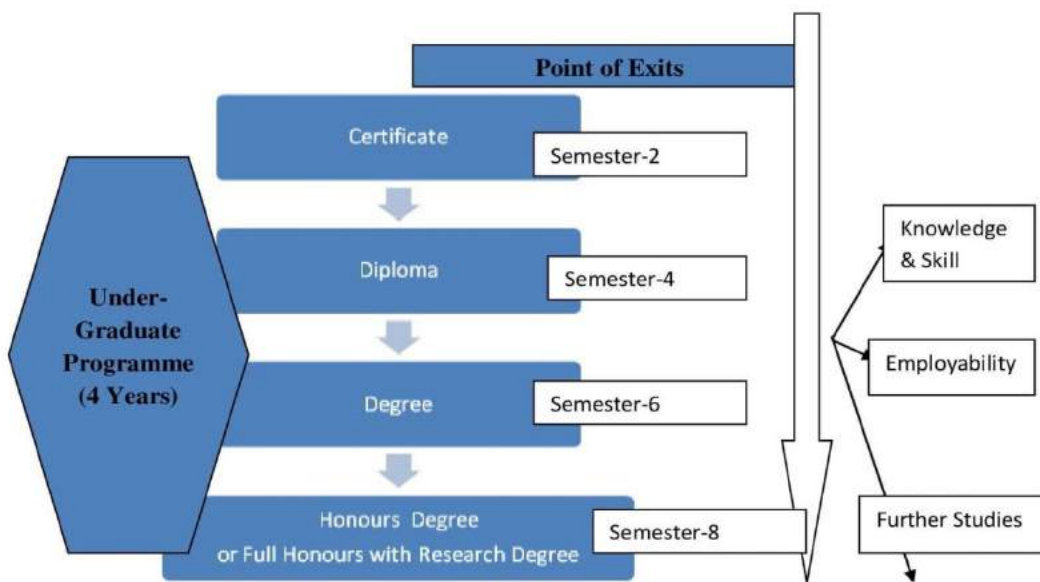
their own curriculum based on their interest, specialization and pedagogical approaches with appropriate student support and assessment process within the approved framework, including the textbook, reading materials, assignments, projects and assessments. To provide complete information to the learners and make the programme more accountable and transparent; well informed and well managed a "Course folder" should be developed indicating the objectives, approaches, pedagogies, tentative plan of actions, evaluation mechanism and student support mechanism. The foundation course must be designed and introduced at Undergraduate and Postgraduate level across the institution to promote Indian arts and culture, history and traditions, values and ethics as a compulsory course for all the students.



Multiple Entries and Multiple Exits:

All the higher education institutions would be required to identify the ways and means to implement the provision of Multiple Entries and Multiple Exits, keeping in view the flexibility, choices, and autonomy issues to give the maximum benefits to the learners. For this, the institutions would be required to set the parameters for synergetic transmission of the curriculum with value-added entries and exits options following outcome-based strategic planning rather than following input based traditional planning to maximize the learners' opportunities. The credit transfer policy should facilitate the learners and strengthen the quality of the education not deteriorating the quality, making the cheaper means of getting degrees. The higher education institutions will be required to device the mechanism of entry and exit for each programme

separately. Keeping in view the level of learning outcomes of the pursued programme at the time of exit, the certificate, the diploma or the degree may be provided, making them skilled, employable or capable of advancing for further studies.



A Suggested Model for Four Year Integrated UG-Teacher Education Programme

Reforms in Evaluation Policy:

Keeping in view the policy of NEP 2020, which aims to overhaul the entire system of education; evaluation reforms get a prominent place among all. The institutions are expected to frame the evaluation policy based on the Choice-based Credit System. This system will follow formative and summative evaluation simultaneously, with the development of Credit Transfer Policy and establishment of Academic Bank of Credit (ABC) for credit accumulation, credit recognition and credit redemption as a national academic depository at the institution level. To promote horizontal mobility, to provide flexible and choice-based learning opportunity to the learners, the higher education institutions will be required to device the barrier-free credit transfer policy to move the learner from one institution to another easily. For this, an empowered high power evaluation reform committee is required to be setup at the institution level keeping in view the above mentioned modifications required for the implementation of NEP 2020

In framing "Credit Transfer Policy," the four aspects should be taken into consideration-

- Inter-Disciplinary Transfer
- Intra Disciplinary Transfer
- Intra-Institution Transfer
- Inter-Institution Transfer

Establishment of Research wing of the University: It is also suggested to establish a research wing of the university or institute under the leadership of Dean, Research and Development to align the goal of National Research Foundation NRF. It is pertinent to mention that NEP 2020 suggests establishing NRF to enable a culture of research through universities and provide a reliable base of merit-based but equitable peer-reviewed research funding, helping to develop a culture of research in the country. Presently Research and Innovation investment in India is only 0.69% of GDP, which needs to be increased. To align with the goal of promoting research, the research wing of the university/ institute will be expected to establish, monitor and strengthen the research and innovation by setting up-

- Start-up Incubation Centers
- Technology Development Centers
- Centers in Frontier Areas of Research
- Industry-Academic Linkages
- Interdisciplinary research including humanities and social sciences research

Establishment of Training, Development and Research Centers:

"Training, Development and Research Centers" as- Teaching and Learning Centre (TLC), Faculty Development Centre (FDC), Research Development Centres (RDC) should be established at the institution level. Apart from the Human Resource Development Centers (HRDCs) the universities and higher education institutions should develop such centers at their campus, and the certificate of these centers should be valid for career advancements equivalent to the certificates of HRDC to avoid the unnecessary crowd in HRDCs. This task may be given to the Department of Education and the Department of Management of the Universities to do it collaboratively.

Establishment of the Centre for Adult Education and Lifelong Learning:

The universities and higher education institutions should be encouraged to establish "Centre for Adult Education and Lifelong Learning: under the School of Education and run all five types of

programmes,(a) foundational literacy and numeracy (b) critical life skills (c) vocational skills development (d) basic education and (e) continuing education as mentioned in NEP 2020. The nearby villages of the university/ institution may be adopted for this purpose.

Strengthening Media and ICT Resource Centre:

Media centre of the university/ institution must be strengthened. The lectures of the members of the faculties and invited resource persons should be recorded and kept in a digital repository for the students and academia's larger benefit. The university's Media Centre may work as a resource generation centre and resource management centre for contributing in SWAYAM and MOOCs Courses. ICT resource centre may be strengthened, both at the department and university/ institutional level, to make the Classrooms and Labs– SMART and facilitate the university's teaching-learning process.

Improving GER and attracting the Students from across the country and outside the country:

To improve Gross enrollment Ratio (GER) and attract the Students from different parts and outside the country, a policy should be framed with the various provisions as: merit cum means scholarship; a stipend to students; a dedicated hostel for "Out-State Students" and "International Students"; dedicated University Portal- especially "University Student Support Portal" for Scholarship; information regarding available amenities as a hostel and, canteen; and enrichment of the university official portal as a face of the university with complete information on single click. Alumni, faculty members, retired faculty members and staff should be motivated to sponsor the scholarships and merit awards in the name of their family members or any country leader to promote ownership for the promotion of their institution and to motivate talented students.

Human Resource Management Policy: The policy of Human Resource Management must be framed keeping in view the following points to realize the goal of NEP2020-

- Timely recruitment
- Fast Track Promotion
- Professional Development Opportunities
- Academic Freedom to Faculty
- Teacher Accountability
- Performance appraisal System for Faculty Members
- Encouragement Policy for Teachers and Staff

- Research facilities for faculty members
- Incentive Policy for Teaching, research and Best Practices
- Leadership Development among Teachers
- Research competition among faculty and research scholars

ODL Policy: To achieve the goal of inclusive and equitable quality education to all by 2030, Open and Distance Learning (ODL) needs to be integrated with face to face education as a complementary system of traditional education in place of two different types of education system existing in the country. Synchronous and Asynchronous learning opportunities should be ensured with proper implementation mechanism to fulfill the diversified need of the learners to achieve the goal of providing quality education to all by 2030.

Transformation of Regulatory Bodies:

Through transforming the regulatory system of Higher Education of the country NEP2020 provides a barrier free, catalyzing, synergistic and cohesive system of governance through the establishment of "Higher Education Commission of India" (HECI) which will discharge duties with the help of **four** coherent and symbiotic bodies-

1. National Higher Education Regulatory Council (NHERC) -For **Regulations**
2. National Accreditation Council (NAC)- For **Accreditation**
3. Higher Education Grants Council (HEGC), For **Funding and Financing**
4. General Education Council (GEC), For **Academic Standard Setting**

NHERC will frame regulations and NAC will perform duties as a “Meta-accrediting” body. HEGC will cater the need of funding and financing for the higher education institutions. The GEC will frame expected learning outcomes for higher education programmes. As a member of GEC, the existing regulatory bodies like National Council for Teacher Education (NCTE), National Council for Vocational Education and Training (NCVT), Indian Council for Agricultural Research (ICAR), Veterinary Council of India (VCI), Council of Architecture (CoA) will act as Professional Standard-Setting Bodies (PSSBs). The universities/ institutions will be expected to restructure and reorient their administration's internal mechanism to expedite the university's function. They are expected to redefine their vision, mission, long term goals and short term goals and accordingly determine their objectives to be achieved in time bound manner.

Holistic and Multidisciplinary Culture: NEP 2020 suggests revamping the stand-alone institutions, making professional education an integral part of the overall higher education system by 2030 and establishing a symbiotic relationship between research and teaching. It has to be taken in real spirit and a phased manner; otherwise, it will be a significant loss at the cost of quality stand alone institutions keeping their valuable contribution in the national development.

Conclusion:

NEP 2020 emphasizes the development of the Institutional Development Plan (IDP), a significant shift towards planned and coordinated strategic development of higher education. Multiple entries and Multiple exist are very lucrative step; however, it needs to be connected with employability and skill; and opportunity for further studies. Suppose an institution is providing certificate, diploma or degree. What will be the value of these in recognition for the job or employment or further studies and career advancement; otherwise, it will be of no use. NEP 2020 recommends synergy in curriculum and coherence in organizational structure to work in symbiotic manner with the aim of revamping the stand-alone institutions, making professional education an integral part of the overall higher education system by 2030. But, there is a challenge for the courses or programmes running under the ambit of regulatory bodies. Though they are suggested to be guided by Professional Standard-Setting Bodies under the General Education Council (GEC) which is responsible for the academic standard-setting; professional education institutions would be required to work in coherence and parity with these bodies without compromising autonomy and excellence. There is a need to provide flexibility to the higher education institutions to adjust their course structures and modify curricula in synergetic way to allow multiple entries and multiple exits so that the course or programme should maintain the standard and fulfill the programme's objective. Credit transfer policy also needs check and balance. Credit recognition, credit accumulation and credit redemption policy of higher education institutions need to be determined according to standards set up at the national level. NEP 2020 visualizes achieving excellence in higher education and becoming independent self-governing institutions over 15 years in a phased manner through graded accreditation and autonomy. However, a serious concern among academia is establishing an empowered body-"Board of Governors" to govern the institution free of any external interference, making all appointments including that of the institution's head and taking all the governance decisions. This may become a monster and may allow private players' interference in quality higher education institutions in the name of "highly

qualified, competent, and dedicated philanthropic individuals having capabilities and a strong sense of commitment to the institution", if a due mechanism is not developed by the regulatory body. With the establishment of the research wing at institution level the university or higher education institution should establish the centers in frontier areas of research, especially in the areas like promotion of research in endangered languages, Art, Culture, Humanities, Social Science, Science and Technology. The higher education institutions should be prompted to work with outcome-based strategic planning and goal parameters in a phase-wise manner setting short term and long term goals in the guidance of PSSBs, GEC and HECI with coherence and parity to achieve the goal of sustainable development by 2030.

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12. A Study on Students' Perception towards Online Learning in Higher Education in relation to their Gender and Localities

- **Smt. Chinmayee Nanda**, Assistant Professor, Department of Education, Heramba Chandra College, Kolkata, West Bengal. E-mail: nanda.chinmayee79@gmail.com
- **Dr. Gouri Kumar Nanda**, Assistant Professor, Department of Education, Acharya Prafulla Chandra College, New Barrackpore, Kolkata, West Bengal. E-mail: gourikumar@apccollege.ac.in
- **Dr. Tapan Kumar Chand**, Associate Professor, Department of Education, Maharani Kasiswari College, Kolkata, West Bengal. E-mail: chandtkc@gmail.com

Abstract

Very recently the Covid-19 pandemic situation has shocked the world and our country too. The pressure on students and higher education institutions is realized high. Schools and universities have been closed and exams postponed. Classrooms are going virtual and admissions for the upcoming academic year are fraught with confusion. According to UNESCO, over 320 million students in Indian schools and colleges are currently affected. The pandemic has pushed the world to drastically reinvent ways of coping with the 'new normal'. Can India emerge from this crisis with a refreshed perspective and boost to higher education? An immediate and effective response to the crisis was to go digital. Developing strong online platforms has become necessary to offer continuity in learning. Yet in a developing country like India with vast disparity in socio-economic backgrounds of students and the quality of educational institutions, the shift has not been easy. The digital divide has been further widening the gap, and needs urgent attention from both public and private sector stakeholders as the crisis continues. Good teachers, refreshed curricula and effective tools will ensure students stay involved and active in the learning process. Besides all other factor perception of students towards online learning plays an important role in the way of materializing the different strategies to cope up with the coming digitalized teaching-learning or virtual learning. The Gender and Locality are two major factors which have a greater impact on persons' attitudes and perceptions in other societal variables. In the present article the investigators have selected two variables to study i.e., Gender and Locality as factor in students' perception towards online learning in higher education in west Bengal.

Key word: Students' Perception, Online Learning, Gender, Localities, Higher Education

1. Introduction

The Information and Communication Technology (ICT) and globalization are both enhanced the growth of online education and made a drastic change in the educational sector

especially in higher education. The fast expansion of the use of internet and related technological advancement fulfilled social demands for improved access to higher education. Reach to the online mode of education in higher education gives students access to a broad range of resources to conduct research and for personal study in numerous ways in different fields by collaborating with others around the world. The evolution of wave 2.0 and social software are changing the way students collaborate, access, learn, communicate and seek new information (Compbell, Wang, Hsu, Duffy & Wolf, 2010).

All the countries in the world have augmented their educational network to meet the future challenges posed by the global need and demand. The measures taken in this direction vary from country to country and in the same country from area to area, depending upon the resources available in the respective country. India is a country with highest number of schools and higher education institutions than any academic system in the world. It is hard to provide standards of education to all students compare to online education at a minimum cost, even though it saves time and can easily be accessible from any corner with the help of advance technology and equip learners to enrich their knowledge. Lots of opportunities will be needed for the issue of online learning that can be beneficial in the educational sector. Till now very few blended and fully online modules and courses developed in India.

The spread of pandemic COVID-19 has disrupted every aspects of human life including education. An unprecedented situation has occurred on education system. In many educational institutions around the world, campuses are closed and teaching-learning has moved online. In India, about 32 crore learners stopped to move schools/colleges and all educational activities brought to an end [13]. Despite of all these challenges, the Higher Education Institutions (HEIs) have reacted positively and managed to ensure the continuity of teaching-learning, research and service to the society with some tools and techniques during the pandemic. Advance in technology reduced the anxieties of mental connection. Even in social distancing and physical isolation that is now in present situation during Covid-19, there is effective connection made possible by technology. In the present crisis due to this pandemic, social distancing is advised. Despite the distance we remained connected via internet with every aspects of our daily life. In today's world isolation is virtually impossible. Technology has facilitated tremendously that we can get knowledge at home. Applying technology in the educational field makes teaching and learning more effective. Online learning encourages active participation in the learning process,

can be difficult to achieve through traditional mode of lecture. Teaching remotely and on digital platforms created unexpected changes in our education system. An effective integration requires for transformation process to re-examine the existing structures and practices. Major adjustment in current teaching and learning is essential to adopt technology successfully at Universities and Colleges. Access the internet technology in higher education for faculty, administrators and students is taken into account to enjoy the packed benefits of its adaptation and implementation. Students across the world forced to adopt the delivery of knowledge by online mode to improve and enhance the higher education system. From the viewpoints of student's perception, effect of online learning on the basis of gender and locality may differ to some extent. Hence the present study focuses on the students' perception about online learning in higher education.

1.1 Objectives

For the present study the investigators formulated following objectives:

- i. To study the Gender as a factor in students' perception towards online learning in higher education
- ii. To study the Locality as a factor in students' perception towards online learning in higher education

1.1.1 Significance of the Study

The present study might be worthwhile, as an attempt has been made to produce something about the perception towards online learning and the results of this study might be helpful for solving the problems arise due to social distancing in pandemic situation as well as it might be helpful to prepare new creative, and unique online educational programmes . The outcomes of the study would definitely suggest the strategy for promoting online education not only at Higher education level but at other levels also. The present investigation might would have both theoretical and practical implications to the teachers, educators, instructional designers, curriculum framers, future researchers in numerous ways with respect to constructing online instructional strategies, open and distance education and framing the qualitative e-learning materials. The importance of this study is to create a healthy and positive attitude towards educational technology among persons who suffer the techno-anxiety.

2. Literature Review

Bao (2020) revealed that five principles are highly-impact online education (a) high relevance between online instructional design and student learning, (b) effective delivery on

online instructional information, (c) adequate support provided by faculty and teaching assistants to students; (d) high-quality participation to improve the breadth and depth of student's learning, and (e) contingency plan to deal with unexpected incidents of online education platforms [5]. Nassoura (2020) attempted to measure critical aspects such as, instructor characteristics (IC), social presence (SP), instructional design (ID) and trust (TR). He found that the critical factors influence students' perceptions [20]. Daniels, Sart and Cruz (2019) found a significant difference between ratings from public and private institutions. Students of public institutions show higher expectations on e-learning than students from private institutions [9]. Arora and Mehta (2018) E-Learning in India has a very big potential and a bright future. They suggested E-Learning is needed to attract affordable international students, to utilize the adventurous faculty collaborators, to bring about e-twinning of institutions and to plan more inter-country exchange programs [3]. Naresh and Reddy (2018) reported that E-learning has created new definition and dimension in learning pattern and education system. They found to make complete use of e-learning both for the tutor and learners to change the perception and the method of teaching- learning. They suggested e-learning in India would be an acceptable substitute to the class room learning in higher education very soon [19]. Cynthia (2017) indicated that students' perceptions of learning in online classes vary by all of the demographic variables considered except gender [8]. Konwar (2017) revealed that the attitude of college students towards e- learning is independent with regard to gender and locality. It is also found that the attitudes towards e-learning are very high among college students and the students who has used e-learning as learning strategy they have got high marks or percentage than the less user of e-learning strategy [15]. Lone (2017) advocated that Technology is touching every aspect of society. The human experience of online education is about to change. It is an effective tool for development of educational sector in India [16]. Mamattah (2016) found that majority of the students think e-learning is an innovative idea and must be encouraged; however, few concerns such as the fear of employers' discrimination against those who study through e-learning were discovered. It was also realized that hybrid learning, which is a combination of online learning and face-to-face learning, is the preferred mode of learning for the respondents [17]. Matsunaga (2016) found out participants' overall positive perception of knowledge on online learning. He stated again the findings of this study seem useful for future online course designers and takers [18]. Sun and Chen (2016) viewed that effective online instruction is dependent upon 1) well-designed course content, motivated interaction

between the instructor and learners, well-prepared and fully-supported instructors, 2) creation of a sense of online learning community and 3) rapid advancement of technology [22]. Fedynich, Bradley and Bradley (2015) emphasized on the interaction, between students and with the instructor has a major impact on their satisfaction. They also identified sufficient learner support that linked to campus resources, and the need for varying instructional design and delivery to facilitate students' desire to learn [10]. Soni (2015) identified that a Massive Open Online Courses (MOOCs) based model seems to be the best fit with higher education in India. It can overcome the problems and challenges concerning Indian higher education [21]. Abbad and Jaber (2014) stated that, in general, students have favourable perceptions toward using the e-learning system. They also found that technology acceptance is the most variable; it was the factor that contributed to students' perception and satisfaction of the e-learning system [1]. Kar, Saha and Mondal (2014) found that students have high attitude towards e-learning and their attitude scores did not differ significantly with their personal variables such as, gender, stream of study and residence. The study concluded that university students are ready to take various courses conducted through online mode [14]. According to Allen and Seaman (2013), some educators and administrators believe that learning outcomes through online education are the same or superior to those in traditional FTF classrooms [2]. Burns (2013) reported that traditional students may harbor misgivings about the social aspects involved in online courses, that online students have had positive experiences – though the online courses are not always up to their expectations, and that both traditional learners and online learners perceive online learning as convenient though not necessarily conducive to their learning [7]. Huss and Eastep (2013) suggested that students have definite perceptions about online education and what they believe to be the necessary components for their success in this environment [11]. The investigation of Imran (2012) reported that E-Learning has created new dimensions in education, both within and beyond the curriculum and is still looking at further opportunities of becoming more practical. He strongly believed that e-learning will be a substitute classroom learning in India [12]. Astani, Ready and Duplaga (2010) found that more experience with online learning results in more satisfaction with overall online learning [4]. Barbara, Yukie, Robert, Marianne and Karla (2010) suggested that e-learning leads to similar or better outcomes than face-to-face learning, although the authors noted that the optimistic effect of e-learning outcomes was stronger than in face-to-face courses [6].

2.1 Problem Definition:

The investigators reviewed the above studies critically. The maximum studies highlighted the methods and importance of e-learning in higher education. Very few studies conducted to measure the students' perception towards e-learning were found. Nassoura (2020) investigated some characteristics of instructor and instructional design as the factors in students' perception towards online education. Gender and Locality not as factor found by Konwar (2017), Gender, Stream and Locality not as factors by Kar, Saha & Mondal (2014) and Gender as not a factor in students' perception towards e-learning were found by Cynthia Barnes (2017). Technology acceptance as a factor in students' perception towards e-learning was found by Abbad, M. M. & Jaber, F.N. (2014). No study reported that the gender and locality as factor in students' perception towards online learning. But the Gender and Locality are two major factors which have a greater impact on persons' attitudes and perceptions in other societal variables. To verify the above results, the researchers have selected two variables to study i.e. Gender and Locality as factor in students' perception towards online learning in higher education. Thus the study was entitled as **"A Study on Students' Perception towards Online Learning in Higher Education in relation to their Gender and Localities"**.

2.1.1 Hypotheses

The following hypotheses were considered for the present study.

H₀1: There exists no significant difference between Boys and Girls in the perception towards online learning in higher education

H₀2: There exists no significant difference between Rural Boys and Rural Girls in the perception towards online learning in higher education

H₀3: There exists no significant difference between Urban Boys and Urban Girls in the perception towards online learning in higher education

H₀4: There exists no significant difference between Semi-Urban Boys and Semi-Urban Girls in the perception towards online learning in higher education

H₀5: There exists no significant difference between Rural students and Urban students in the perception towards online learning in higher education

H₀6: There exists no significant difference between Rural students and Semi-urban students in the perception towards online learning in higher education

H₀7: There exists no significant difference between Semi-urban and Urban students in the perception towards online learning in higher education

3. Procedure of the Study

Keeping in view the objectives of the present study, the investigators followed a sound methodology and procedures, the details of which have been depicted here.

I. Variables Studied:

The variables studied in the present study were divided into two categories: (1) Independent variable and (2) Dependent variable

Independent Variables: The present study comprises of two independent attribute variables. Those are (a) Gender (Males and Females), (b) Locality (Rural, Urban and Semi- Urban)

Dependent Variables: Only one variable, Perception towards Online Learning was considered as a dependent variable in the present study.

II. Methods of the Study Employed:

For the study the method of the investigation was confined to a descriptive and survey approach. The method of the study involves analysis, comparison, contrast and interpretation of the data; and drawing out the relevant inferences and significant conclusions.

III. Tools Used:

For the present study a tool was developed by the investigators using Likert scale (5 points) consists of 50 items and included questions on 'Perception about Online Learning' (PAOL) as one of the variable of this study.

IV. Reliability:

The reliability of the scale was measured by split half method with the score 0.76 and internal consistency was measured by Cronbach's alpha method with the score 0.83. The reliability coefficient was found >0.70; it confirms that the scale used in the study is reliable.

V. Validity:

To ensure face validity and content validity of the present scale, the items of the scale were judged by various experts and faculty members from West Bengal State University, Kalyani University and Calcutta University then the scale was given its final form.

VI. Population:

The population of the study was higher education students of west Bengal. The samples were found from two Universities namely West Bengal State University and Calcutta University in West Bengal

VII. Sampling Procedure Followed:

A sample of 507 (N = 507) higher education students of Under Graduate level has been selected from two Universities in West Bengal keeping in view that students of various categories such as gender (male and female) and localities (rural, urban and semi-urban) might be included in the sample. Data are collected electronically through Google form and automatically stored into database. A purposive sampling method was adopted for this study.

The sampling distribution has been presented in the table-1.

Table-1: Showing the sampling distribution

Gender → Localities ↓	Male	Female	Total
Rural	33	71	104
Urban	61	206	267
Semi-urban	37	99	136
Total	131	376	507

Statistics Used: For the statistical treatment of the collected data, different statistical techniques used for the present study can be divided into two major parts, i.e. (a) Descriptive Statistics and (b) Inferential Statistics.

3.1 Analysis of Data

Here the investigators tried to analysis the data of ‘Perception towards Online Learning’:

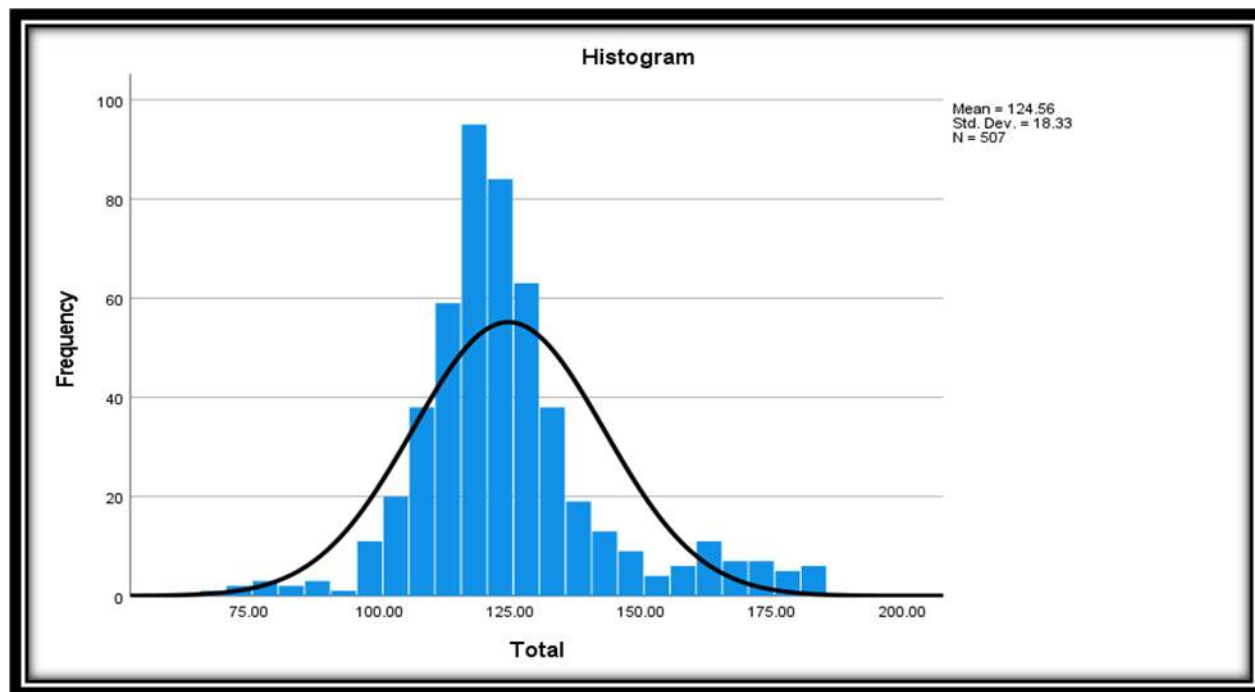
Descriptive Statistics for the scores of ‘Perception towards Online Learning’

Table -2: Showing the Descriptive Statistics for Scores of Perception towards Online Learning		
N	507	
Mean	124.56	
Std. Error of Mean	0.814	
Median	122.00	
Mode	124.00	
Std. Deviation	18.329	
Variance	335.974	
Skewness	0.913	
Std. Error of Skewness	0.108	
Kurtosis	1.979	
Std. Error of Kurtosis	0.217	
Range	117.00	
Minimum	68.00	
Maximum	185.00	
Sum	63152	
Percentiles	P ₂₅	115
	P ₅₀	122
	P ₇₅	130

The descriptive statistics presented in table-2 revealed that the measures of central tendency for total (N = 507) i.e. the mean, median and mode are respectively 124.56, 122.00 and 124.00. The median is slightly differed but mean and mode are nearly same and coincide, which indicates the normality of the distribution. The maximum number of students secured 124.00, where the highest score was 185.00 and lowest score was 68.00 in the distribution. 25% respondents (127 out of 507) secured below 115 and 25% (127 out of 507) secured above 130.

Hence, the remaining 253 respondents obtained scores in their Perception about Online Learning within 115 and 130.

Fig.-1 Showing the NPC with Histogram for the Score of Perception towards Online Learning



3.1.1 Major Findings

(A) Analysis of Gender as a Factor in Students' Perception towards Online Learning in Higher Education:

Table-3: Showing the 't' value of Boys and Girls in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	All Male	131	121.038	19.706	1.721	1.849	2.568*	505
	All Female	376	125.787	17.688	0.912			

*Significant at 0.05 level. $P = 0.0105$

The table-3 showed that, 't' value between male and female students in perception towards online learning in higher education was significant at 0.05 level. Thus, the null

hypothesis (H_01) was rejected. It was established that, there existed a significant difference between male and female students in perception towards online learning in higher education. Since the mean score of female students was higher than the male students, it might be interpreted that, the females at higher education level favour online education more than male counterpart. This result contradicted with the results of the studies conducted by Konwar (2017), Kar, Saha & Mondal (2014) and Cynthia Barnes (2017).

Table-4: Showing the ‘t’ value of Rural Boys and Rural Girls in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	Rural Male	33	112.303	22.471	3.912	3.545	2.394*	102
	Rural Female	71	120.789	13.480	1.599			

*Significant at 0.05 level. $P = 0.0185$

It was observed from the table-4that, ‘t’ value between rural male and rural female students in perception towards online learning in higher education was significant at 0.05 level. Therefore, the null hypothesis (H_02) was rejected. It was established that, there existed a significant difference between rural male and rural female students in perception towards online learning in higher education. Since the mean score of rural female students was higher than the rural male students, it might be interpreted that, the rural females at higher education level favour online education more than rural male counterpart. It made a contradiction with the results of the studies conducted by Konwar (2017), Kar, Saha & Mondal (2014) and Cynthia Barnes (2017).

Table-5: Showing the ‘t’ value of Urban Boys and Urban Girls in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	Urban Male	61	127.836	18.685	2.392	2.804	0.626**	265
	Urban	206	129.592	19.393	1.351			

	Female							
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**Insignificant at 0.05 level. P = 0.5317

From the observation of table-5, it has been revealed that the obtained 't' value was 0.626 which was insignificant at 0.05 level. Therefore, the null hypothesis (H_{03}) was accepted. It was established that, there existed no significant difference between urban male and urban female students in perception towards online learning in higher education. It is found that the mean score of urban female students was higher than the urban male students, it might be interpreted that, the urban females at higher education level favour online education more than urban male counterpart. This result slightly supports to the results of previous investigators like Konwar (2017), Kar, Saha & Mondal (2014) and Cynthia Barnes (2017).

Table-6: Showing the 't' value of Semi-Urban Boys and Semi-Urban Girls in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	Semi-Urban Male	37	117.622	14.536	2.389	2.810	1.364 **	134
	Semi-Urban Female	99	121.454	14.602	1.468			

**Insignificant at 0.05 level. P = 0.1750

With regards to the Table-6 it was found that the obtained 't' value was 1.364 which was insignificant at 0.05 level. Therefore, the null hypothesis (H_{04}) was accepted. It was recognized that, there existed no significant difference between semi-urban male and semi-urban female students in perception towards online learning in higher education. It is found that the mean score of semi-urban female students was higher than the semi-urban male students, it might be said that, the semi-urban females at higher education level favour online education more than semi-urban male counterpart. The said result supported the results of previous researchers like Konwar (2017), Kar, Saha & Mondal (2014) and Cynthia Barnes (2017).

(B) Analysis of Locality as a Factor in Students' Perception towards Online Learning in Higher Education:

Table-7: Showing the ‘t’ value of all Rural Students and all Urban Students in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	All Rural	104	118.096	17.208	1.687	2.159	5.140*	369
	All Urban	267	129.191	19.213	1.175			

*Significant at 0.05 level. $P < 0.0001$

It was observed from the table-7 that, ‘t’ value between all rural students and all urban students in perception towards online learning in higher education was significant at 0.05 level. Therefore, the null hypothesis (H_05) was rejected. It was established that, there existed a significant difference between all rural students and all urban students in perception towards online learning in higher education. It was also found that, the mean score of all urban students was higher than the all rural students, it might be interpreted that, the all urban students at higher education level favour online education more than all rural students counterpart. It made a contradiction with the results of the studies conducted by Konwar (2017) and Kar, Saha & Mondal (2014)

Table-8: Showing the ‘t’ value of all Rural Students and all Semi-Urban Students in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	All Rural	104	118.096	17.208	1.687	2.058	1.125 **	238
	All Semi-Urban	136	120.411	14.630	1.254			

**Insignificant at 0.05 level. $P = 0.2617$

From the observation of table-8, it has been revealed that the obtained ‘t’ value was 1.125 which was not significant at 0.05 level. Therefore, the null hypothesis (H_06) was accepted. It was revealed that, there existed no significant difference between all rural students and all semi-

urban students in perception towards online learning in higher education. Here the mean score of all semi-urban students was found higher than all rural students, it might be inferred that, all semi-urban students at higher education level favour online education more than all rural students. This result supports to the results of previous investigators like Konwar (2017), Kar, Saha & Mondal (2014).

Table-9: Showing the ‘t’ value of all Semi-Urban Students and all Urban Students in perception towards online learning in higher education

Variable	Category	Count (N)	Mean	SD	SE _M	SE _D	t-value	df
Perception towards online learning	All Semi-Urban	136	120.411	14.630	1.254	1.875	4.682 *	401
	All Urban	267	129.191	19.213	1.175			

*Significant at 0.05 level. $P < 0.0001$

The table-9 showed that, ‘t’ value between all semi-urban students and all urban students in perception towards online learning in higher education was significant at 0.05 level. Thus, the null hypothesis (H_0) was rejected. It was established that, there existed a significant difference between all semi-urban students and all urban students in perception towards online learning in higher education. It was also found the mean score of all urban students was higher than all semi-urban students. So, it might be interpreted that, all urban students at higher education level favour online education more than all semi-urban students. This result made a contradiction with the results of the studies conducted by Konwar (2017) and Kar, Saha & Mondal (2014)

4. Implications

Online Education has made a great pace in recent time. In every educational sectors to fulfill the needs of learners it is now an alternative way in the Formal system of Education. This study has greater implications in the field of Higher Education as stated below:

- 1) This study would be helpful for the students to meet the growing demand of online education in the field of Indian Higher education.
- 2) Internet-based online courses are growing day-by-day. This study might be a reformation to change the traditional and habitual mode of education to a new technological mode of education.

- 3) This study might be a pathway to develop practical skills in the field of new online virtual educational environment.

5. Suggestions for Further Research

On the basis of present study the following suggestions were recommended for further research:

1. The study needs to be made on a larger sample of educational organization for various strata such as: Students Academic Streams, Types of Management of Institutions, Parental and Institutional perception, Facilities and intuitional support, Teaching-learning, Examination and Outcomes etc.
2. Same type of investigation may be conducted at different regions of the country to make a comparative study.
3. This study may be conducted to determining the different strata wise differences on the students of Minority Community, Tribe, Castes and Backward Community in India and abroad.

6. Conclusion

Based on our findings, a significant difference found between boys and girls about their perception towards online learning in higher education. Comparing the mean scores of boys and girls (table-3 to 6) it was found that mean score of girls students was higher than the boys. So, it might be said that at higher education level girls are more interested towards online learning than the boys. It was also found a significant difference between all rural students and all urban students as well as all semi-urban students and all urban students in perception towards online learning in higher education. Comparing the mean scores (table-7 to 9) it was found that, all urban students scored higher than all rural students, score of all semi-urban students was found greater than all rural students and all urban students scored higher than all semi-urban students about their perception towards online learning in higher education. Therefore it might be concluded that **Gender and Locality** as factors in students' perception towards online learning in higher education.

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13. Training and Educational Needs for Women in Hilly Areas for their Empowerment

- **Mukhtar Ahmed Research Scholar, Department of Education, H. N. B. Garhwal Central University, S. R. T Campus**
- **Prof. Sunita Godiyal ,Department of Education, H. N. B. Garhwal Central University**
- **Mohd Zameer Research Scholar, Department of Sociology, H. N. B. Garhwal Central University S. R. T Campus, Email.Id:- Mukhtarhnbgu62@gmail.com**

Abstract

The present paper is prepared with propose to identify the areas of training and educational needs for rural women empowerment, the restrictions faced by rural women in hilly regions in the direction of their self-employment and suggestions to overcome some problems. Even if rural women in hilly areas do not possess many of the social issues they have in earlier days, they are not assumed to live single-handedly rural areas. This is, for the most part, because as they are not economically independent regularly. Women empowerment is an energetic and dynamic process that facilitates them to realize their identity and power in all characteristics. Though it enables them to have more right to use the knowledge and resources, greater sovereignty in decision-making, the more excellent capability to plan their work, free them from the clutches of inappropriate custom builds and practices. Empowerment is a process that involves continual shifts in power relations between different groups, individuals and social groups in society. The real meaning of the franchise,s is that others cannot grant it but must be increased by those who seek it. But it is most reliable viewed as a process in which individuals, groups, and communities' progress towards organized and opened-based forms of social action. Women empowerment can be used as an instrument to convey about a substantial positive amend in women's socio-economic condition. Vocational Training for Women Skill improvement for the employability willpower is used as a mediator to modify in promoting women's employment.

Keywords: *Women empowerment, Training, Skill, Knowledge, Educational needs.*

Introduction

The Education, in its ordinary sagacity is a type of knowledge in which the awareness, skills and lifestyle of a grouping of the community are transmitted as of single age group to the subsequently throughout teaching, or investigation. Learning is characterize as not in a single

part; it depends on details, i.e., proper education and casual Education. Appropriate knowledge is the erudition of the skills which we obtain from different agencies such as schools and institutions, while accessible Education is the learning that goes on in everyday existence. Obviously, the informal learning people learned from relations, other societies their associates in different part, proper education is obligatory for giving power to the entity among a few particular abilities that build them renowned in humanity. Women represent approximately to some extent of the social contest, but reasonably instruction altitude as lesser than men. After sixty years of independence, India is until now to give complete proper Education to everyone. In 2005 Indian, the government passed an act, to make available Education to all and absolutely, it is functioning and bearing in mind of society. But at a standstill, there are numerous of hurdles in the case of women education. Therefore there are much deficient in the different sectors including employment. In the region of Urban, that the women are in some good stands in compare to rural women, but they are beyond to man.

Women Education in India has been a key preoccupation of both the government and civil society as educated women is especially limited in the country. Women can play an incredibly central role in the development of the country as they represented the half of population. This disbelieved that female Education pretentious by of gender inequality, customs of society which resulted keen on raise in scarcity and backwardness of the country. Educating girl go ahead to a number of social benefits including women empowerment. Currently women in India are facing a number of problems due to be deficient in of Education such as domestic violence, cruelty of men, gender discrimination, discrimination in the distribution of power and work, economic exploitation, sexual exploitation etc. Education is the key sources for women empowerment, prosperity, social development, and welfare of community in all manners. Women are oppressed in all spheres of life, they require to be empowered in all walk of life. The word women empowerment essentially means that the women have the power or capacity to regulate their day-to-day lives in the social, political and economic terms -an authority which enables them to shift from the margin to the central point. Therefore, the principle of gender fairness are enshrined in the Indian Constitution in its preamble, fundamental rights, fundamental duties and directive principles. The Constitution grants equality to women and empowers the state to adopt measures, a position, indiscrimination in favor of women.

Conventions to secure rights

Women empowerment is not a single, but it is multi-dimensional in its move toward and covers social, political, economic and social aspects. Women charge in India is heavily dependent on numerous changes in the geographical sites (rural/urban), educational status, social status (caste and class) and age. Policies on women empowerment survive at national, state as well as local levels in various sectors which including health, Education, economic opportunities, and gender-based violent behaviour and political participation. Therefore, the scope and coverage of the schemes start on which have been getting higher that take account of initiatives for economic and social empowerment of women for securing gender equality. Women in rural regions necessitate hold up to systematize and be brought into whole stages of managerial, agenda-setting, along with programmed blueprint and execution at the same time as expert stakeholders. On the way to build up more effectual policies and programmes for rural development and rural women's empowerment, it is obligatory to make stronger countries' competence in the direction of assemble and investigate data that are disaggregated by sex age as well as by rural and urban population. Keeping this in mind, the researcher has chosen Usilampatti taluk, one of the backward areas concerning women's status, taken as the study area to identify the NGOs program meson women empowerment with the assist of the data collected from voluntary organizations involved in rural development.

Significance and Selection of the Study Area:

As for as concerned, in India as in numerous of other countries of the world, there is a massive difference between the idealized perception of women and the actual life circumstances in which women find them. Today, women in Indian society have been in front of challenges in illiteracy, exploitation, unemployment, female infanticide, child marriage, sati, dowry, prostitution, rape, widowhood, and devadasi harassment by husbands, nagging and purdah system. So, every one of these have prohibited Indian women from attaining greater heights. As for as concerned in traditional societies, still more than elsewhere, therefore the women empowerment does not occur quickly or in overnight. In the Indian context, there was evidence of such types of changes in emerging, to which the project had apparently contributed.

Women empowerment as a tool of upliftment:

Empowerment is a process that involves constant changes in the power of relations between different groups, individuals and social groups in the communities as well as in the whole societies. Therefore, the core of empowerment is to it cannot be bestowed by others but must be gained by those who seek it. But it is the majority of the consistently viewed as a process in which individuals, groups, and communities' development towards organized and broadly-based forms of social action. Women empowerment can be used as a tool to bring about a considerable positive change in women's socio-economic conditions.

What are the reasons for this sorry state of affairs? Issues may be various and varied, On the other hand, a few fundamental issues deserve specific mention:

Lack of consciousness

There is a lack of social and economic empowerment

Lack of political will

Delicateness of accountability mechanisms

Lack of enforcement by the police force

Lack of gender culture

Therefore, here is the question: how greater participation of women in politics can be achieved? Generally, the answer is suggested in the form of 'reservation.' However, the mere reservations will not solve the problem unless and until women were given commensurate powers to function effectively. They become more conscious and aware of their rights and duties.

Barriers to equality

No country has achieved full gender equal opportunity, and women across the human race continue to undergo prejudice and disproportionate rights and options. The situation is most horrible in most of the developing countries where hurtful patriarchal traditions, counting child marriage and female genital mutilation, stay behind the norm. One in four girls does not attend secondary school and one in five girls is married before her 18th birthday. Child marriage robs girls of a bright future and brings a high risk of death and injury related to pregnancy and childbirth. Therefore, in most developing countries, a woman's talent to determine her children's number and spacing is limited or non-existent. Even in many high-income countries, women often get paid less than men for the same jobs, face gender-based discrimination, violent behavior, and suffer from misogynistic attitudes and sexist policies that restrict their autonomy over their own

bodies.



Internationally there is one in every five girls is married, or in the union, before turning 18. In the least developed countries, that figure increases to 40 percent, with a shocking 12 percent married before age 15. (UNFPA).

Four out of five women live in countries rated 'poor' or 'very poor' for gender equality

A significant new report on the state of gender equality in 129 countries reveals that women and girls continue to be discriminated against across the globe, with four out of five women living in the lowest-scoring countries.

The report, *Harnessing the power of data for gender equality*, published by Equal Measures 2030, introduces the 'SDG Gender Index,' a new comprehensive tool for tracking progress towards gender equality using 14 of the UN's 17 Sustainable Development Goals (SDGs).

No country is equal

According to the index, no country has until now achieved gender equal opportunity as envisioned in the ambitious 2030 SDG Agenda. The average worldwide score, where 100 is full equality, is only 65.7. Forty percent (or 1.4 billion) of the world's girls and women live in countries with "inferior" scores of 59 or less and another 40% live in countries with "poor" scores of 60-69. This means only one in five women lives in a country with at least a "fair" gender equity score.

Not a single country received an "excellent" score (90 or more) but as usual, Scandinavia topped the list of "good" countries, with the highest mark going to Denmark (89.3). The other

Education India Journal: A Quarterly Refereed Journal of Dialogues on Education, A UGC- CARE List Journal, ISSN 2278-2435, Vol. 10, Issue-2 May-2021. Page 173

countries in the top ten in order of rank are Finland, Sweden, Norway, Netherlands, Slovenia, Germany, Canada, Ireland, and Australia.

An equivalent of humanity is a better world

Empowering women is the majority effectual technique to diminish the fecundity charge in adding up to reach a sustainable population size that good wishes the restrictions of Earth's moving capacity. The number of years a woman has used up in Education is habitually inversely correlated with the number of children she will put up within her life span. The project, which compares the use of different procedures to restrain type of weather change, has shown that humanizing girls in addition to securing women's voluntary right to high-quality family scheduling collectively could decrease atmospheric carbon dioxide by 103 rigatoni's, making this the number one a good number powerful solution to climate change.

Achieving gender fairness will make the world a well again, more contented place and is crucial to creating lasting environmental progress.

Population Matters is calling for women's empowerment internationally, including;

- Ensuring the equivalent contribution of girls and women in Education and the workplace.
- Charitable women sovereignty over their bodies, including unrestricted access to modern contraception and abortion.
- Finale the perform of child- and forced marriage, which disobey girls' rights to a healthy, fulfilling life.
- Conceding women full equal opportunity under all laws and ending all policies that disadvantage women.
- Eliminating patriarchal attitudes and behaviors that reason women to undergo and that put them off from accessing control positions.
- As long as sufficient parental leave and childcare opportunities make possible women have the same unconstrained career development as their partners.

Women in the hills are at a more disadvantaged stage, like their counterparts work in the army, industries, or other income-generating avenues in the plains. It becomes a compulsion for the women to handle both family and agriculture. They have to work throughout the day, starting

with their household chores, nurturing children, livestock, going out to bring feed, fuel, fodder and drinking water to sustain their livelihood. Singh and Bhatt (1985) examined the role of women in the agricultural economy of Himachal Pradesh and revealed that among the farmworkers, the proportion of females was higher than males. The level of illiteracy was higher along with females as compared to males. Two-thirds of their time was utilized for the tending of cattle and one-third for crop production activities. Changes in crop production technologies of the workload of women in all size farms have improved.

Discussions.

NGOs and its Role:

Non-Governmental Organizations (NGOs) in India have a well-to-do and exciting history, but one which has been characterized by just like a fluid connection with the state and state instrumentalities. More than the past 150 years, Indian governments, in cooperation of colonial and postcolonial, have played a major role in shaping Indian NGOs, equally in terms of how they purpose in society and their repeatedly fraught relationships with the state. On behalf of development NGOs, the broader groups of people aspirations they encourage include alleviating poverty, addressing marginalization, achieving social justice and promoting respect for human rights. Therefore, the Women Empowerment has been the central agenda for both government and NGO's Voluntary action promoted by voluntary agencies engaged in development play a significant role at the grassroots level in the regions of the success of rural development depends upon the active participation of the people through Non-Government Organizations. The various roles of NGOs are like Educating the Rural Women, Supplementation of Government Efforts, Efforts Organizing the Rural Women, Ensure Women's Participation in their empowerment, Mobilizing the optimum Resources, Promoting Rural Leadership, Representing the Rural Women, Promoting Technology in Rural areas, Activating the Rural Delivery System.

Conclusion

The present paper concludes that the women engage in recreation an important and decisive role within agriculture and allied fields. Do research showed that farm women's participation was maximum in cutting, picking, cleaning of grains, drying of grains, storage, processing operations and the major part of the cleaning of field, raising nursery for seedling , weeding, shifting production to the threshing floor, farmwomen also does winnowing and grading operations. In the case of leveling of field, fertilizer application, they do the least amount of work. In contrast, there

are no participation of farm women in plugging of area, plant protection measures and marketing activities. The study also depicts that age, family income, landholding influence the women's participation in agriculture. Types of family, education level, caste were not affected by the women's participation in agriculture. In this direction, extension personnel should focus on farm women by giving more exposure to technical knowledge, marketing, intelligence and managerial skill.

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14. Social Experiences and Formation of Sex-Specific Aspirations about Children's Education among Bengali Muslim Parents

- **Tanmoy Kumar Pal**, Assistant Professor (Social Work), Directorate of Distance Education, Rabindra Bharati University, Kolkata, India. Email: to.tanmoy@gmail.com
- **Dr. Subhrangsu Santra**, Assistant Professor (Rural Management), Department of Lifelong Learning & Extension, Visva-Bharati University, Sriniketan, Birbhum, West Bengal, India, Email: ssantrarec@gmail.com

Abstract

This field based study compares the aspirations of 200 Indian Bengali Muslim parents about children's education, and illustrates how social experiences of parents give those aspirations a 'gendered' shape. Statistical tests revealed two contradictory insights about the relation between aspirations of parents and educational qualification of parents. First, the desired education level for sons and daughters would most probably be higher if the mother's education was higher. Second, the desired education level for daughters would most probably be higher if the father's education level was higher. But, such one-directional conclusion could not be drawn regarding the desired level of education for sons. This contradiction is explained through five qualitative factors, viz. embarrassment of Muslim wives who had higher educational qualification than their husbands, increasing demand for educated Muslim girls as bride, lack of job opportunity for male Muslim youth, male migration for job, and, belief of parents regarding the efficacy of education.

Keywords: *Aspirations, Parents, Muslims, Education, Gender*

Introduction

The people of India subscribe to various religious beliefs. Hindus are the largest religious group in India and Muslims are the second-largest. The development deficit of Indian Muslims became a basis of debate and action as the Prime Minister's High-Level Committee submitted its report, titled 'Social, Economic and Educational Status of the Muslim Community of India', in 2006. The report made it clear that Muslims were lagging behind different socio-religious categories (Basant, 2012; Sachar Committee, 2006). In 2007, the National Commission for Religious and Linguistic Minorities arrived at many similar conclusions regarding disproportionate educational and employment opportunities for Muslims in India (Pandya, 2019; Rahman, 2019). The Muslim population in India, as recorded in Census 2011, was 172.2 Million which constituted 14.23% of the total population (i.e, 1.21 Billion) of the country. A comparison of Census data showed that

the literacy rate among Indian Muslims improved from 59.1% to 68.5% between the years 2001 and 2011. In the same period, the female literacy rate among Muslims increased from 50.0% to 62.0%. Yet, as per Census 2011 data, the literacy rate of Indian Muslims was much below the national literacy rate (73.3%).

Like other religious groups of India, Muslims are not concentrated in any particular state of India. Rather, they live in most states of India although their proportion to the total population varies from state to state. In the state of West Bengal, Muslims constituted 27.0% of the total population as per data of the Census of India 2011. The literacy rate among Muslims of West Bengal was 68.7% in comparison to the State literacy rate of 76.3%. The female literacy rate among Muslims was 64.8% in comparison to the overall female literacy rate of 70.5% in the state.

Studies conducted before 2010 on the educational condition of Muslims of West Bengal reported incongruous findings about the aspiration of Muslim parents regarding the education of their children. While some studies indicated a lack of serious effort on part of Muslim parents and the community regarding children's education at formal schools (Mondal, 1997), other studies revealed that Muslim parents were not disinterested in the formal education (Pratichi Institute, 2009; Santra & Rafik, 2007). More recent studies point out that Muslims are increasingly getting interested to send their children, irrespective of the sex of the child, to formal school and English medium schooling (Hussain & Siddiqui, 2013; Musharuddin, 2018). The concern for quality education and enthusiasm for creating educational opportunities for children among Muslim women, irrespective of the sex of the children, has also been reported (Pal, Roy, Rana, Hazra, & Santra, 2017; Pal & Santra, 2018; Sengupta & Rooj, 2018). On the other hand, parents and young Muslim women having an inequitable attitude towards the education of girls have been reported by many studies (Husain, 2005; Mukhopadhyay, 2008; Sinha & Ram, 2018).

Parents' aspiration regarding the education of the child has a significant impact on the child's schooling and life. Evidence indicates that even in the face of low teacher expectations, parental aspirations can play a critical role in children's psyche to fare well in education (Benner & Mistry, 2007). Aspirations of parents can determine the number of years of schooling to be completed by the children (Favara, 2017). On the other hand, unrealistic aspirations or over-aspirations of parents can be detrimental to children's achievement (Murayama, Pekrun, Suzuki, Marsh, & Lichtenfeld, 2016). The significance of the actions of parents and guardians in regard to the education of the child is well recognized in Indian legislation. In 2002, the Article 51-A of the

Constitution of India was amended which stated that it was the duty and responsibility of every Indian parents and guardian *"to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years."* In a similar vein, section 10 of the *Right of the Children to Free and Compulsory Education Act, 2009* mentioned *"the duty of every parent or guardian to admit or cause to be admitted his or her child or ward, as the case may be, to an elementary education in the neighbourhood school."*

Various factors can shape the aspirations of the parents. These include education of parents and children's academic performance (Spera, Wentzel, & Matto, 2009), the seriousness of the Government and teachers (Prodip, 2017), parental non-educational expectations (Favara, 2017), attitude towards traditional gender roles (Hasan & Menon, 2004; Rao, 2010), girls' capability, and gender-biased investment attitude (Sarker, Karim, & Suffiun, 2017). Even political empowerment strategies like the election of female leaders as president of local self-governments were found to have improved the aspirations of parents for the education of girls, although it did not bring any change in parents' aspirations for boys (Beaman, Duflo, Pande, & Topalova, 2012).

The brief review of the literature makes it clear that the aspirations of parents are gendered in nature and their aspirations would impact the children's education in different manners in different households. But, there exist limited discussions on how, in an educationally backward community like Muslims, the aspirations of parents are formed and then take a gendered shape. With this background, this paper set the following objectives:

- a) To find out and compare the sex-specific aspirations of Muslim parents regarding the education of their children.
- b) To find out how social experiences shape the aspirations of Muslim parents to make those aspirations 'gendered'.

Methods

Study Area

The data used in this paper were collected from two hundred (200) Muslim households living in two (2) districts of the West Bengal in India. The state of West Bengal is located in the eastern part of India. The selected districts were Hugli and Uttar Dinajpur. These two (2) districts were selected based on the literacy rate among the Muslim community. The literacy rate among Muslims in West Bengal was 68.7% as per the Census of India 2011 data. Out of all districts in

West Bengal, Hugli had the highest literacy rate among Muslims (81.4%) and Uttar Dinajpur had the lowest literacy rate among Muslims (51.2%) as per the data of Census 2011.

Sampling

A multi-stage sampling method was followed for selection of the households which is described below:

- 1) Two blocks from each sample district having the highest and lowest concentration of the Muslim population were selected. Thus, four (4) blocks were selected from two districts.
- 2) From each of the sample block, using enrolment data available from District Information System for Education (2015-16), villages having an enrolment of at least 40 Muslim students were listed. From the list, two villages were selected randomly.
- 3) Twenty-five (25) Muslim houses were randomly selected in each village from the list of Muslim students which was derived from the village school. This way, 200 Muslim households were selected.

Data

Parents of the children were interviewed using a semi-structured interview schedule. The tool contained both open-ended as well as close-ended questions. Small group discussions were also held with willing respondents to understand the view of the respondents in a better way.

Findings and Discussion

Aspirations of parents

Out of 200 sample households, at least one male child of school-going age was found in 156 families. In 166 families, there was at least one girl child of school-going age. Parents of these families indicated their aspiration regarding their children's education. Their aspirations are shown in Table 1.

Table 1: Aspiration of Muslim parents regarding education of their children

How long the child will study	Percent of parents	
	Boys	Girls
At least up to Class VIII	53.8	60.3
As long as finance permits	46.2	31.3
Until marriage	0.0	8.4
Total	100.0 (N=156)	100 (N=166)

Source: Field Data

Approximately 8.4% of parents said that they would allow their daughters to pursue education until they get married. For boys, marriage was not a condition to discontinue schooling. However, 46.2% of parents indicated that they would send their son(s) to school as long as they do not face financial constraints. For parents of the daughters, the figure was 31.3%. Therefore, the financial condition and the sex of the child would jointly influence parents' willingness to continue or discontinue the schooling of children. The boys would be affected more than the girls by such decisions. However, marriage consideration alone would determine the (dis)continuation of schooling for 8.4% of girl students.

It was also found that 53.8% of parents were determined that their son would study up to class VIII, at least. For daughters, 60.3% out of 166 parents could indicate a specific level of desired education. Not only these parents were determined that their children would study at least up to Class VIII, but they could also say in a specific manner the minimum standard up to which they desired that their children should study. Table 2 shows the minimum standards as desired by these parents.

Table 2: Minimum standard of education desired by Muslim parents for their children

Minimum standard of education	Percent of parents desired	
	For Sons	For Daughters
Till Class VIII	4.8	5.0
Till Class X	58.3	47.0
Till Class XII	29.8	39.0
Above Class XII	7.1	9.0
TOTAL	100.0 (N=84)	100.0 (N=100)

Data in Table 2 revealed that most of the Muslim parents were not eager to stop their children after schooling of Class VIII. For boys, more than half of the parents (58.3%) desired their children would study till Class X. The percentage of parents (47.0) having a similar desire for girls was much less. The opposite was true for the parents who desired that their children would study till Class XII or beyond. Only 29.8% of parents desired that their sons would study till Class

XII. However, 34.8% of parents desired that their daughter would study till Class XII. Beyond Class XII, the percentages of parents were 9.0 and 7.1 for daughters and boys respectively.

The data in Table 1 and Table 2 indicates that after Class X, more girls may be in school than the boys, although nothing can be said for sure because the financial condition of the household and marriage consideration would continue to change these proportions consistently.

Sex and educational status of the Parents

To find out how the aspiration of parents was influenced by the sex and educational status of parents, the following hypotheses were formed:

- The desired education level for children (for sons as well as for daughters) would be higher if the mother's educational status was higher.
- The desired education level for children (for sons as well as for daughters) would be higher if the father's education was higher.

Independent Samples Jonckheere Terpstra Test for Ordered Alternatives (JT Test) was conducted to test the hypotheses. The variables *mother's educational status* and *father's educational status* were used as an independent variable. The *desired education level for boys* and the *desired education level for girls* were treated as dependent variables. All variables were measured at the ordinal level. The educational status of parents and desired educational levels of children were categorized into six (6) ordered alternatives: *Illiterate, Up to Class IV, Up to Class VIII, Up to Class X, Up to Class XII, and Above Class XII*. However, none of the parents went to school beyond Class X. Hence, the independent variables effectively had only four categories: *Illiterate, Up to Class IV, Up to Class VIII, Up to Class X*. Similarly, the parents indicated Class VIII as the lowest level of desired education for their children. Hence the dependent variables also had only four categories: *Up to Class VIII, Up to Class X, Up to Class XII, Above Class XII*. For each set of combinations, *JT Tests* were conducted with threshold significance level 0.05. The results of the tests are shown in Table 3 and Table 4.

Table 3: Jonckheere-Terpstra test summary (*desired level of education for children vis-à-vis mother's educational status*)

<i>Test Summary</i> ^a

	Desired educational level for boys	Desired educational level for girls
Number of Levels in MOTHER's EDUCATIONAL STATUS	4	4
N	84	100
Observed J-T Statistic	1459.000	2291.000
Mean J-T Statistic	1228.500	1727.500
Std. Deviation of J-T Statistic	107.805	144.943
Std. J-T Statistic	2.138	3.888
Asymp. Sig. (2-tailed)	.033	.000
Monte Carlo Sig. (2- Sig. tailed)	.033 ^b	.000 ^b
95% Confidence Lower Interval Bound	.030	.000
Upper Bound	.037	.000
Monte Carlo Sig. (1- Sig. tailed)	.017^b	.000^b
95% Confidence Lower Interval Bound	.015	.000
Upper Bound	.020	.000
a. Grouping Variable: MOTHER's EDUCATIONAL STATUS		
b. Based on 10000 sampled tables with starting seed 624387341.		
Note: Monte Carlo simulation used as the number of children was ≤ 100		

Table 3 shows the results concerning the first hypothesis. It was found that the asymptotic p-value (2-tailed) = .033 for boys. Therefore the null hypothesis, that *the distribution of DESIRED EDUCATIONAL LEVEL FOR BOYS is the same across categories of MOTHER's EDUCATIONAL STATUS*, was rejected. Most importantly, 1-tailed p = .017 which was less than

the threshold significance level. The 1-tailed p-value indicated that there was a statistically significant trend in the data.

Similarly for girls, 2-tailed asymptotic $p < .05$. Hence the null hypothesis, that *the distribution of DESIRED EDUCATIONAL LEVEL FOR GIRLS is the same across categories of MOTHER's EDUCATIONAL STATUS*, was rejected. As the 1-tailed $p < .05$, the existence of a statistically significant trend was confirmed.

Table 4 shows the results concerning the second hypothesis. For boys, the asymptotic significance of the 2-tailed $p = .344$. This value was higher than 0.05, which was the level of significance. Therefore the null hypothesis, that *the distribution of DESIRED EDUCATIONAL LEVEL FOR BOYS is the same across categories of FATHER's EDUCATIONAL STATUS*, was accepted.

Table 4: Jonckheere-Terpstra test summary (desired level of education for children vis-à-vis father's educational status)

Test Summary ^a			
		Desired education for boys	Desired education for girls
Number of Levels in FATHER's EDUCATIONAL STATUS		4	4
N		84	100
Observed J-T Statistic		1239.500	2150.000
Mean J-T Statistic		1139.500	1670.500
Std. Deviation of J-T Statistic		105.575	143.771
Std. J-T Statistic		.947	3.335
Asymp. Sig. (2-tailed)		.344	.001
Monte Carlo Sig. Sig.		.343^b	.001^b
(2-tailed)	95% Confidence Lower	.334	.000
	Interval Bound		
	Upper Bound		
		.352	.001
Monte Carlo Sig. Sig.		.174^b	.001^b

(1-tailed)	95%	Confidence	Lower	.167	.000
	Interval		Bound		
			Upper	.182	.001
			Bound		
a. Grouping Variable: FATHER's EDUCATIONAL STATUS					
b. Based on 10000 sampled tables with starting seed 1502173562.					
Note: Monte Carlo simulation was used as the number of children ≤ 100 .					

For girls, the 2-tailed $p = 0.001$. In both instances, $p < 0.05$. Therefore the null hypothesis, that *the distribution of DESIRED EDUCATIONAL LEVEL FOR GIRLS is the same across categories of FATHER's EDUCATIONAL STATUS*, was rejected. The 1-tailed $p < 0.05$. Hence the existence of a statistically significant trend was confirmed.

The results of JT tests revealed two interesting and contradictory insights. These are:

- The desired education level for children would most probably be higher if the mother's education was higher. This would be true for sons as well as for daughters.
- The desired education level for daughters would most probably be higher if the father's education level was higher. But regarding the desired education level for sons, such a one-directional conclusion could not be drawn.

We would need to reflect on the role of social experiences of the parents to explain this contradiction which we take up in the following sub-section.

Social Experiences of the Parents

a) Feeling of Awkwardness

It was found in 85 households (i.e 42.5%) out of 200 sample households that the mothers had higher educational qualifications than the fathers. They indicated that their husband(s) could not continue their schooling due to financial compulsion. They had to leave school and had to start work at a very younger age. However, their economic condition improved later. So, the guardians of the female respondents did not mind to select him (the husband) as the bridegroom. Some of these female respondents conceded that they felt it embarrassing and awkward to acknowledge that their husbands were less educated than their wives. Hence they felt that the boys and the girls should be equally educated so that their daughters would not have to face such embarrassment.

Group discussions with 12 female respondents revealed that the mothers who had higher levels of education could pursue their husbands and other family members more logically than the illiterate mothers could. The capacity of educated mothers had a positive impact on continuing the education of their children for a longer period. Group discussions with husbands of 10 female respondents revealed that they (husbands) believed that both husband and wife should be educated to have a happy family life. Hence they did not oppose the intention of their wives to educate their children as much as possible irrespective of the sex of the children.

b) Increasing Demand for Educated Girls as Brides

Qualitative discussions with the parents in the study area indicated that Muslims used to prefer less educated girls as a daughter-in-law earlier. However, the situation had started changing. Nowadays the bridegroom himself and his family members would not prefer illiterate girls as a bride. Muslim bridegrooms started preferring literate girls as brides because they felt that bride's lack of literacy would create problems in day to day management of the household. The problems would particularly become evident if the husband had to migrate to other states and had been away from the home for a long period. As a result, the demand for educated girls as brides increased.

This issue reverberated in the words of a respondent who was a grocer shop keeper from the Mollasimla village of Hugli district. He commented that – “Our previous generation was unwise. They used to marry uneducated girls from the remotest village. They thought they would control women this way. But it resulted only in half-educated children like us. Their thinking dragged the Muslim community behind. (*Agekar diner lok gulo chilo sob boka. Kon dur oj para gaan te giye osikhhito meye der biye korto. Keno? Jate sohoje bou der control kora jaai. Kintu fol ki holo ? Amader moto addhhek sokhhito chelera ! Ei sob lok gulo Muslim somaj ke pichiye diyeche.*)”

The parents were also requested to indicate their perception regarding easiness and difficulty to marry off an educated girl in Muslim society. One hundred and seventy-two (172) parents gave their opinion which is shown in Table 5. An overwhelming majority of parents (85.5%) said that finalizing a marriage was easier for an educated girl. Only 9.9% of parents felt that finding an educated bridegroom for a Muslim educated girl would be difficult. The rest of the parents (4.6%) were not sure whether it would be difficult or easy to get an educated bridegroom for marriage.

Table 5: Perception of parents regarding difficulty to marry off an educated girl

Perception of parents	Percent of Parents
Difficult	9.9
Easier	85.5
Not sure	4.6
Grand Total	100.0 (N=172)

Source: Field Data

Quantitative as well as qualitative data presented above indicate that the demand for educated girls as prospective brides had been increasing. Hence the parents gave importance to the education of daughters. They also felt that future generations would suffer more if the daughters were not educated. According to them, such logic was not applicable for boys. As a result, the desired education level for girls increased correspondingly with an increase in the educational status of fathers as well as mothers. But the same was not true for boys. The perception that it would be easier to get educated girls married off was a factor in pursuing primary education by Muslims. The change in attitude implied that the retention rate of the girls would increase as the tendency of early marriage would reduce.

c) Lack of Job Opportunity and Migration

Out of 200 households, there were 65 households (32.5%) from which at least one adult person migrated to other states for the earning purpose. But, it was found that only adult males and adolescent boys from Muslim households of the study area were migrating to other states. No female household members migrated to other states for employment. Only two households were found from which female household members migrated to accompany their husband temporarily. The respondents informed that the migrants worked as laborers in unorganized sectors like hotels, restaurants, garment factories, shops, ornament manufacturing units in various cities and states outside West Bengal. The common destinations were New Delhi, Ahmadabad, Kochi, Punjab, and Haryana. The migration of adult males in the study area occurred perennially. Migrants used to return home at an interval of 3-6 months.

Most of the parents were frustrated as there was not enough job opportunity for educated youth. They believed that return on investment for the education of a boy might not be high due to limited employment opportunities. The level of dissatisfaction was such that an illiterate mother in Dharampur village of Gopalokhar-I block of Uttar Dinajpur mentioned that their sons would

study up to Class VIII only, even though the father studied up to Class X. She felt that education beyond Class X might not bring any gain for their sons. Such experiences explain why the desired level of education for boys did not increase correspondingly with an increase in the educational status of fathers.

d) Efficacy of education

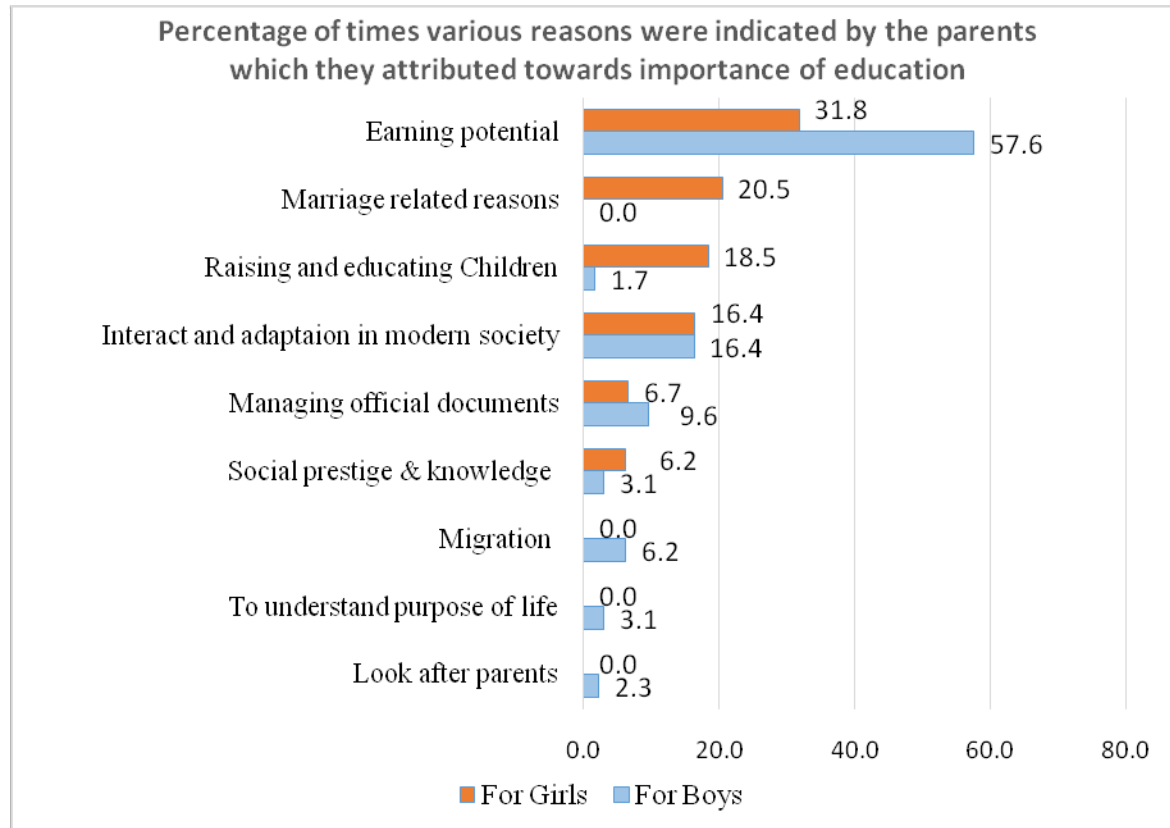
The respondents were asked to indicate various reasons which they attributed to the importance of education. An analysis of the reasons mentioned by the parents clearly shows that the adult socialization and social experience of the parents force them to include gender roles as a factor while setting their goals about their education of children. The reasons were clubbed into nine (9) categories. The percentage of times of various reasons were indicated by the parents is shown in Figure 1.

Education's instrumental power in securing a job was the most important reason pointed by parents. Parents indicated 58.0% times that education would help boys to get better-paying jobs though not always in the organized sector. Though it was the most important reason for girls as well, only 32.0% of times the parents indicated that education would help in increasing employment opportunities for girls. While 21.0% of times parents mentioned that educating girls would help in getting better bridegroom and to adapt with in-laws after marriage to get respect from in-laws after marriage. Another 18.0% of times parents mentioned that education would help girls in nurturing and educating their children. However, such roles were not given importance for boys.

On the other hand, 6.2% of times parents mentioned that education would be helpful for the children if they migrate to other states. This reason was never mentioned as important for girls.

This is not surprising because it was found that migrants were adult males and adolescents, and not a single female member migrated to other states for employment purposes.

Figure 1: Importance of education for Muslim children



Source: Field Data

Conclusion

Family is widely regarded as the place where gender-based socialization begins. The sex-specific aspirations are cursive elements of the gender-based socialization process. This paper showed that sex-specific aspirations for the education of children are not reproduced by the age-old customs only. Rather the aspirations are formed and shaped by social experiences and economic necessities of the parents. Therefore any attempt towards changing the gender norms and establishing gender equity in a given population should not neglect the impact of social experiences on the mind of the parents and the economic hardships faced by the families. This aspect becomes particularly significant in the light of the recently approved National Education Policy (NEP) 2020. The NEP 2020 accepted the fact that large disparity still remain at the level of school education (especially at secondary level) and proposed to “constitute a ‘Gender Inclusion Fund’ to build the nation ’s capacity to provide equitable quality education for all girls”

(GoI,2020). This is definitely a laudable footstep. However, steps should also be taken for inclusion of boys from poor families so that they are not weighed down by economic adversities. The findings of this study are also significant for Indian Muslims because they are considered as a backward community and their backwardness is anchored to religious ideologies. The Governments at Union and State levels have been implementing various schemes (like scholarship, micro-credit, employment-oriented skill development, etc) for the development of education and livelihood of Muslims. These programs are intended to improve the educational qualification of Muslim youths and reduce economic hardships. Such programmes are indisputably necessary. However, these programs are not the means to manage the psychological frustration and anxiety that may be an outcome of the disparity of educational qualifications between the husbands and the wives. The expectations and aspirations of educated Muslim women may actually create anxiety and stress in a patriarchal family if the husband's educational qualification is too less than his wife. Hence Muslim parents, in particular, and Muslim society, in general, would need awareness about the impact the configuration of families (in terms of educational qualification of the husband and wife) and the social experiences of the family members on the process of formation of sex-specific aspiration. Unless they are aware, their response towards the socio-economic forces would only be reactionary, despite overall progress in terms of schooling years and educational qualification.

These apprehensions are inferred based on the qualitative discussions held with wives having either higher or lower educational qualifications than their partners, and the husbands having higher educational qualification than their wives. However, the views of the husbands whose level of education was low compared to their wives could not be included. The primary reason was that most of them were not physically unavailable during the household visit, as they were at the workplace during the daytime or they migrated to other states for employment. This is indeed a limitation of this study. We would like to investigate this issue in the future.

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15. Impact of Orientation Programme on Teaching Attitude and Self-Confidence of College Teachers

- Hadiya Habib, Research Scholar 'Department of Education, University of Kashmir 'Hadiya.scholar@kashmiruniversity.net
- Dr.Tasleema Jan, Professor of Education, Department of Education, University of Kashmir, tasleemajan@gmail.com

Abstract

In the present investigation, an attempt has been made to study and assess the impact of Orientation Programme on Teaching Attitude and Self-Confidence of College Teachers. One Group Pre-test Post-test Experimental design was used. Initially. The investigators administered the tests (Teacher's Attitude Scale Towards Teaching Profession by Jan and Habib, 2020) and Teacher's Self-Confidence Scale by Gupta and Jha 2014) on all the 40 participants on the first day of the programme using purposive Sampling technique and from the respondent participants, a sample of 30 college teachers was drawn by using Lottery method of Simple random sampling technique. The selected Experimental group of 30 college teachers was chosen for pre-test. The same experimental group of 30 college teachers were post-tested after the completion of one month of the programme in order to see the difference in the mean scores of their pre-test and post-test scores. Mean, S.D, t-test were used to compare the mean scores of pre-test and post-test. The findings of the study revealed that the orientation programme had a significant impact on teaching attitude and self-confidence of college teachers.

Key Words: Attitude towards teaching, College teachers, Orientation programme, Professional development , Self-confidence

Introduction

Higher education in India has grown significantly since the country's independence in 1947. The rapid expansion of higher education system has brought several relevant issues related standards of its quality to forefront. One of the most important issues is skills and training of teachers to impart quality education to students. The quality of education hinges on the skill and abilities of teachers. So, one of the basic requirements is professional development and professional training of the teachers. Different commissions and policies also suggested different programmes for the professional development of teachers. National Educational Commission (1964-66) recommended that the orientation course should be organised for the new staff in every university. Also, National Policy on Education in its Policy of Action (1986) proposed:

1. To organize specially designed orientation programme for all new entrance lecturers

2. To organize refresher courses for all the teachers at least once in five year
3. To organize orientation programme for the teachers
4. To encourage teachers to participate in workshop, seminars, conference and symposia etc.

In consonance with the seventh five-year plan proposals and to implement the NPE and the POA, the University Grants Commission (UGC) had formulated the Academic Staff Orientation Scheme in 1987-88. The main objective of the scheme is to initiate a comprehensive programme of professional development of teachers. Academic staff orientation programme and refresher courses organized at various universities of country are specifically aimed at enabling the newly appointed lecturers to understand the significance of education in general, and higher education in particular; to acquire and improve basic skills of teaching; to utilize the opportunities for personality development and knowledge up gradation and to understand the linkages between education and economic, social culture values and national goals.

Review of Related Literature

Busayo (2015) studied the “Impact of Orientation programme on University Freshmen: The example of Federal university Oye-Ekiti, Nigeria”. The study surveyed the impact of orientation programme on university freshmen at the Federal University Oye-Ekiti, Ekiti state, Nigeria. A sample of 200 questionnaires was administered on the freshmen across the four faculties of the university namely: Agriculture, Engineering, Humanities and Social sciences, and Science representing 98.5%. The findings revealed that orientation was educative, enlightening and interactive and it allowed for question and answer opportunity. The results further showed that direct contact and familiarity with the principal officers of the university is ensured while accommodation and other challenges of freshmen were addressed. 193 respondents (96.5%) opined that orientation should be held consistently annually for freshmen while 4 respondents (2%) were against the opinion.

Sonawane and Surve (2015) studied the “Professional development of academic staff in higher education: Impact of orientation programmes”. The study focussed on finding out whether the orientation programmes have been successful in helping teachers in improving their professional skills and makes them a better teacher. Data was collected through specially designed self-administered questionnaire. Qualitative analysis was done on data gathered through questionnaire. The study concluded that the orientation programme had a positive impact on the skills of participants who attended the orientation programme and study also concluded that the orientation

programmes conducted by different AcademicStaffcolleges are catering the professional development needs of the academic staff college.

Satsangi (2013) studied the “Impact of orientation programme on higher education teachers. The various parameters were taken for the consideration such as knowledge upgradation, art of thinking, research skills, technological information, environmental awareness and motivation, personal attributes, stress management etc. Primary and secondary data were collected and analysed by appropriate statistical methods. On the basis of the findings of the research, the Z-test value inferred that all the parameters had predicted a significant impact of orientation programmes offered by Academic Staff Colleges on higher education teachers.

Sharma and Khurad (2013) studied the “Impact of orientation programme on awareness of its components among teachers at higher education”. Sixty-sevendcollege teachers attending orientation programme at UGC-Academic staff college, RashtrasantTukadoji Maharaj Nagpur university were assessed for impact of orientation programme on awareness of its components. The teachers were asked to rate the extent of awareness of components of orientation programme on a pre-tested structured questionnaire on four-point scale, before (pre-test) and after (post-test) of the programme. The four components of orientation programme were component A- Awareness of linkages between society, environment, development and education; component B - philosophy of education, Indian education system and pedagogy; component C - resourceawareness and knowledge generation and component D personality development and management. The statistical results of pre and post scores revealed a significant ($p < 0.01$) increase in the awareness of all the components of the orientation programme. The study concluded that the orientation programmes organised by the UGC-Academic Staff Colleges may go a long way in monitoring and imbibing professional culture in teachers to build academic excellence among them.

Need and Significance of the Study

Teacher professional learning is of increasing interest as one way to support the increasingly complex skills students need to learn in preparation for further education and work in the 21st century. Sophisticated forms of teaching are needed to develop student competencies such as deep mastery of challenging content, critical thinking, complex problem-solving and effective communication and collaboration and self-direction. In turn, effective professional development is needed to help teachers learn and refine the pedagogies required to teach these skills. The

professional development programmes conducted by Human Resource Development Centres (HRDCs) across India such as Orientation programme help in inculcating confidence, courage and commitment towards their profession among the teachers. The success of these programmes depends upon the attitude of the teachers. If the teachers are ready to accept things which are introduced in orientation programme then there is a point in running these programmes. These in-service programmes are the only opportunities for the teachers to improve themselves. The orientation programme should focus on to help the teachers to develop positive teaching attitude and to increase their self-confidence as positive teaching attitude helps teacher to develop a conducive learner friendly environment in the classroom. This also casts a fruitful effect on learning of the students also. Teachers also need to be self-confident as the more confident a teacher become in his teaching skills, the better prepared he can move on the “next level” i.e. deepen his understanding of learning and teaching. Thus, it is necessary to study the impact of orientation programme on teaching attitude and self-confidence of college teachers.

Objectives of the Study

The study was guided by the following objectives:

1. To assess the Impact of Orientation Programme on Teaching Attitude of College Teachers
2. To assess the Impact of Orientation Programme on Self-Confidence of College Teachers.

Hypotheses of the Study

Based on the above-mentioned objectives, following null hypotheses have been set for the study:

1. There is no significant impact of orientation programme on teaching attitude of college teachers
2. There is no significant impact of orientation programme on self-Confidence of college teachers.

Research Methodology

In the present study, investigators have chosen the One Group Pre-test Post-test Design, a type of Pre-experimental Design to assess the impact of orientation programme on teaching attitude and self-confidence of college teachers.

Population of the Study

The population of the present study comprised of the college teachers who attended the orientation programme (2020) conducted by Human Resource Development Centre (HRDC) of University of Kashmir.

Sample and Data Collection

In order to assess the impact of orientation programme on the two selected dependent variables i.e. Teaching Attitude and Self-Confidence, the investigators selected the Orientation programme (2020) conducted by Human resource Development Centre (HRDC) of University of Kashmir. Initially, The investigators administered the tests (Teacher's Attitude Scale Towards Teaching Profession by Jan and Habib, 2020 and Teacher's Self-Confidence Scale by Gupta and Jha 201) on all the 40 participants on the first day of the programme using purposive Sampling technique and from the respondent participants, a sample of 30 college teachers was drawn by using Lottery method of Simple random sampling technique. The selected Experimental group of 30 college teachers was chosen for pre-test. The same experimental group of 30 college teachers were post-tested after the completion of one month of the programme in order to see the difference in the mean scores of their pre-test and post-test scores.

Data Collection Tools

The tools used for data collection in the present study are given below:

1. Teacher's Attitude Scale Towards Teaching Profession (TASTTP-JTHH) by Jan and Habib, 2020
2. Teacher's Self-Confidence Scale (TSCS-GBJA) by Gupta and Jha (2014)

Analysis and Interpretation of Data

Objective No. 1: To assess the Impact of Orientation Programme on Teaching Attitude of College Teachers.

Hypothesis H_0 1: *There will be no significant impact of Orientation programme on Teaching Attitude of college teachers.*

In order to achieve the objective no. 1 and to testify the null hypothesis H_0 1, One Group Pre-test Post-test experimental design was used. To find the difference between the pre-test and post-test scores of experimental group (college teachers who participated in orientation programme) on teaching attitude, the means of pre-test and post-test scores were compared. To check whether the difference found between the two is significant or not, t-test was applied. The results are given in the Table 1.1

Table 1.1

Difference between the means for pre-test and post-test scores
of college teachers on teaching attitude

	N	Mean	S.D	Std. Error of Mean	SE _D	df	t-ratio	Level of Significance	** Signific ant at 0.01 level, $p < .01$, $r = .10$ On the perusal
Pre-test	30	109.3	12.9 2	2.36	2.82	29	10.77**	0.01	
Post-test	30	139.73	9.93	1.81					

of the Table 1.1, a significant difference is noticed between the means of pre-test and post-test scores having t -value 10.77 which is significant at 0.01 level. It can be inferred from the Table 1.1 that mean for post-test scores of experimental group (M= 139.73) is greater than that for the pre-test scores (M= 109.3). This indicates that there is a significant impact of orientation programme on teaching attitude of college teachers i.e. orientation programme enhanced the positive attitude of college teachers towards teaching. Hence, the null hypothesis H_{01} , “there will no significant impact of orientation programme on teaching attitude of college teachers” is rejected.

Objective No. 2: To assess the impact of Orientation Programme on Self-Confidence of College teachers.

Hypothesis H_{02} : *There will be no significant impact of Orientation Programme on Self-Confidence of college teachers.*

In order to achieve the objective no. 2 and to testify the null hypothesis H_{02} , One Group Pre-test Post-test experimental design was used. To find the difference between the pre-test and post-test scores of experimental group (college teachers who participated in orientation programme) on self-confidence, the means of pre-test and post-test scores were compared. To check whether the difference found between the two is significant or not, t-test was applied. The results are given in the Table 1.2

Table 1.2

Difference between the means for pre-test and post-test scores
of college teachers on self-confidence

	N	Mean	S.D	Std. Error of Mean	SE _D	df	t-ratio	Level of Significance
Pre-test	30	314.6	27.95	5.10	5.10	29	18.57**	0.01
Post-test	30	409.4	23.19	4.23				

**** Significant at 0.01 level, $p < .01$**

On the perusal of the Table 1.2, a significant difference is noticed between the means of pre-test and post-test scores having t -value 18.57 which is significant at 0.01 level. It can be inferred from the Table 1.2 that mean for post-test scores of experimental group (M= 409.4) is greater than that for the pre-test scores (M= 314.6). This indicates that there is a significant impact of orientation programme on self-confidence of college teachers. i.e. orientation programme enhanced the self-confidence of college teachers. Hence, the null hypothesis H₀₂, “there will no significant impact of orientation programme on self-confidence of college teachers” is rejected.

Findings of the Study

The main findings of the present study are given below:

1. Orientation Programme had a significant impact on attitude of college teachers towards teaching. Analysis revealed the presence of significant difference between the pre-test and post-test scores of experimental group on teaching attitude ($t=10.77$, $p < 0.01$). The post-test scores of experimental group (Mean =139.73) excels the pre-test scores of the group (Mean= 109.3) which indicates that the Orientation programme enhanced the teaching attitude of college teachers (vide Table 1.1).
2. The Self- Confidence of college teachers is enhanced due to the Orientation programme. Analysis revealed the presence of significant difference between the pre-test and post-test scores of experimental group on self-confidence ($t= 18.57$, $p < 0.01$) .The post-test scores of experimental group (Mean = 409.4) excels the pre-test scores of the group

(mean=314.6) which indicates that Orientation Programme enhanced the self-confidence of college teachers (vide Table 1.2).

Discussion of the Findings

In the present study, it is revealed that orientation programme had a significant impact on teaching attitude of college teachers. This finding is in accordance with San and Nn (2016); Dwivedi and Singh (2012) who have reported that in-service teacher training programmes have significant impact on attitude of college teachers towards teaching. The second finding of the study revealed that the orientation programme had a significant impact on self-confidence of college teachers i.e. orientation programme enhanced the self-confidence of college teachers. This finding is in consonance with the findings obtained by Prasad (2014) and Fresko and Chain (1985) who have reported that in-service training teachers manifested greater self-confidence in knowledge of curricular materials and high levels of confidence in activity to teach curriculum.

Conclusion

The overall findings of the study revealed that the Orientation programmes conducted by Human Resource Development Centre (HRDC) enhance the positive teaching attitude of college teachers and increase their self-confidence. The post-test scores of experimental group on teaching attitude scale and self-confidence scale being higher than the pre-test scores is an indication of the fact that orientation programme had a significant positive impact on teaching attitude and self-confidence of college teachers. It means that the college teachers who attend the orientation programmes develop the positive teaching attitude and become more confident teachers. So, it is concluded that orientation programmes conducted by different Human Resource Development Centres (HRDCs) are catering to the professional development needs of the academic staff. These programmes are helping the teachers to improve their personality which in turn help in their professional development also. So, it is suggested that orientation programmes should be held consistently annually for the newly recruited college lecturers in order to develop them professionally.

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16. Adequacy of Physical and Human Resources Available in the DIETs and Self-Financed Institutions in the State of Himachal Pradesh

- **Monika Parmar** , Research Scholar, Department of Education, Himachal Pradesh University, Shimla
- **Dr. Vivek Nath Tripathi**, Assistant Professor, Department of Education, Babasaheb Bhimrao Ambedkar University, Lucknow Email. viveknathtripathi@gmail.com

Abstract

The study explored about the availability of the physical and human infrastructure in Diets & Self-financed Colleges in the state of Himachal Pradesh. This study was conducted during research work. Study also explore Infrastructure and other academic input in light of NCTE norms. One of the objective of study is compare the adequacy of physical and human resources available in DIETs and self- finance D.El.Ed. Colleges. .The finding of study reveal that under the dimension of human resources indicates that sufficient number of teachers, principals, group C and group D employees are present at all the institutions. Whereas, superintendents were present at each DIET, but not at self-financed institutions. On the other hand, library chairperson was present at each campus of samples self-financed institution, but not at DIETs. Absence of laboratory assistants in DIETs and one of the self-funded institution needs to draw attention of the administrators. Computer operators and storekeepers were present at more self-funded institutions than at DIETs, but still needs upliftment in both type of institutions. Observing the physical resources in DIETs, it is evident that all DIETs have their own classes and staff room. Also, classes were full of natural light, Most of the DIETs provide the hostel facility where students live and study with their fellows, whereas two-thirds of the DIETs were having their multipurpose hall All DIETs have separate toilets and common room for girls and boys. but still needs upliftment in both type of institutions.

Key words: Infrastructural facilities, Pupil teachers, of Diets and Self-financed College

.Introduction

The teacher is the most important element in any educational program. It is the teacher who is mainly responsible for implementation of the educational process at any stage. Education of teachers not only facilitates improvement of school education by preparing competent, committed and professionally well qualified teachers who can meet the demand of the system, but also functions as a bridge between schooling and higher education. NCTE (1998) states that Teacher

Education is based on the theory That teachers are made, not born in contrary to the assumption, “teachers are born, not made”. Since teaching is considered as art and a science, the teacher has to acquire not only knowledge, but also skills. The National Council for Teacher Education has defined teacher education as – A programme of education, research and training of persons to teach from pre-primary to higher education level. Teacher education is a programme that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the challenges therein.

The unprecedented expansion of teacher education institutions and programmes during the past few years characterizes the teacher education scenario of today. Essential requirement of pre-service teacher certification for appointment as a teacher led to mounting pressure on existing institutional capacity. With the demand for exceeding supply, market forces have taken over causing unprecedented rise in the number of teacher education institutions in most parts of the country. The rising demand for trained teachers and the belief that a training certificate acts as collateral against future unemployment has made teacher education a profitable business proposition. It has also led to a large scale mushrooming of teacher education

Diploma in Elementary Education Programme.

The diploma in elementary education D.E 1 .E. D. is a two year professional programme of teacher education. The elementary teacher education programme carries different nomenclatures such as BTC, JBT, D.Ed. (Diploma in Education). Henceforth the nomenclatures of the programme shall be the same across all the states and it shall be referred as the diploma in Elementary Education. The main objective (D.El.Ed.) programme is to prepare teachers for the elementary stage of education, i.e. classes I to VIII The teacher learns the skill to transact the subject in accordance with the needs and interests of the children.

.DIETs in Himachal Pradesh

The state government established 12 DIETs (four up-graded and eight new), sanctioned between 1988-89 and 1996-97 in all the districts of the state. These institutions conduct pre-service and in-service course in the respective fields. The teacher training programme was first started in the year 1951 when a government basic training school was started at Solan to meet the shortage of junior basic trained teachers to teach primary classes. The duration of the course was one year. Later junior basic training classes, extending to over two years, were started in

government training college of women at Shimla. Higher secondary school at Kandaghat and Sabathu. There was a teacher training center at St. Bede's college for training of pre-primary school teachers. One basic training school was opened at Nahan in 1955 and another at Dharmshala in 1956. Since then many effort have been made by the center and state governments for the upliftment of learning programme for elementary level teachers. The Diploma in Elementary Education (D.El.Ed.) is a two year professional programme of teacher education. It aims to prepare teachers for the elementary stage of education, i.e. Classes I to VIII.

Need and Significance of the Study

The importance of primary education is universally recognised as catering to the most impressionable, plastic and educationally potent period of child's life. The Indian Education Commission (1964-66) has aptly observed,

The importance of providing education for children has captured the imagination of the public today and a considerable amount of time and effort is being devoted for developing, modifying and implementing educational programmes for children under six years of age and the quality and efficiency of education depend on the quality of teachers. Various efforts have been made for the expansion and qualitative improvement of teacher education before and after independence. The National Council for Teacher Education, an apex body established by the Govt. of India has formulated norms and standards to improve the quality of Teacher Education Programme at various levels.

During the last decade there has been a phenomenal expansion of teacher-education programme in India. Privatization has already started showing its tremendous impact on 'Teacher Education'. Mind boggling increase in the number of self-financing D.EL.ED. College has created a grave situation with regard to the quality of teacher training programme.

With the opening of a large number of new colleges, there are now several primary teachers training institution (D.EL.ED. College) in India which are producing a large number of trained teachers every year. The hilly state of Himachal Pradesh has also been influenced by this phenomenon.

It is imperative that all educational programmes, plans their implementation and functioning need to be evaluated from time to time in order to study their effectiveness and to improve their quality as well as workability. After establishment 12 DIETs (four up-graded and

eight new), sanctioned between 1988-89 and 1996-97 in all the districts of the state D.E.L.D Program is implemented in Himachal Pradesh. It is a right opportunity to examine its different aspects including implementation, functioning and effectiveness. The review of the related literature reveals that no attempt has been made by the researchers to evaluate adequacy of the infrastructure in D.El.Ed. Programme In Self-financed Colleges of Education and Diet"

. In view of this it was thought worthwhile to undertake the present problem for investigation. The present study focuses on the availability of various physical facilities for the proper functioning and implementation of D.E.L.D Program in In Self-financed Colleges of Education and Diet". On the basis of this the adequacy and appropriateness of facilities will be ascertained so as to make recommendations for bringing any improvement if required

. The results of the study will also be helpful in suggesting the steps to be taken for imparting quality training to these elementary teachers. No single published work, which give a detailed and systematic account of such an evaluation of self-financing D.EL.ED College in comparison to Govt. DIETs in state of Himachal Pradesh. The purpose of present study will be to compare the prevailing D.El.Ed. Programme as is being conducted by self-financing colleges and DIETs in Himachal Pradesh. The purpose of present study will be to compare what kind of infrastructure facilities are provided by these self-financing D.El.Ed. Colleges and DIETs. A need, therefore, is felt to undertake the present study. To see whether the objective of D.El.Ed. Programme are being achieved by these institutions or not.

Statement of the Problem

Adequacy of physical and human resources available in the DIETs and self-financed institutions In the State of Himachal Pradesh

Objectives of the Study

The following were the objective of present study:

1. To study the adequacy of physical and human resources available in the DIETs
2. To study the adequacy of physical and human resources available in the self-financed institutions
3. To compare the adequacy of physical and human resources available in DIETs and self-finance D.El.Ed. colleges

Operational Definitions

DIET

(District Institute of Education and Training):Primary School teacher-education institutions which are financed and managed by government of Himachal Pradesh.

Self-financed D.El.Ed. Colleges:

Primary School teacher-education institutions which are financed and managed by private bodies, and affiliated to HP Board of School Education, Dharmshala.

Delimitations of the Study

1. The study was delimited to self-financing D.El.Ed. Colleges and Govt. DIETs of Himachal Pradesh.
2. The study was delimited to 6 districts of Himachal Pradesh only.
3. The study was delimited only to 6 DIETs and 6 D.El.Ed. Self- Finance colleges. Only.

Method: Descriptive survey method was used for present investigation.

Sample of Study: Six DIETs and six D.El.Ed. Self- Finance colleges were selected randomly by using lottery method.

Description and Analysis Objective- 1To study the adequacy of physical and human resources available in the DIETs (N=6).’For studying and understanding the adequacy physical and human resources available in the DIETs, the researcher has recorded the observations using the observation schedule. The items of the observation schedule were then classified into four different dimensions, viz.

1. Physical Resources
2. Instructional Resources
3. Teaching Aids
4. Human Resources

The dimension-wise description and analysis of the data is as follows:

Dimension - 1: Physical Resources

Figure 4.11.1(a)

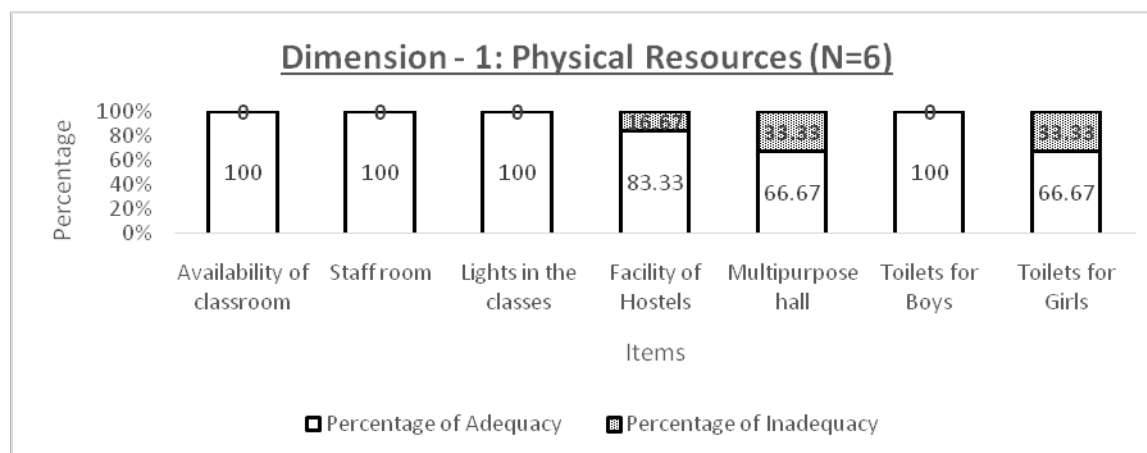


Figure 4.11.1(b)

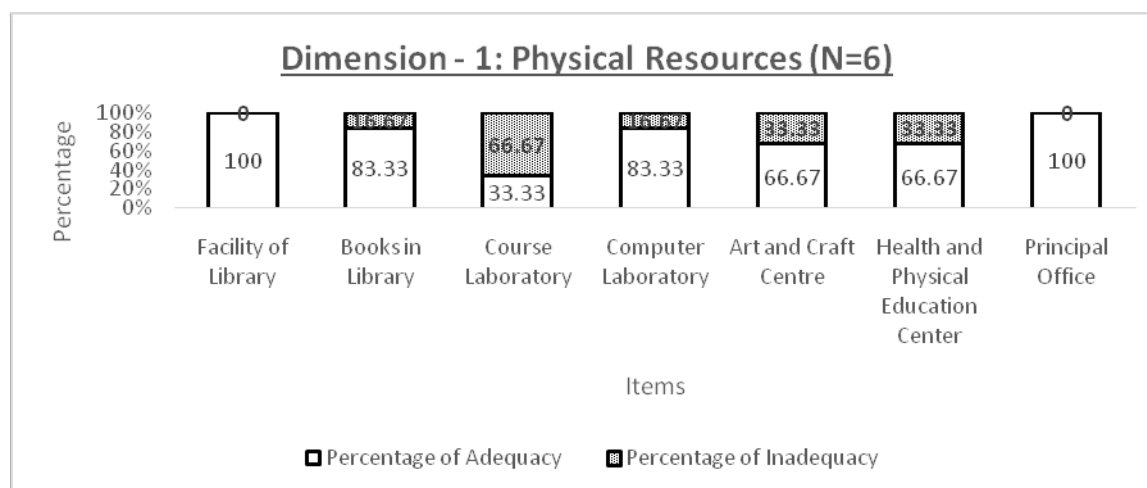
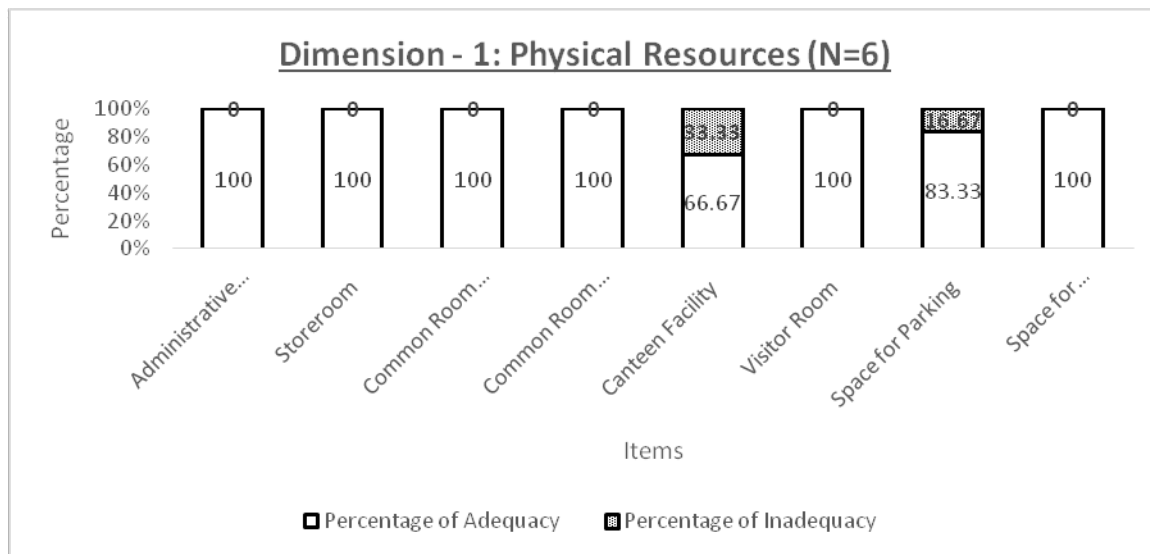
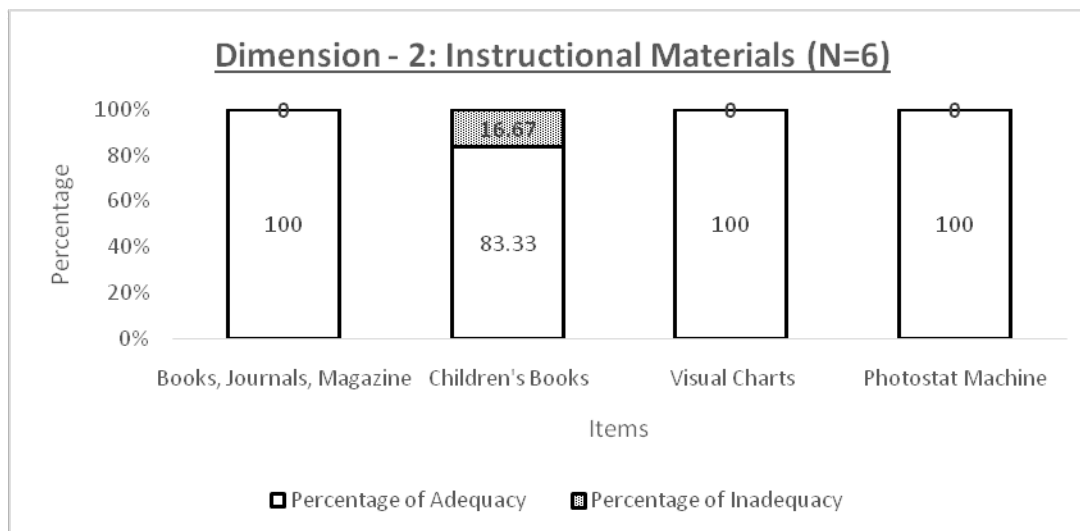


Figure 4.11.1(c)



Dimension 2: Instructional Materials



Dimension 3: Teaching Aids

The observations regarding teaching aids are recorded and tabulated as shown below in

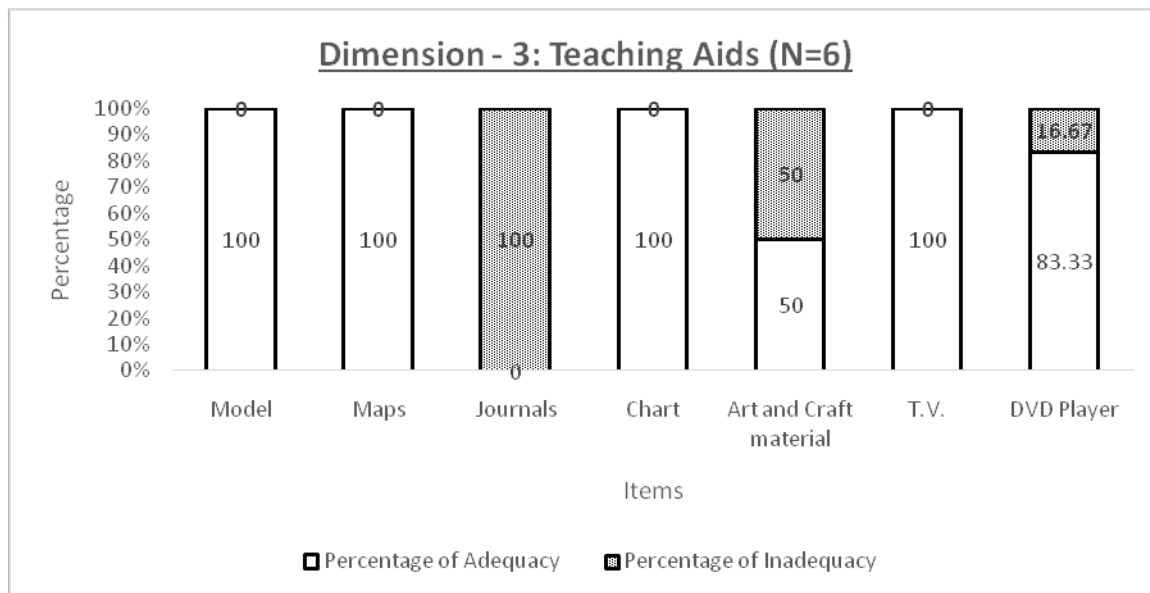
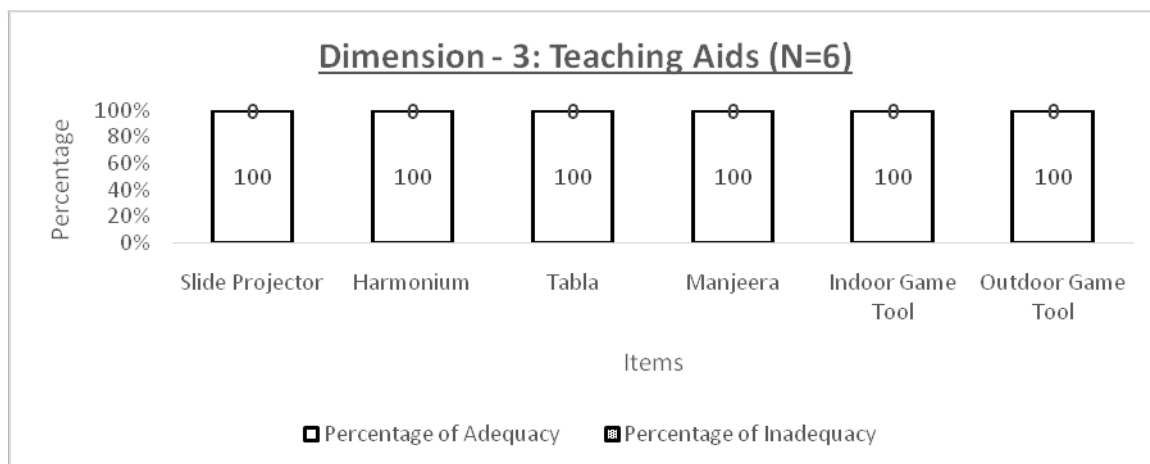
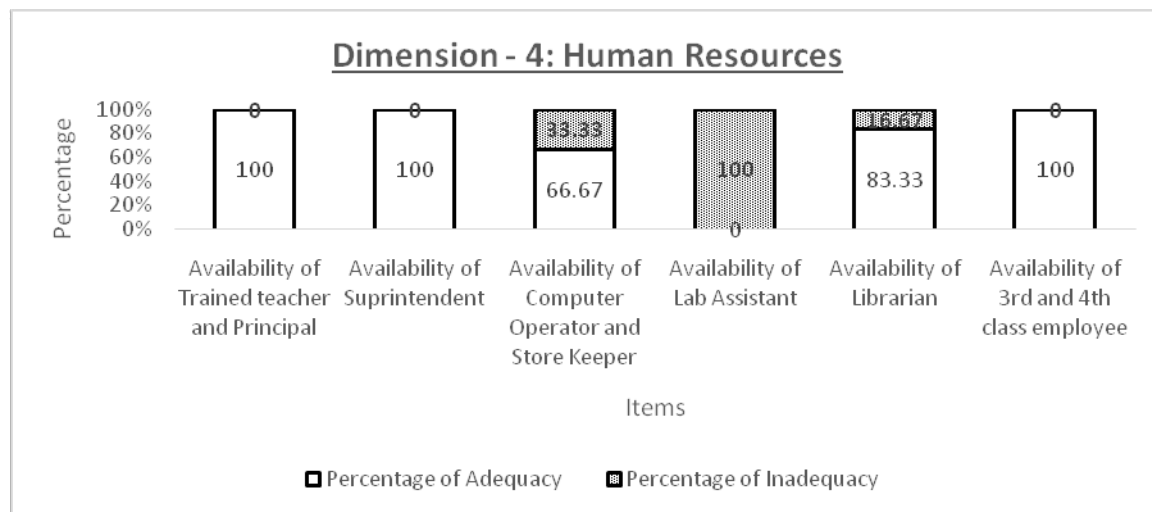


Figure 4.11.3(b)



Dimension - 4: Human Resources

Figure 4.11.4



Interpretation of Data in Respect to Objective 1:

After observing the physical resources in DIETs, it is evident that all DIETs have their own classes and staff room. Also, classes were full of natural light, so pupil teachers were not facing any type of obstacles in their study. Most of the DIETs provide the hostel facility where students live and study with their fellows, whereas two-thirds of the DIETs were having their multipurpose hall where the students do their extracurricular activity which refines their skills. All DIETs have separate toilets and common room for girls and boys and for preventing confusion, all the toilets were mentioned with sign language. Moreover, all DIETs have their own library, where pupil teacher issue books for a time and also do their study in free hours. Further, most of these DIETs have the authentic books related to their course.

However, only one-third DIETs have proper course laboratory. It means that two-third DIETs either do not have their course laboratory or are not having adequate equipment. Interestingly, most of the prospective teachers at these institutions do not know what the language laboratory is. Also, most DIETs have their own computer laboratory where pupil teachers do their course work including ICT related work.

It is also evident that two out of every three DIETs have a big hall for art and craft where pupil teacher gather and spend an hour daily, where teacher gives them various tasks to work

upon, like decorating the notice board. Also, it is observable that two-third DIETs have health and physical education centre where students play different type of indoor and outdoor games. Also, all DIETs have their own principal and administrative office, as well as their own storerooms and visitor rooms.

Moreover two-third DIETs have canteen facility. Also, with the help of observation, we can say that each and every DIET has space for parking where teachers and students and other staff of college park their vehicle and also have the space for gardening. All DIETs have sufficient books, journals and magazine and they also provide books and magazine to their pupil teachers. Most of these DIETs have the children's book which helps the pupil teacher to make the lesson plans. Visual charts are a graphical representation of any content. According to the observation, it is clear that all DIETs use visual charts to train the pupil teachers and have photostat machine.

Further, all DIETs were full of teaching aids and most of the DIETs' teacher use teaching aids like models, maps, charts, T.V. and slide projector. But it was also observed that no DIETs were providing journals to their pupil teacher. We also find that in only half of the DIETs, art materials were available, but the art teacher was not there in those colleges and the condition of art material was also very poor. All DIETs were having and using T.V. and slide projector and most of them were using DVD player too.

It is also observed that musical instruments were available in all DIETs, but music classes were not running regularly in any DIETs. All instruments like Tabla, Harmonium, Manjeera etc. were covered with dust. Also, all DIETs daily in last period organize indoor and outdoor games. Some indoor games like carrom, table tennis, chess, ludo and some outdoor games like cricket, hockey, and badminton were played and time to time competitions were also organized among different groups and colleges. It is also revealed that in all DIETs, fully trained teachers were available. It was also found that each teacher was using different teaching skills and techniques during their teaching and also students were seen enjoying their classes. It has been concluded that principal and superintendent were available in all DIETs and they were highly active.

Furthermore, two-thirds of the sampled DIETs were having computer operators and storekeepers while in all DIETs, the laboratory assistants were available who arrange the lab and

place the lab items systematically and help the students in conducting their practical. The researcher also observed that in most of these DIETs, the librarians were present and sufficient who issue the books for student and care of books and also have register to maintain the book details. The availability of group C and group D employees were found sufficient.

Description and Analysis in Respect to Objective2: 'To study the adequacy of physical and human resources available in the self-financed institutions (N=6).'

The dimension-wise description and analysis of the data is as follows:

Dimension - 1: Physical Resources

The data gathered through observation regarding physical resources in self-financed institutions has been tabulated below as illustrated in Figure 4.12.1(a)

Figure 4.12.1(a)

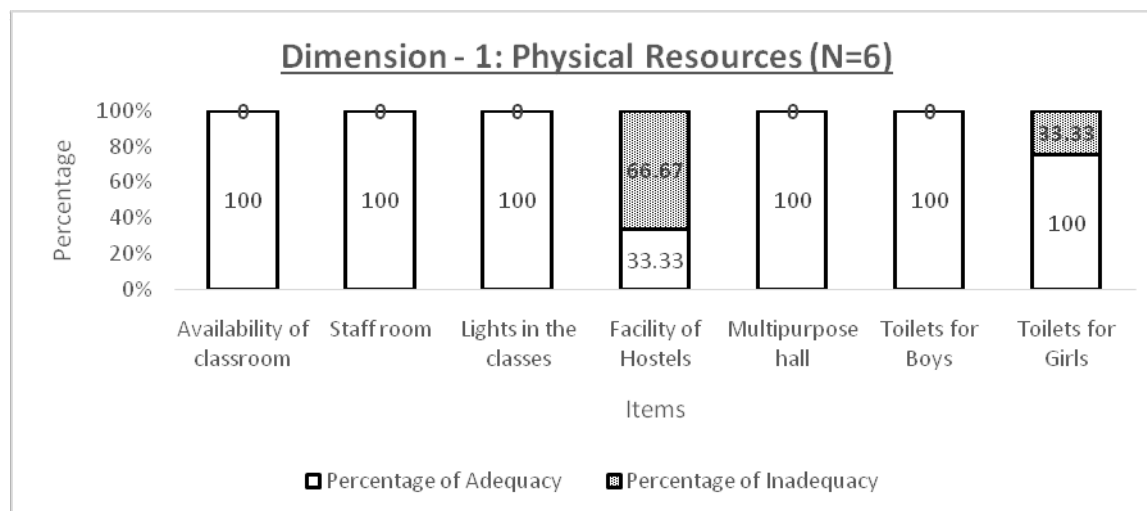


Figure 4.12.1(b)

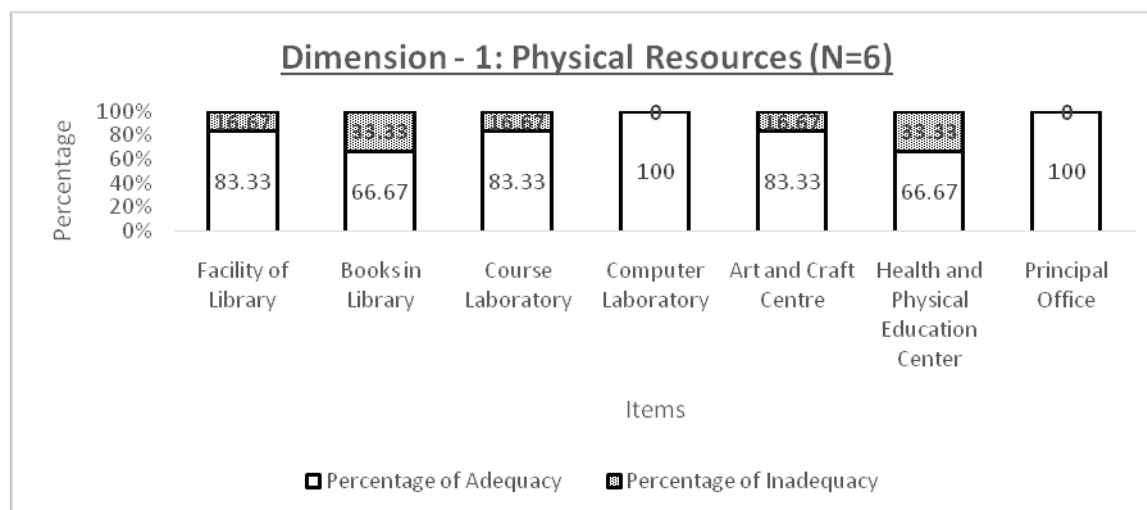
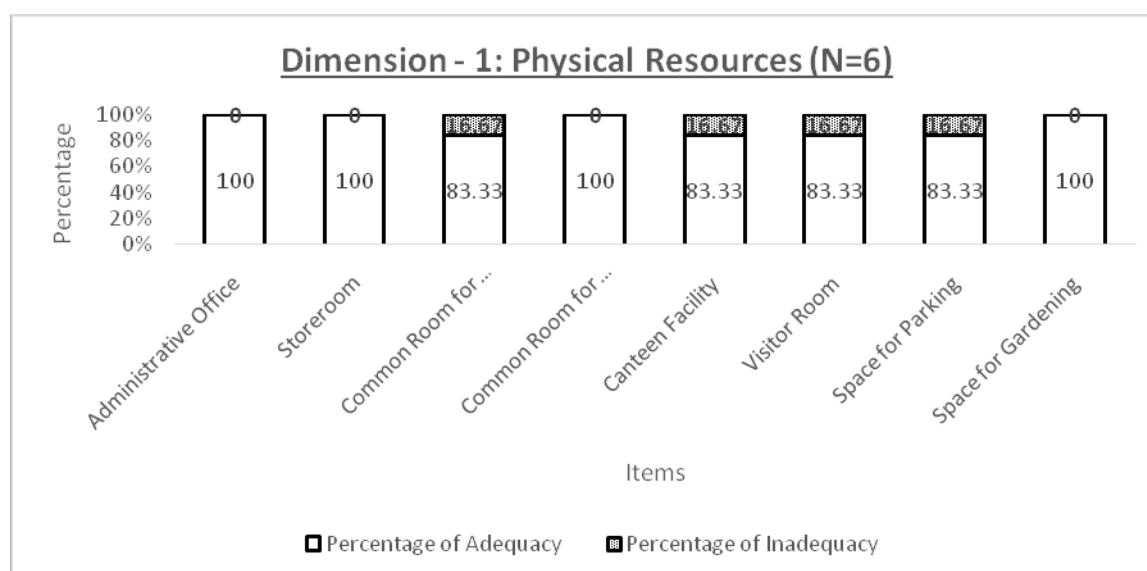
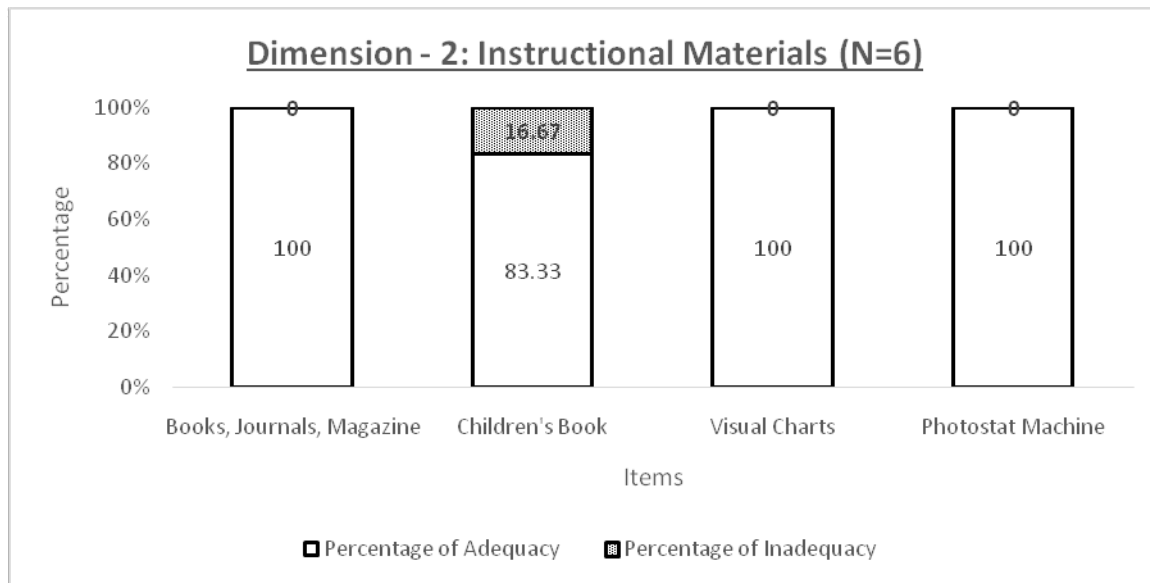


Figure 4.12.1(c)



The data tabulated above can also be represented graphically as shown below in Figure 4.12.2.

Figure 4.12.2



Dimension - 3: Teaching Aids

The data regarding teaching aids has been collected through observation and is tabulated in Table 4.12.3 below.

Table: 4.12.3

The data tabulated above in Table 4.12.3 can also be represented graphically as shown below in Figure 4.12.3(a) and Figure 4.12.3(b).

Figure 4.12.3(a)

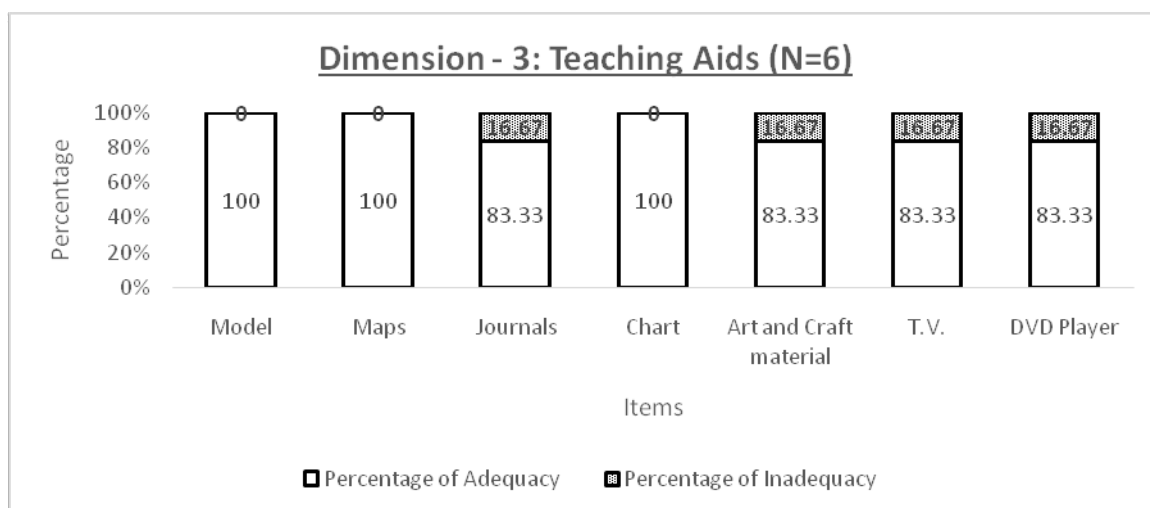
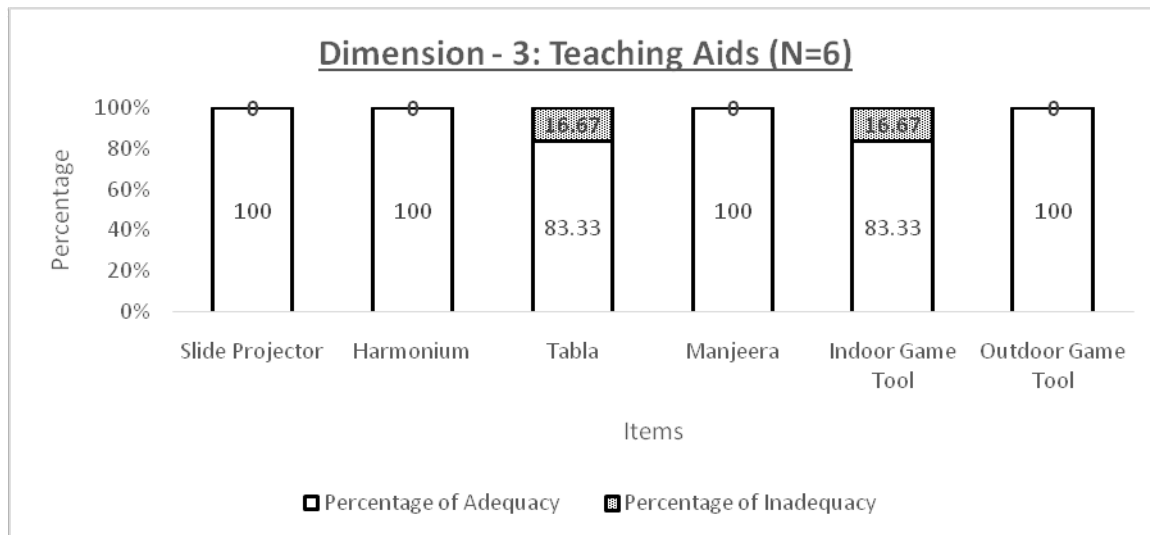
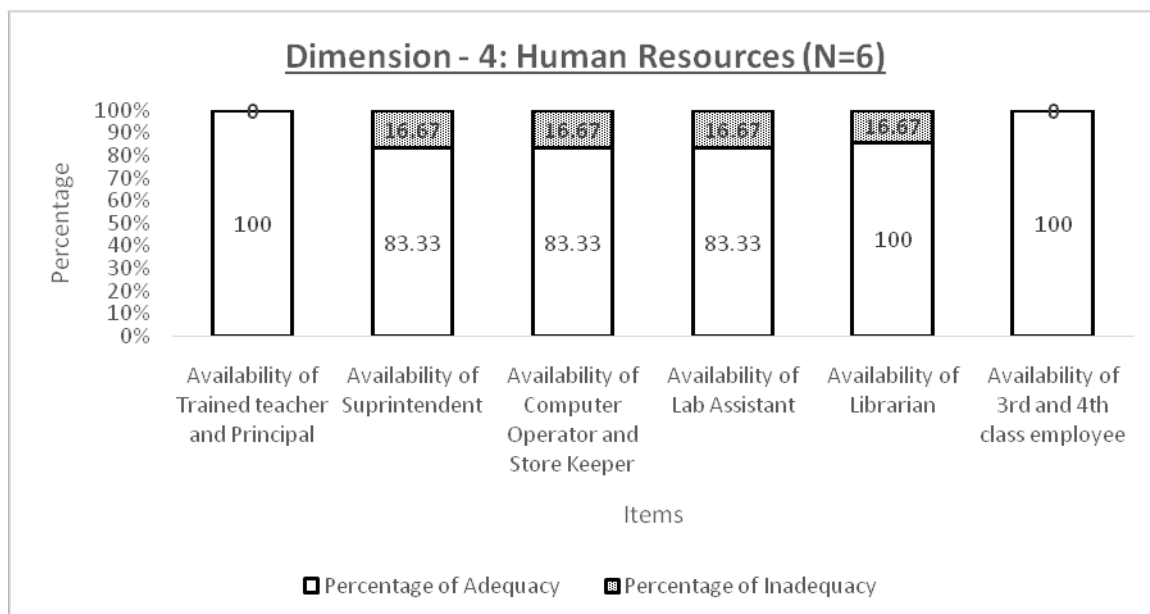


Figure 4.12.3(b)



Dimension - 4: Human Resources

Figure 4.12.4



Interpretation of the Data in Respect to Objective 2:

Data related to human resources available in self-financed D.El.Ed. Colleges indicates that all D.El.Ed. colleges have their own classrooms and staff rooms where classes run, and staff is

always available in staff room. Campuses were naturally illuminated where teacher and student were not facing any type of problem related to light. The hostel facilities for the needy were found unsatisfactory, and two thirds of the sampled colleges do not even have hostels at their campuses. After analyzing the data, it is also observed that every self- financed D.El.Ed. college has a multipurpose hall, where all the activities were organized.

Moreover, colleges have separate toilets for girls and boys with the symbol and also separate common room for girls and boys. Most colleges have their own library where pupil teacher issue books for a time period and also do their study in their free periods, although even one-third colleges are not having course-related books in library. Most colleges have course laboratory which means colleges provide practical knowledge with their course content. Also, all colleges have their own computer lab where pupil teachers do their course work and ICT related work on computers. After observing Most colleges have a big hall for art and craft where pupil teachers gather and spend one hour daily for art and crafts works teacher give them task like decorate the notice board.

Moreover, only two-third colleges have their own health and physical education center. Self-financed D.El.Ed. colleges have their own principal and administrative offices, and storerooms where files and some other things related to study were stored. Most colleges also have visitor rooms available in their premises. Furthermore, most of the self-financed D.El.Ed. colleges provide canteen facility. So, students were not facing so many problems to take snacks. Space for parking and gardening about which, by observation, we could say that each and every DIET has space for parking where teachers and students and other staff of college stand their vehicle and also have space for gardening. All self-financed D.El.Ed. colleges have books, journals, and magazines in their library and pupil teacher and teachers are using these books, journals, and magazines. Also, it is evident that all colleges have the children's books which helps pupil teachers to prepare their lesson plans.

It is also evident that all self-financed D.El.Ed. colleges use visual charts that are graphical representation of any content to train their pupil teachers. Also, we can conclude that all self-finance D.El.Ed. are having photostat machines. Also, all D.El.Ed. colleges were using teaching aids like models, maps, charts, slide projectors during their classes to make their classes

interesting. Further, most of the self-finance D.El.Ed. colleges were using T.V. as a teaching aid. It is also revealed that most of the self-financed D.El.Ed. colleges provide journals to their pupil teacher.

Moreover, most of the self-finance D.El.Ed. colleges were using art materials and all self-finance D.El.Ed. colleges were having musical instruments, but the music classes were rarely running in self- financed colleges. All musical instruments like Tabla, Harmonium, Manjeera etc. were full of dust. Most of these colleges were having indoor game equipment and they are organizing indoor games and all D.El.Ed. colleges have outdoor game equipment and organize outdoor games. Also, inter-murals and inter-college competitions are also frequently held.

Furthermore, it is found that in all self-financed D.El.Ed. colleges, sufficient trained teachers were available and also each teacher was using different teaching skills and also students were enjoying the class. Also, principals were there at each institute and most of them also have office superintendent and they were possessing expertise in their work. Also, in most of the D.El.Ed. college the availability of computer operator and storekeeper was sufficient. It was evident that most of the D.El.Ed. colleges have sufficient laboratory assistants. We can also observe that in all self-funded D.El.Ed. colleges, librarians were available who issue the books for pupil teachers and care about books and also have register to maintain the books detail. Sufficient number of group C and group D employees were also observed. Group C employees obey all the teachers and staff's order, and Group D employees make campus hygienic.

Description and Analysis in Respect to Objective 3: 'To compare the adequacy of physical and human resources available in DIETs ($N_1=6$) and self- finance D.El.Ed. colleges ($N_2=6$).

Data regarding the physical and human resources has been described and analyzed in the sub-sections 4.11.1 and 4.12.1 above, which was based upon the observation by the researcher and was recorded. For comparing the adequacy of the resources at both types of institutions, the above-mentioned data is used and again described and analyzed after synthesis to facilitate the comparison. The dimension-wise description and analysis is given in the following sub-sections.

Dimension - 1: Physical Resources

The data tabulated above in Table 4.13.1 can also be represented graphically as shown below in Figure 4.13.1(a), Figure 4.13.1(b), and Figure 4.13.1(c).

Figure 4.13.1(a)

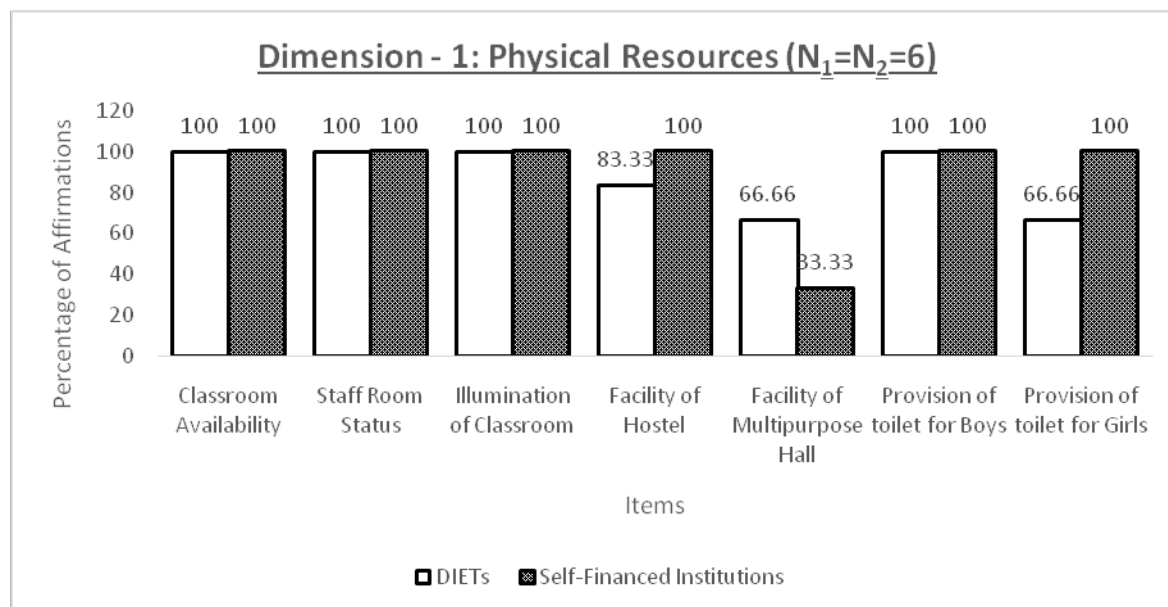


Figure 4.13.1(b)

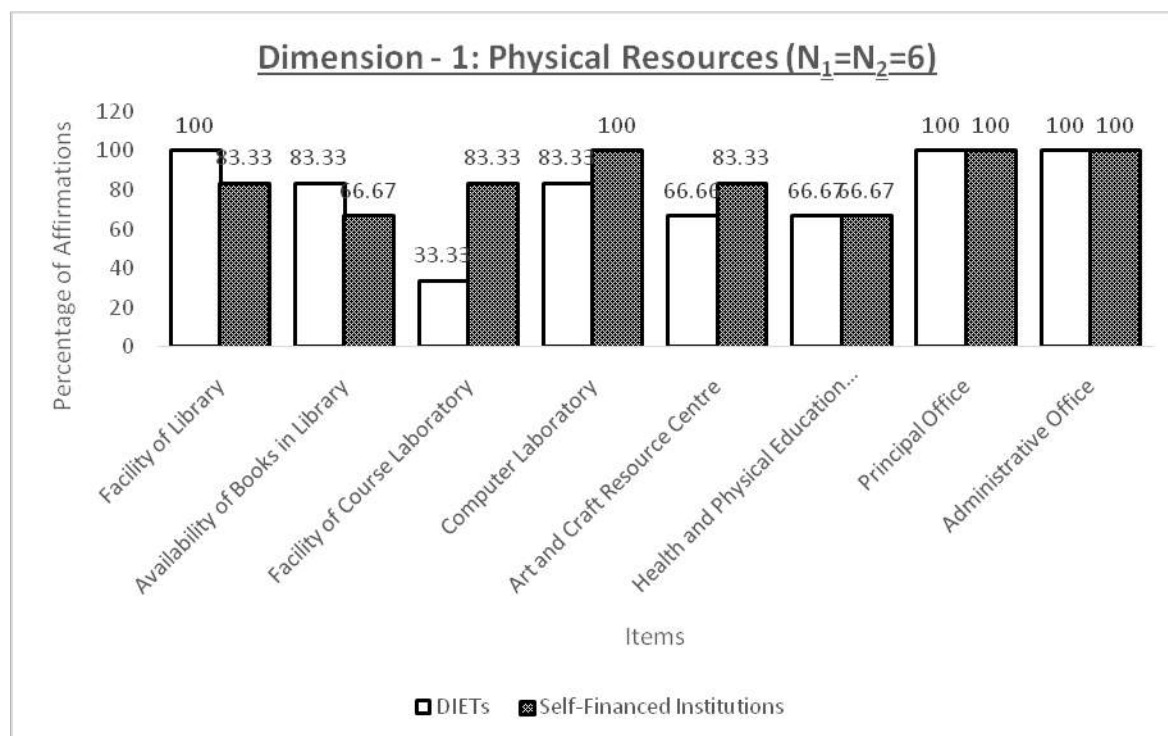
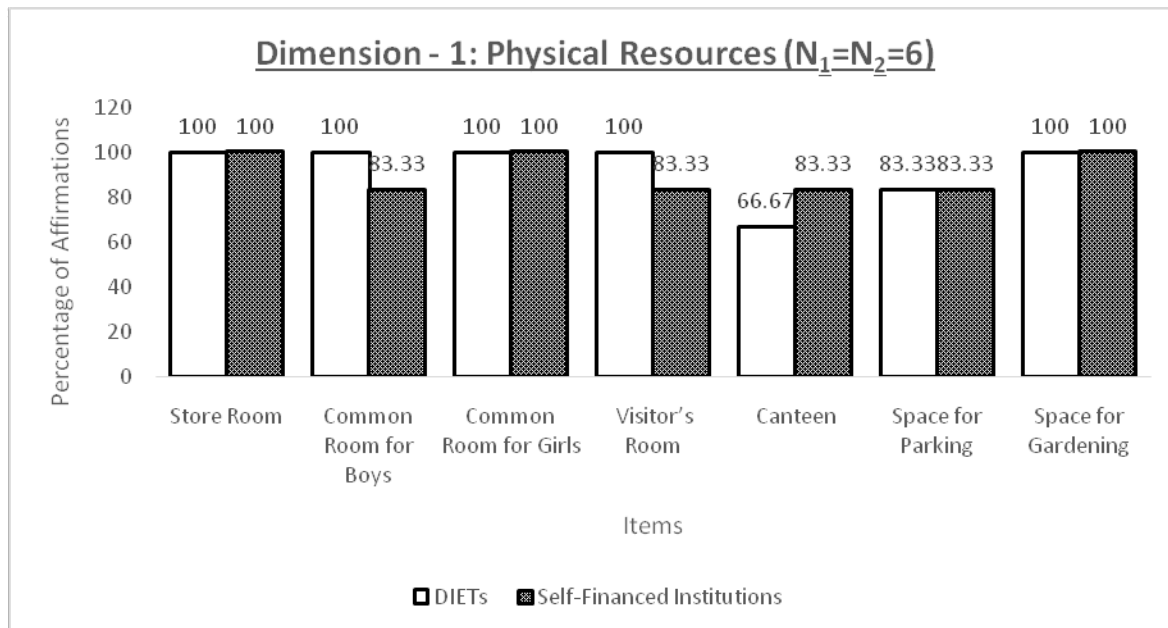


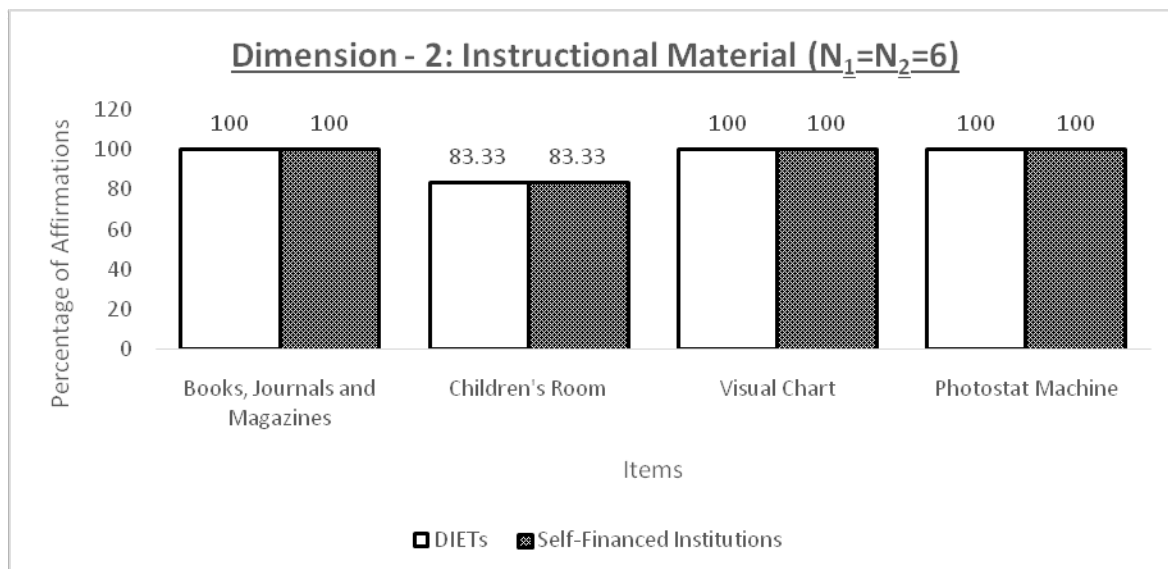
Figure 4.13.1(c)



Dimension 2: Instructional Materials

The data tabulated above in Table 4.13.2 can be summarized and graphically represented as shown below in Figure 4.13.2.

Figure 4.13.2



Dimension - 3: Teaching Aids

Figure 4.13.3(a)

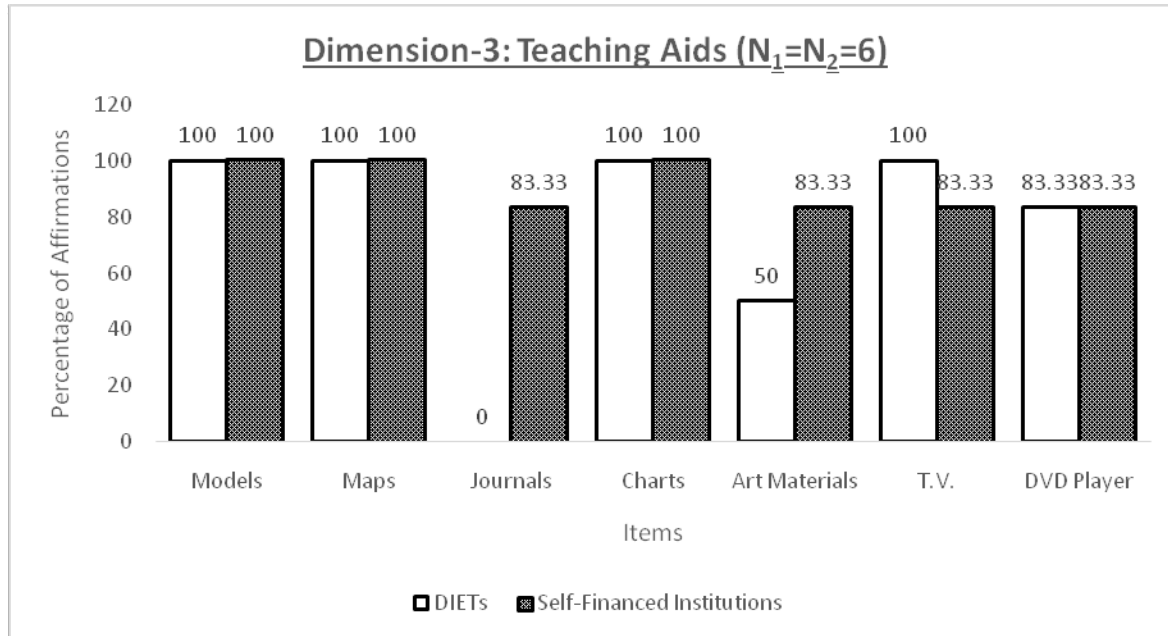
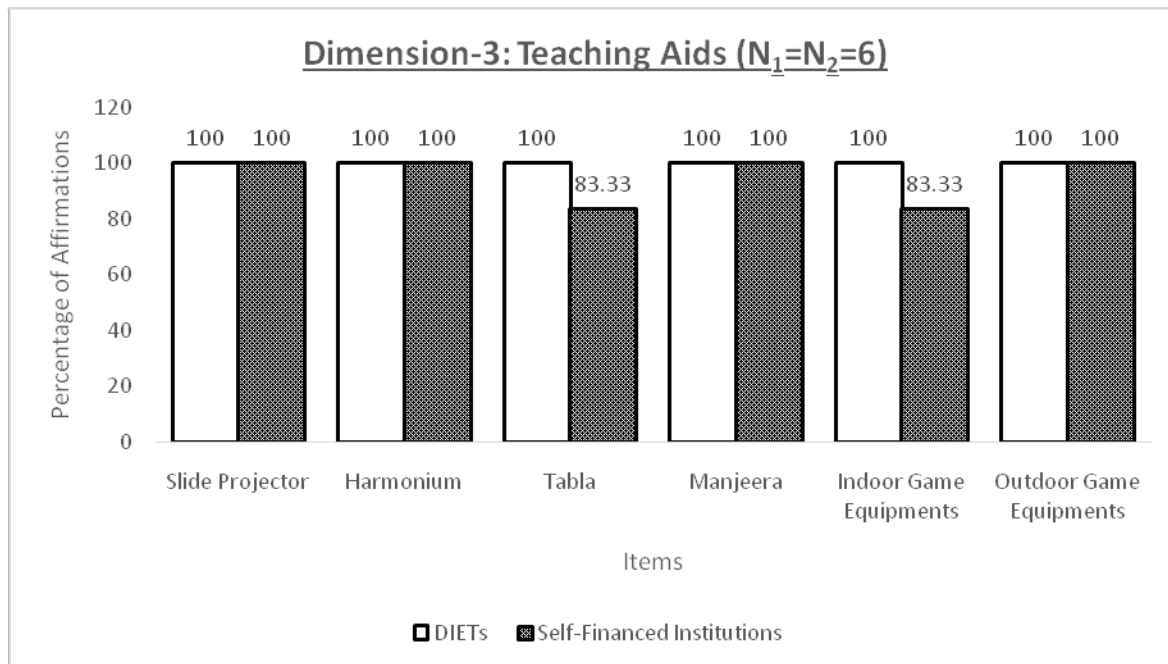
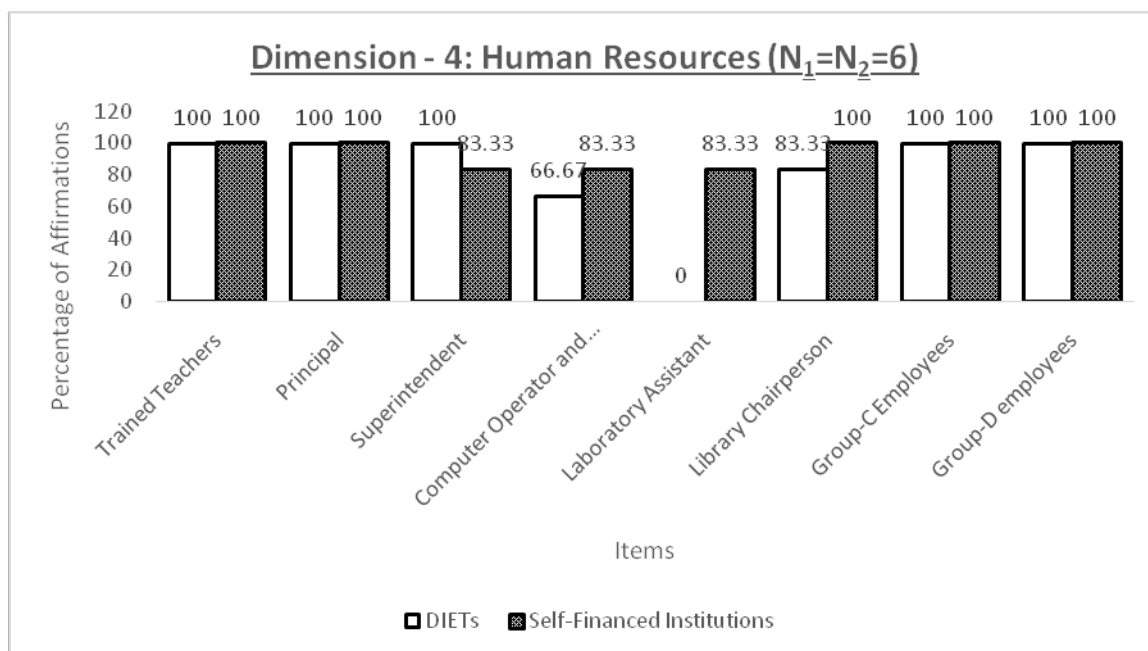


Figure 4.13.3(b)



Dimension - 4: Human Resources



Interpretation of the Data in Respect to Objective 13:

The data represented and analyzed above in sub-section 4.13.1 can be interpreted as following. Within the dimension of physical resources, it can be interpreted that all the institutions were having sufficient number of classrooms, staffrooms, natural illumination, toilet facilities for boys, principal and administrative offices, storerooms, common rooms for girls and sufficient space for gardening. Hostel facilities, girls' toilets, and computer laboratory were present in all the self-funded institutions, but few of the DIETs yet need to provide these facilities. On the other hand, facility of library, common rooms for boys and visitor rooms were available in all the DIETs but still need to be made available at few private colleges. Further, the facilities like multipurpose halls and availability of curriculum related books in libraries needed improvement in all institutions, but currently DIETs are doing better in these aspects. On contrary, facilities like course laboratory, art and craft resource center and canteen are provided more frequently in private institutions, but still needs to be enhanced in all the institutions. At last, facilities of parking space and health and physical resource centers are equally provided at both types of institutions, but still need to mark their presence at every institution.

While talking about instructional materials, it has been observed that books, journals and magazines, visual charts and photostat machines were available at every campus, but children's

rooms were still not available in each of the campuses. Both type of institutions, either DIETs or self-financed institutions have to still work in this direction.

When it comes to teaching aids, availability and usage of models, maps, chart items, slide projector, harmonium, manjeera, and outdoor games equipment were present in all the DIETs as well as self-funded institutions, but at most of these institutions, musical instruments are not used at all. Although DVD player was not present in all the DIETs and self-financed institutions but was used frequently. Television, tabla and indoor game equipment are available at all the DIETs, but few privately-owned colleges do not have these on their campus. This lack needs to be eradicated. Although art materials and journals are frequently used and are present at most of the self-funded institutions, they are not present in most of DIETs and are seldom used.

Finally, dimension of human resources indicates that sufficient number of teachers, principals, group C and group D employees are present at all the institutions. Whereas, superintendents were present at each DIET, but not at self-financed institutions. On the other hand, library chairperson was present at each campus of samples self-financed institution, but not at DIETs. Absence of laboratory assistants in DIETs and one of the self-funded institution needs to draw attention of the administrators. Computer operators and storekeepers were present at more self-funded institutions than at DIETs, but still needs upliftment in both type of institutions.

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17. Environmental Education: What is to be done

- Dr. Nandan Bhattacharya, UGC – Human Resource Development Centre, Jadavpur University, Kolkata, e-mail- asstdirhdc@jadavpuruniversity.in

Abstract

The present article emphasizes on the necessity of teaching of environmental education in the present global scenario and the responsibility of teachers performing it. The paper finds out the problems concerning the teaching of environmental education as lack of awareness and interest among stake holders, lack of proper importance & infrastructural facilities provided by the institution and lack of proper coordination between the academic components. The solution of such problems needs academic as well as administrative assistance on which the study makes an effort to focus on some recommendation.

Key words: Environment, Education, Teaching, Participatory learning,

Introduction:

The definition of environment and environmental education are usually a stipulating subject (Lucas, 1972). Comprising all the aspects of environment it can be defined as the complex set of physical, geographic, biological, social, cultural and political conditions that surround an individual or organism and that ultimately determines its form and nature of its survival may be defined as environment. The accomplishment of eco-friendly environment, sustained and equitable development, protection and preservation of biodiversity remains the greatest challenge to humanity today. But recent years have witnessed rising concern and conflict between development and destruction. To cope up with such a scenario reorientation of the education system is required which will lead to a sensitive sense of accountability in individuals and society. Environmental education therefore must be an organized effort to teach about how natural environments function and, particularly, how human beings can deal with their behavior and ecosystems in order to live sustainably. The term is often used to imply education within the school, college and university system, from primary to higher education. However, it is sometimes used more broadly to include all efforts to educate the public and other audiences, including print materials, websites, media campaigns, etc. Intergovernmental Conference on Environmental Education organised by UNESCO in co-operation with UNEP Tbilisi (USSR)

during 14 - 26 October 1977 stated that “Environmental education should be integrated into the whole system of formal education at all levels to provide the necessary knowledge, understanding, values and skills needed by the general public and many occupational groups, for their participation in devising solutions to environmental questions” (UNESCO, 1977). This is possible only when environmental issues are identified, scientifically understood and appropriate solutions applied for their improvement; into the way people perform their trade, profession or occupation. Therefore in this backdrop concept of environment education emerged from the Stockholm Conference organized by the United Nation in 1972. In the Declaration of the United Nations Conference on the Human Environment Principle 19, it is stated as “Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension” (Stockholm, 1972). In this milieu two issues are to be catered with due importance, i.e. appropriate curriculum and the proper teaching learning method exclusively applicable for environmental education. Both the matters are critical to implement due to the unique nature of their own. Environmental education thus is often interpreted as both curriculum product and curriculum process. Gauph (2010) opines that “A complicating factor for environmental education as both a product and a process has been that it does not neatly fit into any traditional subject areas of the curriculum, and its interdisciplinary or multidisciplinary nature has meant that it has often been marginalized in traditional schooling as a result”. Thus the subject is not only multidisciplinary in nature but requires unique teaching methodology to address the subject acceptably to the students. At the same time not only the teacher student relationship is the only criteria but relation with the authority and above all the whole society is also essential part of the process. This requires a suitable infrastructure and coordination under the umbrella of the educational institution, the management, staff, official and the funding authority or the authority concerned with principle making.

Whatever the condition of the education system may be with its merits and demerits, support or limitation, one thing is clear that teaching is the primary essential component for better learning. Therefore teaching methodology should be on primary focus on which the learning as well as awareness depend a lot. So many works have been performed with regard to teaching methodology particularly concerning Environmental Education. Colbeck *et.al.*(2002) worked on

faculty motivation and traditional or group assignment teaching. Sundaramoorthy and Sampath (2004) worked on knowledge and attitude about environmental education. Blackburn *et. al.* (1991) provides information on faculties' interest self-competence, self-efficacy, institutional commitment, personal interest in teaching. Brown and Atkins (2002) in their book, states about effective teaching. Mahmood *et.al.* (2012) showed students preference of problem based learning over conventional methods. Goodsell *et.al.* (1992) opines in favour of collaborative learning for higher education. Ethical and aesthetics obviously is a part of teaching no matter wheather the subject is. This issue is addressed by Rethorst (2019). Besides different govt. and NGOs are working on this matter like those of The Global Development Research Centre (GDRC) (discussing on objectives of environmental education); North American Association for Environmental Education; CPREEC (publishes a journal on environmental education). Present study tried to put some light on this perspective. It also tried to propose models and recommendation suitable for present setting of our country.

History and current status of Environmental Education in India:

Before going through the detail study it is better to recapitulate a quick backdrop of Indian scenario of Environmental Education. In India the issues of Environmental Education came forward during 1980s. In the area of formal education, the National Policy on Education, 1986, thrusts on generate consciousness about the environment. University Grants Commission (UGC) is directed by the Supreme Court inter alia to take proper steps to provide EE in higher education finding proposal from universities, incorporated several courses and prescribed several programmes. Ministry of Human Resource Development, Department of Education, Government of India with NIC (National Informatics Centre) and UGC organized a 5 members committee (Prof. Erach Bharucha, Director, Bharati Vidyapeeth Institute of Environment Education and Research, Pune; Prof. C Manoharachary, Department of Botany, Osmania University, Hyderabad; Prof. S Thayumanavan, Director, Center for Environmental Studies, Anna University, Chennai; Prof. D C Goswami, Head, Department of Environment Science, Gauhati University, Shri R Mehta, Director EE Division, Ministry of Environment and Forests) of Curriculum Development with Dr. N. K. Jain as UGC official to prepare a six months compulsory core module course in Environmental Studies for undergraduate students in 2004. The vision and structure of this curriculum can be quoted as "The Core Module Syllabus for Environmental Studies includes classroom teaching and fieldwork. The syllabus is divided into eight units covering 50 lectures.

The first seven units which will cover 45 lectures are classroom teaching based to enhance knowledge skilled and attitude to environment. Unit eight is based on field activities and would be covered over five lecture hours and would provide students with firsthand knowledge on various local environmental aspects. Field experience is one of the most effective learning tools for environmental concerns. This moves out of the scope of the textbook mode of teaching, into the realm of real learning in the field, where the teacher acts as a catalyst to interpret what the student observes or discovers in his/her own environment. Field studies area as essential as class work and form an irreplaceable synergistic tool in the entire learning process” (Bharucha, 2004). Recently during 19th June, 2017, UGC informed all the Universities about compulsory implementation of module syllabus on Environmental Studies for undergraduate course of all branches of higher Education in Universities and Colleges as per directives of the Hon’ble Supreme Court of India, University Grant Commission with the help of an Expert Committee has framed 8 units module syllabus for Ability Enhancement Compulsory Courses (AECC- Environmental Studies) under CBCS. All the Universities are requested to take necessary steps for implementation of the directions of the Hon’ble Supreme Court (Letter No. D. O. No. F. 1 - 212017 (CPP -II, Dt. 19.06.2017).

The status of Higher Education in India:

The higher education in India comprises of four components viz. students, teachers, institution administration and UGC. The former two are directly related to teaching – learning process while the institution and UGC comprise the administrative or authoritarian part. According to UGC report, “At the time of independence, there were only 20 universities and 500 colleges in the country with 2.1 lakh students in the higher education system. As on 31.03.2019 there are 1047 Degree Awarding Universities / Institutions (Source AISHE portal and UGC 2(f) list of Universities) including IIMs, 41935 Colleges (Affiliated /Constituent / PG - Off Campus Centers / Recognized Institutions) (Source AISHE portal 2018-19) and Students Enrolment of 373.99 Lakhs in Higher Education. After independence, there has been a phenomenal growth in all these numbers. Now, it is a recorded fact that there is an increase of 52.35 times in the number of Degree awarding Universities/Institutes, 83.87 times increase in the number of colleges, and the students enrolment has gone up to over 178.09 times in the system of higher education as compared to the figures of Independence Year of India”. (UGC Annual report, 2018-19). As the teacher and student community are believed to be one of the chief responsible part of our society

having a close contact both directly and indirectly over the large section of people of the country and impact on them, the lions' share of the responsibility to raise the environmental awareness among people should also come to be shared by them. But unfortunately in spite of all sincere attempts for enhancement and encouragement expected value addition in this regard was not achieved. This article tried to find out the probable reasons and its solution. It also tried to focus on firstly the need of alternative practice of the EE and the alternative model for EE particularly in Indian Context.

Reasons behind the disappointment:

As like other issues of our education system as well as society EE also encounter the same fundamental problem i.e. the incongruity between 'ideal' and 'real'. The vision and curriculum and the implementation of them exhibits relentless discrepancy. The reasons are following.

Lack of proper importance & infrastructural facilities provided by the institution.

Though Hon'ble Supreme Court and UGC have tried their level best to furnish the EE in India the reality contradicts sternly the rules. The problem is of two folds. Firstly there is dearth of number and properly qualified faculty and secondly the scarcity of infrastructural facilities. As example only 209 M.Sc. in Environmental Sciences colleges in India (Shiksha, 2020) and 124 B. Sc. colleges in comparison to 6047 colleges regarding Arts disciplines (Fig. I) (Target Study, 2020) In most of the colleges then teachers are there not from Environmental Science/arts discipline specifically. A report of The Indian Express says "Several DU colleges are violating the University Grants Commission's guidelines on who can teach environmental science — a compulsory paper". It further mentioned that "As per RTI replies received by the All India Environmental Science Students' Union from over 40 DU colleges, only eight have teachers with an MA in environmental science/studies or with a NET or PhD" (Chettri, 2017). This view is further justified by the following statement "The syllabus pertaining to environmental education has been prescribed and the guidelines have been framed but according to the applicant, teachers who are not qualified in terms of the UGC Guidelines are teaching the subject. The teachers who have specialized in Sanskrit, Hindi, English, Electronics, Political Science, Sociology, Mathematics, Physical Education, Home Science, Computer Science etc. have been assigned the task of teaching the subject of environmental science; in the most cosmetic way, which is against the letter and spirit of the judgment/orders passed by the Supreme Court of India. It is also

averred by the applicant that a number of States like the State of Haryana, Punjab, Goa, Mizoram, Delhi and the Union Territory of Chandigarh amongst others have not complied with the directions of the Supreme Court of India, as afore-noticed” (M.C. Mehta Vs University Grants Commission Ors., 2014). If we look into the statistics depicting the percentage of recruitment of faculty in ENVs, it clearly accords with the reports stated above. In comparison with other alleged popular subjects environmental science shows noticeably less number of teachers (Fig. II).

The other side of the problem is the insufficiency of infrastructure. Recalling Bharucha, EE is unlike any other conventional course and it needs special attention and amenities to attract the pupils and cater the subject in acceptable manner. Therefore it needs instruments, specially designed teaching aids and properly trained persons to handle those. Unfortunately institutions particularly the newly formed, rural, or even urban colleges are really necessitate amenities, library facility, proper infrastructure for practical classes, equipments of teaching aids (OHP, LCD, Slide projector etc.) to draw attention of the students with regard to environmental education. Moreover, the class constitutes of a large number of students and the teacher student ratio exceeds any scientifically recommended threshold. Furthermore as teachers of different subjects teach the subject in the institution it must require coordination between faculties assigned to take classes or setting up the routine. But in most of the cases such coordination is undermined resulting into failure to render due emphasis and importance to the subject.

Lack of awareness and interest among students and teachers.

The earlier mentioned reasons in consequence results into the lack of interest among both students and teacher community. Quiet often it is found that the class of EE is taken for granted and the students roaming here and there during the class of environmental science. In this case it should be noted that the degree of awareness varies to a great extent among the students depending on the base of their knowledge they have assembled in previous learning. Teaching faculty often are found to pursue the class very inattentively, reluctantly, not fully equipped with well prepared lesson plan etc. The outcomes however are misuse of the time, waste of the resource. Teaching is a highly individualized activity, and the student-teacher interaction is an intense human relationship that encompasses a broad range of personalities and behaviors. Teachers’ motivation is essential to guide the students. They are in the direct contact with the students to feel, judge and evaluate the pulse, lacuna and development of them. On the other hand

they can convey the voice of the students to the institution authority. Above all no other factors motivate the students as successfully as they can. To motivate each and every student a scientific easily accessible and practicable teaching methodology is really wanting.

Discussion:

There may be two kinds of solutions of the problem. One is academic, concerning innovative teaching and learning methodology which students and teachers are directly and exclusively related with. The second one is to some extent administrative where college authority as well as UGC itself should have to share the responsibility. Let us find out the solution from these two view points. Discussing about the responsibility of teachers particularly regarding EE, UNESCO stated, "The teacher's responsibilities for the student activities are twofold: to assure that they understand what they are being asked to do, and to provide the opportunity for them to share and discuss among themselves—under the teacher's supervision—the results of their activity. It may not be feasible for each student to complete every activity. It is important, however, that each activity be performed by a few members of the class and that all class members benefit from the sharing and discussion of each activity's results" (Environmental Education Series, UNESCO, 1986). Hence it is worthy to say that teachers and teaching is the chief component for greater and better EE in every structure of educational scenario wheather primary or secondary or even higher education. So far the teaching methodology is concerned there is no "best" or "most effective" teaching style, which will work well for all teachers or in all situations. Rather in most of cases it is flexible and dynamic concept subject to change depending on several factors. Educationists have made a comparison between the techniques. Accordingly the methods recommended are Lecture, Demonstration or Performance, Case Study, Simulation, Discussion, Pairs or Small Group Work, Individual Instruction etc. Every method has merits and demerits of its own. Discussion and assigning group work are proved to be more effective than lectures for developing students' critical thinking skills, interpersonal skills, and professional confidence (McKeachie, 1990; Johnson *et.al.*, 1998; Cabrera *et.al.* 2001). Though in case of colleges in India usually lecture method is followed due to lack of infrastructure as discussed earlier. Lecture method is proved to be one of the most universal, widely used conventional teaching methods. It may be as good as or better than other pedagogical methods for fostering immediate factual recall of

material (Kulik & Kulik, 1979 cf. Cabrera *et.al.* 2001). The advantage of this method is that there is no specification of size or the composition of the class and dependent on the skill of the teacher. Therefore, the whole lesson is reliant on the motivation of the teacher, his or her physical, psychological and sociological state during the lecture period. On the other hand it has limitation also as the student participation is very poor. The attention and learning of the so-called 'last benchers' often results into a big zero. On the other hand, there is controversy regarding size of class for better performance. Earlier studies clearly indicate that class room size is not a determining factor for good performance in teaching and learning (Edmondson and Mulder 1924; Hudelson, 1928). Support for small class size comes from Macomber and Siegel's (1957a, 1957b, 1960; Siegel, Adams, & Macomber, 1960). "...it seems likely that in larger classes, faculty members typically require less written work and spend more time lecturing and less in discussion" (McKeachie, 1990). But unfortunately this issue is beyond the jurisdiction of the present article and it would take miles to walk for solving the crisis of teacher-student ratio. So what we can do is to cut the coat according to our cloth. That means finding out the solution optimizing our effort in the present and current circumstances.

Recommendation:

Tagore says the essence of teaching is not to just bottle feeding of the content to the students but to create inquisitiveness creativity and passion for the content. If the interest of the students can be drawn the practice may achieve rolling stone effect creating self motivation of them to learning and increase awareness about environmental issues which is the desire of EE. Keeping such limitations like infrastructural constrains, the students composition and the class size etc. in mind we are in a situation where student attraction and attention must be drawn but unfortunately no sophisticated and so called modernized techniques are available in all institutions. The present dissertation tries to recommend an innovative methodology, which may be feasible for all situations. The recommendations are as follows.

I. It is evident that more the active participation in learning the more success can be achieved. Therefore first and foremost recommendation is to ensure participation among students. In this practice the coordination between the concerning teachers is primarily necessary for allotment of topics at the beginning of the session. Once allotted, for each week at day 1 the teacher would likely to distribute the assignments on a subject to the groups of students on which they would be requested to prepare a project. The topics would be discussed by lecture method throughout four

days (day 1 to day 4). At day 5 there would be a group discussion session and finally at day 6 each group of students' presentation would be arranged. As for example the Unit 3, Section 3.4, the topic recommended in model curriculum of UGC is energy flow. It has 6 items to be discussed each can be distributed to one or if necessary more than one group (Table 1). Hereby, augmentation of more student participation would likely to be is expected. The only thing essential to implement is the proper coordination between faculty, students and authority of the institution.

II. As described above regular interaction and communication among the stake holders of the education system is required to update and refine the system. Therefore the present study tried to propose 'Line and Loop Model' (Figure III) for the components to take active part in interaction. Both intra and inter community interaction is essential. Each stair must interact with its lower one (block arrows in fig. III). Intra community interaction among the students should be arranged in guidance and presence of instructor. Regular faculty meeting within a definite interval should be organized to discuss the current state. College administration may organize seminars, debates, guest lectures to enhance the knowledge database. Co curricular activities may be organized to encourage student interest. But seldom negligence and scarcity of time may hinder the process. In that case it is suggested to maintain direct or overlapping communication procedure e.g. UGC to teachers, UGC to students or institution authority to students overlapping the immediate strata.

III. It is a poor situation we face in the enrollment as well as the number of faculty in institutions in context of Environmental Studies (Fig. II and III). Therefore, each and every institution should have at least one specialized faculty for teaching and coordination for EE. Therefore first of all Government should recruit at least a single post for Environmental Science/Arts faculty for each institution.

Conclusion:

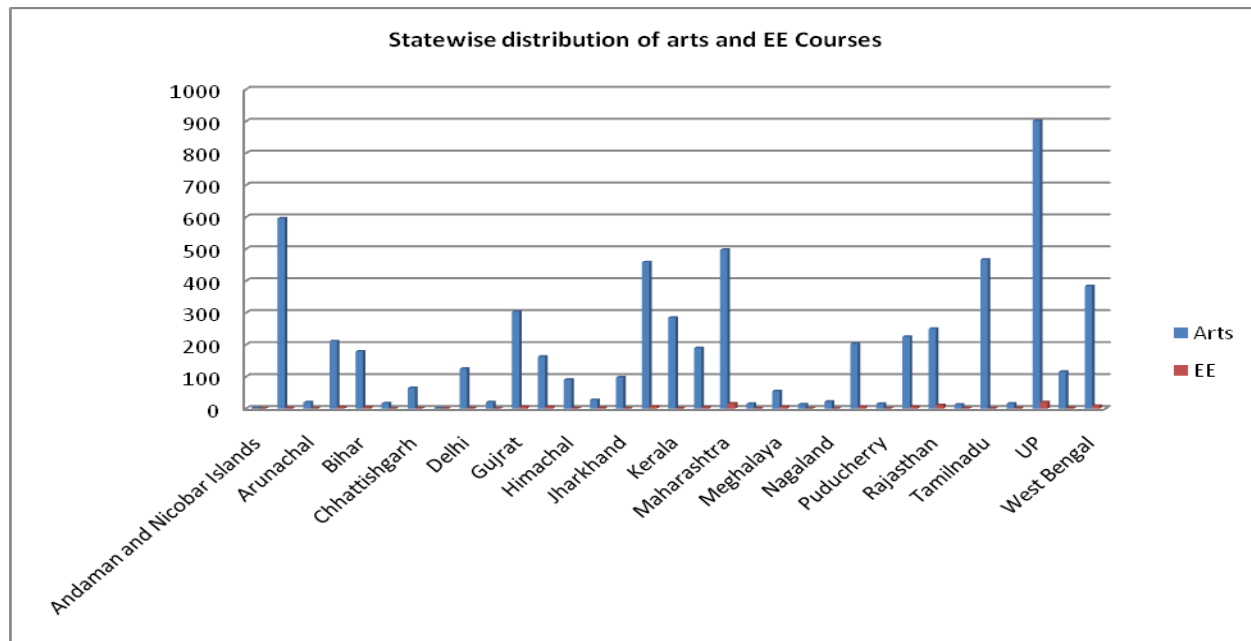
As reported earlier application of suitable teaching method is a situation and person specific subject. The only thing we must keep in mind that environmental studies should no longer be treated as a so called 'additional subject'. Rather the increasing threats to environment have put us in a vulnerable bank of a river where the future of our successors or the mankind itself is facing severe devastation. An overall social movement now only can combat against such circumstances to clear the evil clouds of annihilation. The TEAM (Together Everyone Achieve More) work of education system in this regard must lead the flag to achieve the perfection. If perfection means

100% and each letter gets its equal value then it may be coined as **P (Practice) x E (Enthusiasm) x R (Resource) x F (Feasibility) x E (Encouragement) x C (Continuity) x T (Togetherness) x I (Involvement) x O (Organization) x N (novelty)** where absence or negligence of any of the component would give rise zero.

Table.1: The hypothetical weekly study schedule

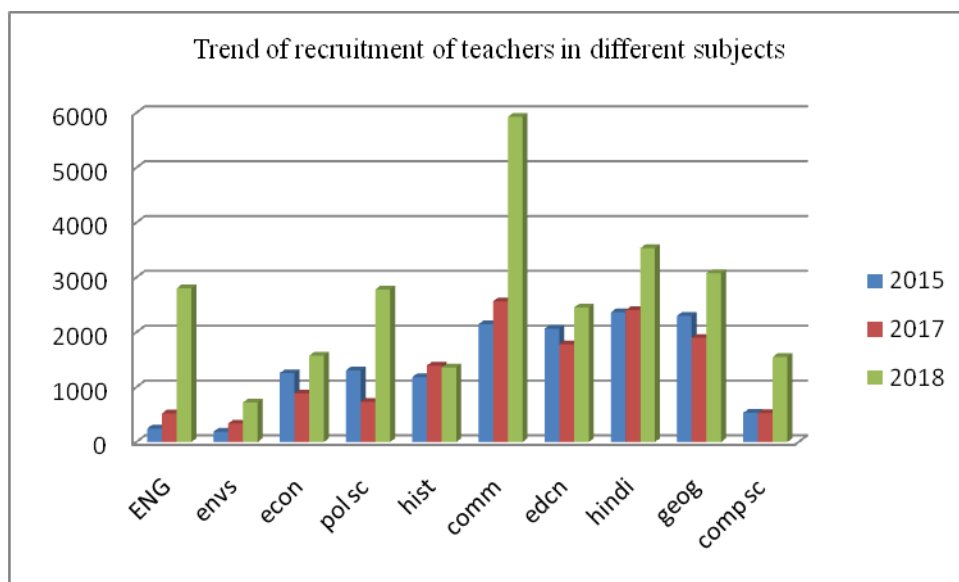
Day 1	Distribution of assignments to groups + Lecture on a particular topic.
Day 2 – Day 4	Lecture on a particular topic.
Day 5	Group Discussion
Day 6	Presentation from the students + evaluation

Fig. I. State wise distribution of B. Sc. colleges offering EE and Arts colleges.



Source: <https://targetstudy.com/colleges/arts-colleges-in-india.html>

Fig. II. Trend of recruitment of teachers in different subjects in higher education



Source: <https://www.edufever.com/cbse-ugc-net-previous-year-cut-off/>

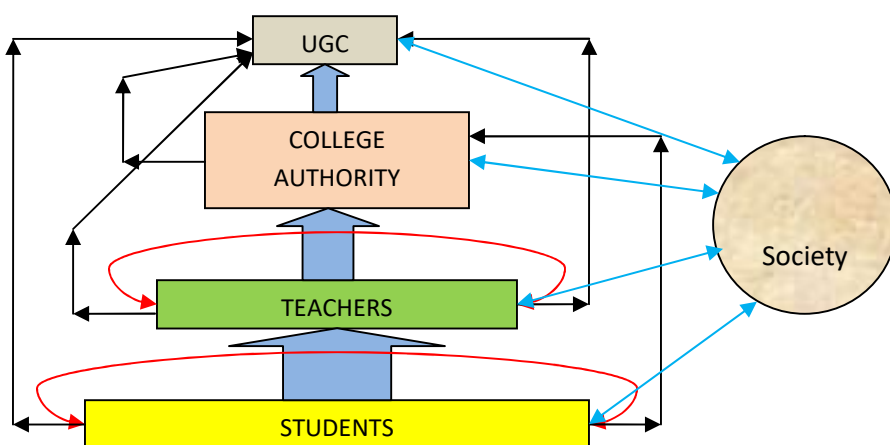


Fig. II. Line and loop model of coordination and feedback among the stake holders of the academic system.

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18. An Online Learning Model to develop English language skills through web-based andragogy

- Ghazala Nehal, Assistant Professor , Uluberia College, Howrah, West Bengal
- Md. Kutubuddin Halder, Professor , Department of Education; University of Calcutta, Kolkata, West Bengal

Abstract

The paper qualitatively revises web-based andragogic roles of Educational Technology through an Online Learning Model [OLM], self-designed by the researcher to establish the idea that traditional classroom teaching models may not be always effective for online andragogic learning, as observed during COVID-crisis online classes – blackboards were replaced with digital whiteboards, class timetables were being posted in WhatsApp groups and class lectures, substituted with fixed hours of live lectures via Google Meet. With students, straining their ears for hours, learning became a physical pain, especially when such online classes, as classroom teaching, are conducted 5 days a week! Teaching models viz. Herbartian Model or the ICON Model, designed for classroom learning, can result adversely if imposed upon online learning. Online learning will require an individual set of Online Learning Models. But no teaching model, in India, has ever been designed exclusively for online learning. The paper thus focuses on designing an OLM & application of the OLM on adult-learners. A web-based andragogical design, the OLM is founded upon Constructive Learning theories that promote skill-building & knowledge construction through self-learning and scaffolding. Through a series of constructive online learning activities, the OLM, here, aims to develop the four English language skills. The effectiveness of the OLM is observed in student-centricity and absence of peer-pressure in the e-learning environment. The OLM further reveals that if learning is skill-oriented, especially if generic & professional skills are involved, our tech-savvy learners will always be motivated to learn even if learning is taking place amidst predicaments. The research is thus an attempt to give its readers an insight into the student-centricity of OLMs which, if designed as per its digital potentials, could achieve the 4 Cs of the 21st century skill-learning – critical, creative, collaborative & communicative skills.

Keywords: Andragogy, Online Learning Model, Classroom Teaching Model.

Introduction

With COVID- crisis significantly compromising nation's formal education system, Educational Technology (EdTech), no doubt, has risen as a means for disaster management control in the education world. But the crisis has also, inadvertently, given EdTech a scope in the dark to reintroduce itself not just as an information delivery system but as an *andragogical* means to constructive learning. The teaching models, used in the Indian Education System, viz. the *Herbartian Model*, the *ICONModel*, Bruner's *Concept Attainment Model* or Ausubel's *Advance Organizer Model*, were designed exclusively for classroom learning. No teaching model, in India, has ever been designed exclusively for online learning. But the 'infosphere' (Floridi, 2014) as we live in, the indispensability of EdTech in the teaching-learning process cannot be overlooked. Thus, with the 21st century educational goals, problematizing the binaries between correctly answering & critically thinking - information piling & knowledge building - scoring & skill acquisition, web-based learning should be given a substantive & independent role in the teaching-learning process by allowing it to have its own Online Learning Models. The pandemic exigencies have further put the marginalized roles of online learning into question. The question, the research, therefore, has raised is: should we continue to look upon online learning as a mere bridge for geographical gaps - a sophisticated tool to reproduce information in vibrant digital packages – a substitute for classroom learning – a “digital myopia” as it is?

To answer the question, the researcher, has self-developed a *skill-based Online Learning Model* [OLM]. An andragogical learning design, the OLM is founded upon Constructive Learning theories which promote skill-building & knowledge constructions through self-learning and scaffolding. The skills that the OLM aims to construct, here, among its adult learner-participants are the four English language skills.

Research question:

- How can the four English language skills – *Listening, Speaking, Reading & Writing* (LSRW) - be developed among adult-learners in an e-learning environment?

Literature Review(the reviewed research papers were accessed through Google Scholar as the COVID-crisis allowed no, in person, use of libraries):

- Western perspective

Since the invention of World Wide Web (www) by Tim Berners-Lee (1989), web-based learning has travelled *three generations* – witnessing a shift from “content-oriented” to “communication-oriented functionalities in the web platform.” (Ahamer,2010)

With the advent of e-learning, the need for skill-development in instructional technology was immediately felt. But despite its introduction in the teacher-training institutes, computer application among school teachers was still unpopular (Oliver,1994). Web-based “audio graphics” had limited pedagogical use, “largely for classroom management and content delivery.” (Oliver & McLoughlin, 1997). Face-to-face interaction was still pre-dominant as there was “no administrative high-level support for tele-teaching”, e-tools played ‘supportive role’ and ‘blended learning’ was in vogue (Ahamer,2010).

The *second-generation* e-learning, thus, moved towards student-centric “communication and construction” in the wake of its *first-generation* teacher-centric “content and quiz” (Ahamer,2010). Use of multimedia in networked learning was, now, not just limited to content-delivery but in developing problem-solving skills. As such skill-development is possible not through “assimilation of a large body of isolated facts” but through “collaborative activity”, web-based learning witnessed a subsequent rise in student-student interactions and a decline in student-teacher interactions (Oliver & McLoughlin, 2001). Online learning environment, now, promoted “self-regulated learning” by assigning “real world tasks which integrated a number of skills.” (Stoney & Oliver, 1999) – these skills were both generic & technological in nature.

The rise of *third generation e-learning* with web-based discussion forum - “public space” like “easily accessible ‘home’ for newly forming groups and as mentally comfortable living room for learners.” (Ahamer,2010). further promoted student-centricity in e-learning. These virtual “living room” which had well-structured peer-reviewed discussion, became “a material manifestation of world views”, promoting “higher order thinking” and providing opportunities “to practise a broad range of generic skills” (McLoughlin & Oliver, 2001).

As for technological skill, “computer operation skills, software applications, Internet usage and WWW usage” benchmarked ICT literacy (Oliver & Towers, 2000).

The growing emphasis on skill development shifted web-based learning designs from *online content to online task-based learning designs* (Oliver & Herrington, 2001). The “digital myopia” (Herrington *et al.* 2005) was gone and computers had evolved from being a mere information delivery boy to being a ‘facilitator’ whose new role is to bring *technical skill development*,

scaffolds, *'formative assessment'* & *'distributed cognition'*. (Oliver, 2007). Researchers and educationists were now more interested in designing constructivist online learning materials (Oliver, 2000). The online instructional designs, having “Web-supported inquiry-based learning approach” (Oliver, 2007). now, evolved into having three critical, constructivist strategies - selection of *'learning tasks'*, *'learning resources'* & *'learning support'* (Oliver & Herrington, 2003)

However, initially such constructive online learning environments were being designed only for higher educational purposes (Oliver, 2001), schools were still outside its ambit until the COVID crisis in 2019. The emergency shift to online teaching was challenging for school teachers, either because of inadequate skills & equipment, and technological non-preparedness or because of the content-challenges to transfer laboratory experiences of science-subjects into online lessons (Babincakova& Bernard, 2020). As for university classes, COVID crisis had posed a similar challenge; but universities in Western countries were “quicker to adapt” because of their higher “technological readiness” than the CEE countries. (Tartavulea, 2020)

- Indian perspective

Speaking of “technological readiness”, Indian web-based learning design, during COVID crisis, experienced similar challenges as did the CEE countries. Although many academic units have been practising blended learning, face-to-face interaction is still predominant in Indian schools & colleges (Dhawan, 2020).

Pre-COVID online teaching, in India, has been prevalent mostly in Distance Education System carried out by Open Universities, viz. IGNOU & NSOU. It is only recently that online platforms like SWAYAM portals, 2018, have been government initiated to make higher education more accessible.

Till now school education was still outside the ambit of online learning. EdTech start-ups for school education like the BYJU’S learning app was popular only among the privileged few with high-tech androids and English as their MOI. The majority middle-class mass, accessing Govt. & Govt.-aided schools with non-English MOI, still heavily relied on the learning resources and instructions provided in person by their school or tuition teachers. Their knowledge & use of technology was limited only to projectors, PPTs, computers & whiteboards. It is only in the last

few months that LMS, viz. Zoom Classes, Google Classrooms, Moodle Desktop, Microsoft Team, etc. have suddenly become the buzzwords in Indian schools & colleges.

This unprecedented transition into networked learning, although has made teachers & students find themselves in unfamiliar territories with fundamental online learning challenges to overcome, viz. “technical constraints like sustainability of devices and bandwidth availability, broadband connectivity issues” in rural India (Muthuprasadet *al.* 2020) “unequal distribution of ICT infrastructure, digital illiteracy, digital divide, technology cost & obsolescence, lack of personal /physical attention, confusion, anxiety and (subsequent) frustration “(Dhawan, 2020)in the teaching-learning process; Indian educational researchers are trying to stay positive of the shift (Dhawan, 2020; Shenoy *et al.* 2020) and are preferring to describe it as a ‘revolution’ in the education system (Muthuprasadet *al.*, 2020). Recent studies have actually revealed students’ preference for the “flexibility and convenience of online classes” – use of smart phones, “recorded classes with quiz at the end of each class to improve effectiveness of learning” (Muthuprasadet *al.* 2020), easy accessibility to teachers via voice or text messages and virtual teaching being space & time free are appealing to the students. “However, the question about the preparedness, designing, effectiveness of e-learning is still not clearly understood, particularly for a developing country like India...” (Muthuprasadet *al.*, 2020).

The researcher has, thus, attempted to develop and apply a self-developed Online Learning Model. Participants’ perceptions of the online learning design have later been qualitatively analysed to establish the “effectiveness of e-learning” for skill development.

Conceptual framework:

The researcher has borrowed the following 2 theories on online learning by Ron Oliver to develop her own skill-based Online Learning Model [OLM].

A) Theory 1: Oliver’s three “critical elements of online learning settings” (Oliver, 1999):

- ✓ *Learning activities*
- ✓ *Learning material*
- ✓ *Learning scaffolds*

B) Theory 2: Oliver’s Theory of “online learning materials, supporting constructivism” (Oliver, 2000):

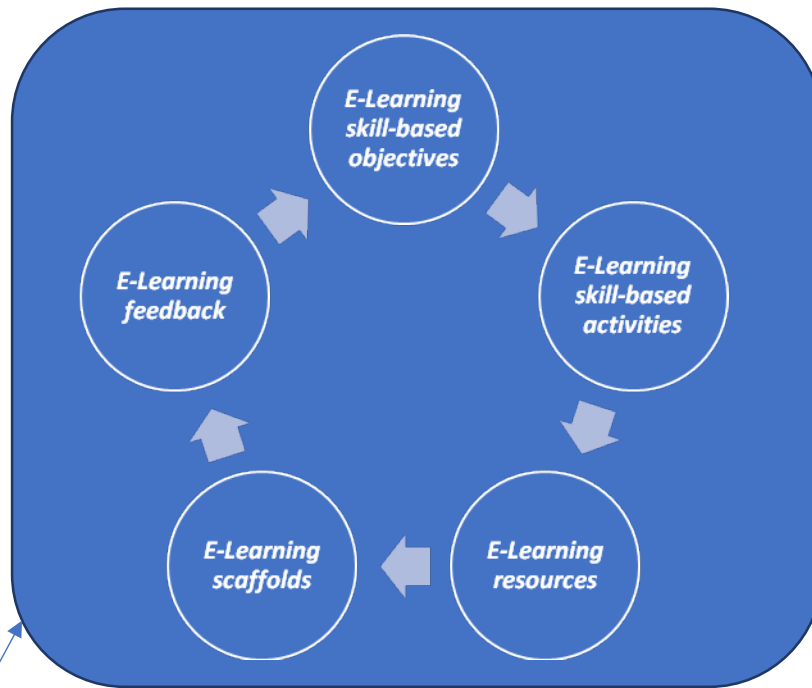
1. **Selecting “meaningful context” for learning:** When “meaningful Web contexts” are generated– information, then, becomes the *means* to construct knowledge and not the *end*, in itself.
2. **Designing learning activities prior to selecting learning resources:** Traditionally, learning resources or course-contents are selected first, and based on which evaluative learning activities are structured. But for constructive learning, designing of learning activities should precede content selection. The content, thereby, becomes “the means to an end” – it “serves to support the learning activity”.
3. **Learning Activities need to be open-ended & ill-structured:** Ill-structured, open-ended tasks offers learners the creative opportunities to add their own structure to complete the tasks.
4. **Ample learning resources:** Learners must “be able to view situations from a number of perspectives, to be able to disregard irrelevant information and to have to deal with the cognitive conflicts that occur as their ideas develop. This form of learning activity cannot be supported by scant resources...”
5. **Provide learning support:** Learning design must have appropriate “supports and scaffolds” to facilitate the learner.
6. **Authentic assessment activities:** Students are motivated towards “learning activities that are in some way related to the planned assessment.”.

Designing an Online Learning Model

✓ The researcher’s self-designed Online Learning Model [OLM]:

The Online Learning Model [OLM], developed by the researcher, has 5 *E-learning components* (Fig. 1) which are functional inside a digital space, offered by a user-friendly Learning Management System (LMS), for e.g., Google Classroom, Moodle Desktop, etc. The Model, here, is based on Constructive Learning Theories which advocate skill-building & knowledge construction through self-learning and scaffolding.

A blueprint of researcher’s self-designed Online Learning Model [Fig 1.]:



Learning Management System

(for e.g., Google Classroom or Moodle desktop)

✓ **The researcher's OLM has 5 components (Table 1):**

1. *E-Learning skill-based objectives*
2. *E-Learning skill-based activities*
3. *E-Learning resources*
4. *E-Learning scaffolds*
5. *E-Learning feedback*

✓ **Table 1 - A description of each of the 5 OLM components:**

E-learning components	Description
<i>E-Learning skill-based objectives</i>	Skill/s that will be developed as the end-product of online learning
<i>E-Learning skill-based activities</i>	Online learning activity/s, selected for the particular skill/s development.
<i>E-Learning resources</i>	E-content/s used as appropriate learning resource/s.

<i>E-Learning scaffolds</i>	E-content/s used as appropriate learning support/s
<i>E-Learning feedback</i>	Using LMS tools or E-tools for immediate feedback & comments on learners' skill development.

Application of the OLM on adult-learners

To ensure the effectiveness of the OLM, researcher had applied the Model on 10 English Method student-teachers of a Govt.-aided teacher training institute in West Bengal for a period of 2 months – August & September, 2020. During these two months participants' performance was duly observed, evaluated & recorded for data analysis.

- **The OLM was applied in Google Classroom, for English language skill development among its adult learner-participants, as follows:**
 - ✓ Google Class name: *English Method*
 - ✓ Google Class students: *10 English Method student-teachers*
 - ✓ Google Class code: *xhvmhme*
- **Application of the 5 E-learning Components of the OLM have been presented in the following table [Table 2]:**

<i>E-Learning objectives:</i>	<i>E-Learning activities:</i>	<i>E-Learning resources:</i>	<i>E-Learning scaffolds:</i>	<i>E-Learning feedback</i>
Development of English language skills (LSWR) for adult participants	1.E-Activity 1- To design creative lesson plans for school students, using digital learning resources 2. E-Activity 2- Peer Review of each	1.E-contents & Video Tutorials (self-created by the researcher) 2.Handpicked YouTube	1.Technical assistance to post queries, attach files in Google Classroom or submit assignments through Google Forms.	Instant feedback and comments from the researcher through Gmail and private comment

other's lesson plans	video on teaching profession	2. Written Guidelines & instructions for online learning activities	sections of Google Classroom were given.
3.E-Activity 3 -Online Speaking Skill activity through video creations		3. Rubrics for Peer Review (E-Activity 2)	
4.E-Activity 4 – Online Listening Skill activity to summarize & comment on a TED Talk YouTube video on teaching experience.			

- **The researcher has modified Oliver's theory on online constructive learning (*Oliver, 2000*) to adapt her OLM to Indian status quo for e- learning as follows:**
 1. Unlike Oliver's theory to have "open-ended & ill-structured" tasks, the researcher had preferred highly-structured tasks. Participants, being *freshers* to e-learning environment, needed adequate scaffolds which were provided in the form of strict deadlines, scores & detailed guidelines to complete the e-learning activities
 2. Given the pandemic-exigency to continue with online formal education, the researcher had further modified Oliver's theory to "*make the resources plentiful*". With each of the e-activity, the researcher had attached only one e-learning resource so that participants could balance between syllabus-studying and skill-developing tasks.
 3. The difficulty levels of the online activities have been adjusted to the participants' English language proficiency. Nine out of ten participants had English as their Second Language, and most of them had poor English language proficiency, especially their English-speaking skill.
 4. To apply the OLM, researcher has availed Google Classroom, a user-friendly Learning Management System [LMS] as the base to execute the *5 E-learning components*

Research Methodology

Data Collection to Qualitatively enquire into the participants' learning experience of the researcher's OLM to establish its effectiveness:

- **Research type:**

It is an *Applied Phenomenological Research*.

It is an *Applied Research* because the researcher has applied her self-developed OLM on the participants for skill-based learning.

It is a *Phenomenological Research* because it makes a qualitative enquiry into the participants "lived experience" of the phenomenon – the researcher's self-developed OLM.

- **Sampling:**

Purposive sampling has been done as it targets a specific student-teacher group for a specific purpose - online learning activities of 10 English Method student-teachers of a Govt.-aided teacher training institute in West Bengal were closely observed to assess their English language, pedagogical & technological skill-development through researcher's OLM.

- **Data triangulation:**

1. Semi-structured focus group interview through Google Meet
2. Participants' feedback on OLM, through Google Forms
3. Researcher's observations

The researchers who is the developer and facilitator of OLM had, thus, been a participant-observer of the online learning process. Despite the involvement, researcher has attempted to maintain objectivity in her observations & analysis.

- **Content Analysis** [*J. Saldana's Coding Manual (2016) has been accessed for Coding methodology of Content Analysis.*]

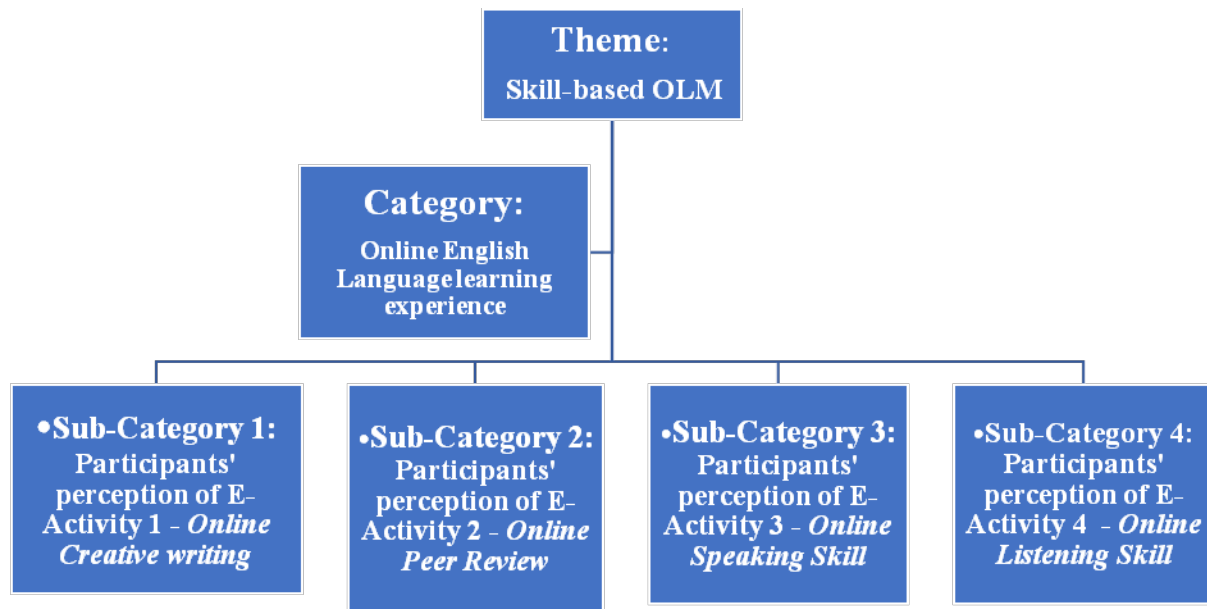


Fig. 2 Structure of the Deductive Content Analysis

A Deductive Content Analysis has been done by arranging the data into Theme, Categories & Sub-categories through a series of Coding Cycles. to qualitatively analyse the participants' learning experience of the researcher's OLM to establish its effectiveness (Fig2.)

In the First Cycle Coding or the *Initial Coding stage*, participants' online learning experiences and perceptions of the four E-Learning Activities have been coded, using *In-vivo&Descriptive Coding*.

In the Second Cycle Coding or the *Categorization* stage these Initial Codes have been indexed under a broad Category – “*Online English Language learning experience*”.

In order to recognise the subtle differences within the initial codes, the codes have been rearranged under four Sub-Categories through *Holistic Coding* [Fig. 2].

The Category & the four Sub-categories have been brought together to develop the Theme – “*Skill-based Online Learning Model*” - which is also the central idea of the research.

To answer the Research Question, the codes under the Category & Sub-categories have been woven into Key Assertions. These Key Assertions actually enumerate the Theme in order to establish the effectiveness of the researcher's self-developed Online Learning Model for English language skill development among adult-learners.

The research question has been answered in the following Key Assertions on the effectiveness of researcher's self-designed Online Learning Model [OLM] for English language skill development among adult-learners.

▪ **Key Assertions:**

Based on the Content Analysis of participants' perception of the four E-Learning Activities, the researcher asserts that the OLM is an effective web-based andragogical design for the development of the four English language skills (LSRW) as well as of a few other cognitive skills, viz. creative writing skills (as observed during E-Activity 1), critical thinking & observation skills (as observed during E-Activity 3), evaluation skills, reporting & reviewing skills (as observed during E-Activity 2), - among adult learners in an e-learning environment.

English speaking skill is generally the weakest among ESL (English as Second Language) learners, they prefer writing to speaking in English, as observed during E-Activity 4 where, although both oral & written options were given for assignment submission, all the participants submitted their summary & comments on the selected TED Talk YouTube podcast through MS word document files rather than through any audio/video files. The researcher observes that the participants' preference for English writing to English speaking is because of their inadequate listening or exposure to English language in, otherwise, a vernacular-dominant learning environment. The OLM can come to their rescue by providing them with innumerable listening options to English language through its handpicked YouTube videos & podcasts. As for speaking, learners can record their speech in English without being ridiculed or judged for wrong English pronunciation or vocabulary; and forward it to the facilitator, time & again, for correction and improvement (as practised in E-Activity 3). Besides, one can replay his/her speech in English to locate mistakes and to re-record it till he/she is satisfied with his/her performance. The repeated recordings will help the learner to self-evaluate as well as bring confidence as he/she speaks in English.

Another area the OLM revealed is the absence of peer-pressure in the e-learning environment. Online learning can bring to light hidden talents even of the quietest, the introvert or of the least motivated learners. Since learners can complete online activities in the comforts of their home without any peer-pressure to perform or to prove themselves, they are able to give their best. In the absence of peer-pressure, their potentials & creativity are in full swing. It is rarely observed in classroom teaching where the hierarchical class structure – the high achievers, the moderates, the low achievers and the failures – is not always based on students' true potentials but on how well they score & perform in class, submit assignments on time, respond to teacher's instructions and handle peer-pressure. These pre-requisites to fit in the highest order of the class-structure cannot be easily met by the introverts, the geeks & the nerds of the class.

OLM can further develop one professionally by making its learners more disciplined with the LMS electronically reminding learners time & again that the deadline for assignment submission is near. Online learning allows easy sharing of learners' views through video creations (as observed during E-Activity 3) & easy exchange of write-ups for peer-review (as observed during E-Activity 2), through WhatsApp, emails & Google Forms. With the easily accessible and user-friendly digital tools within a Learning Management System, the OLM can further provide convenient hands-on experience at language & cognitive skill development. Unlike classroom teaching, bound by space & time where lesson plans are prepared, mostly, to address the prescribed syllabi which, in India, is still too content-oriented, an OLM with its time & spatial liberty can incorporate multiple, digital means to skill-based learning.

Furthermore, digital efficiency of OLM can be a motivating factor for learners - the celerity with which e-files are downloaded or uploaded, feedbacks & comments are instantly delivered, and the e-privacy to share doubts, opinions & scores bring positive reinforcements.

The rigour with which the participants had performed the E-Learning Activities of OLM, designed during the COVID-crisis, further revealed that if learning is skill-oriented, especially if generic & professional skills are involved, learners will always be motivated even if learning is taking place amidst predicaments. It also establishes the fact that digital literacy is not a concern for our tech-savvy generation.

The OLM can bring student-centricity to the evaluation process. Immediate feedback, convenience for both the learner & the facilitator in formative assessments through user-friendly evaluative tools like Google Forms, opportunities to be scored online on each of the formative

assignments and privacy in teacher's comments & feedback, offered by user-friendly LMS, act as motivation for skill-development. Besides, unlike on-campus requirements of classroom teachings, time & spatial convenience of OLM preserves learners' physical energy for constructive learning activities, otherwise wasted in travel. Learners can work out assignments at their convenience and need not miss deadlines – a learner may study at night and submit her assignment online before 12a.m midnight and yet she is not late in her submission.

Moreover, the e-contents, provided as e-learning resources and e-learning scaffolds, can be enriched with hypertexts, learners can choose among weblinks for appropriate & multiple digital LTMs (Learning Teaching Material) as learning resources. They can access them cost-free through mobiles & laptops, unlike classroom learning where students are entirely at teacher's mercy to make the contents attractive & comprehensible - the teacher, in class, has to manually carry LTMs to class or have expensive projectors, screens & amplifiers, installed, to use digital LTMs.

However, it is also true that, unlike classroom teaching where lectures & tutorials are followed with a question-answer session, the OLM does not offer immediate doubt clarification options. Learners need to wait for their answers over phone calls or through private comment sections in the LMS. It causes communication gaps between learner & facilitator, making the learning process lonely & distant. Besides, all may not be comfortable with E-contents as learning resources. The OLM, further, fails to incorporate group-discussion and games as learning activities. Video-conferencing can be an option for group discussion but it lacks the “human touch” of class interaction which has its own “charms and liveliness” (as perceived by one of the participants). Internet unavailability, costly & limited data packs, buffering net connection can interrupt concentration during online learning. These drawbacks can be because, unlike the First World Countries who have already stepped into third generation e-learning with web-based discussion forum and virtual “living room”, promoting “higher order thinking” (McLoughlin & Oliver, 2001), we who actually have been thrust into e-learning environment by the COVID-crisis, are still struggling in the first-generation of web-based learning – quite a long e-road, indeed, lay ahead of us!

Limitations:

1. Observations cannot be generalized because of the small sample-size due to purposive sampling.
2. Researcher's observation stretches across only a few online activities with low difficulty index; if the online activity frequency and their respective difficulty levels are increased, a different set of perspective might emerge.
3. The COVID-crisis having put the nation's formal education into jeopardy, the online activities had been performed by the student-teachers in a rather anxious-prone atmosphere. The researcher, thus, observes that pandemic-anxiety, as an intervening variable, has impacted participants' performance.

Suggestions:

1. OLM can be developed for other disciplinary-contents & skill development, other than English Language & Pedagogy
2. Instead of a highly-structured tasks, ill-structured tasks with minimum E-Learning Scaffolds, as suggested by Ron Oliver (2000), can be designed to explore participants' creativity & problem-solving skills.
3. Difficulty levels & task complexities could be further raised to make the E-Learning Activities more challenging.

Conclusion:

We envision online learning as a virtual substitute for classroom teaching, it was quite evident during the mass online classes during the COVID-crisis - blackboards were replaced with digital white boards, class timetables were being posted in WhatsApp groups and class lectures, substituted with live lectures via Google Meet. Students, enmeshed in the pandemic-anxiety and the consequent dubiety in the education world, were fatiguing over long fixed hours of live online-lectures, exposing them to heavy mobile radiation and draining them of their energy and expensive data packs – it is worse than monotonous class lectures! Students, hailing from remote corners, are the worst sufferers. While they have to seek spaces in roof tops and open fields for internet connection, those from cities & metropolitans can attend these liveonline lectures from their rooms with better internet connection and easy access to plug points. Online live lectures for long-fixed hours deplete mobile charges faster, causing radiation to emit more heavily due to low battery charge which is quite unhealthy if it goes on

for 5 days a week! However, with students straining their ears for hours, learning became a physical pain & hazard for both - having no peers around and only one of the 5 senses - the ears – being mostly active, the process is lonesome, tiring, causes low learning and hence can be demotivating.

Online learning has its own comforts, student-centricity, time & spatial flexibility which cannot be harnessed without proper understanding & skills to utilize its digital tools through a proper Online Learning Model. We hence need proper OLMs to make online classes less hazardous and more student-centric. May be in the near future, we might even need to redesign our syllabus to fit into our new Online Learning Methodologies. The paper thus makes meagre attempts at recognising the distinguished features of virtual learning through the researcher's self-designed Online Learning Model.

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19. Effect of Age, Gender and Discipline on E-Learning Readiness of Faculty Members of Higher Education Institutions

- Dr. Y. Vijaya Lakshmi, Assistant Professor, School of Education, Central University of Gujarat, Vijaya.lakshmi@cug.ac.in
- Dr.Minalba Jadeja, Assistant Professor, Children University, Gandhinagar, jadejamina@yahoo.in

Abstract

The COVID-19 pandemic is redefining the practices of higher education in an unprecedented way. E-learning can guarantee the right to higher education during the pandemic to the students of higher education and hence its adoption in teaching learning is now inevitable. The readiness of higher education faculty members towards E-learning is explored in this paper. The paper also presents about the impact of demographic factors (Age, Gender and Discipline) as predictors variables and the influence of their interaction on the criterion variable i.e., E-learning readiness. A self-developed inventory was used to collect the data about E-learning readiness of faculty members. Seven research hypotheses were framed and tested using 4 X 2 X 3 Factorial Design ANOVA. The findings revealed that there is a need to improve the E-learning readiness of faculty members of higher education. Also, it was discovered that there is no significant difference in the mean scores of E-learning readiness of faculty members with respect to their Age, Gender and Discipline to which they belong. Further it is also observed that the second order interaction effect among the Age, Gender and Discipline has a significant influence on E-learning readiness of faculty members of higher education.

Keywords: E-learning readiness, higher education, faculty members, age, gender, discipline

Introduction

The COVID-19 pandemic, divided the activities all over the world into two parts i.e. “before COVID-19” and “after COVID-19”. Education in general and higher education in particular is no exception to this. The pandemic has made it or rather forced the higher education system to explore more and more ways to integrate the digital platforms into educational practices to guarantee the right to higher education during the pandemic. Whether one accepts or not, teaching is moving online in an untested and unprecedented scale (Burgess and Sievertsen, 2020) and the use of E-learning practices has become the need of the hour not only in the distance education system but even in the traditional system. With this pandemic, the higher education system as a whole is entering into a new era. Undoubtedly, COVID-19 has impact (immediate, short term and

long term) on various stakeholders of higher education i.e. students, teachers, administrators etc. and the biggest impact on the teachers all over the world is the continuity of teaching activity using a virtual platforms like E-learning. (UNESCO, 2020). In practice, the ability of teachers to continue teaching using this modality largely depends on various factors like their experience, skills, attitude and the subject they teach. The subject disciplines which have the responsibility to develop professional competences through practice can face a big challenge in integrating E-learning than those disciplines which can suffice through theoretical knowledge. Teachers, who already entered into higher education system with significant experiences in the use of technology in education, may not have great difficulty in ensuring the continuity of education. However, a biggest challenge would be to such teachers who lack these experiences. Thus, this demand for digital transformation makes it more important to study the readiness of stakeholders to use E-learning practices from various demographic dimensions like their age, discipline to which they belongs etc. (Naresh, et al., Reddy and Pricilda, 2016; Owate, et al., 2017; Ng, 2012; Basol, et al., 2018) and other dimensions like their technological readiness, pedagogical readiness, attitude, resource readiness etc. (Parlakkilic, 2015; Azimi, 2013; Oketch et al. 2014; Nwagwu, 2019; Eslaminejad et al., 2010). In this paper, an attempt is made to study about the E-learning readiness of higher education faculty members especially from the point of view of their Age, Gender, and Discipline.

E-learning and E-learning readiness

The definition of E-learning has evolved and is evolving over time. It can be defined as an approach/method/platform which uses the electronic technologies intentionally to create and present learning experiences to enhance the knowledge and performance of a learner (Horton, 2006; Rosenberg, 2001; Clark and Mayer, 2003; Naidu, 2006; Chadha & Nafay, 2003; Khan, 2005; Panda & Mishra, 2007; Roffe, 2002). Thus, to adopt or accept E-learning as an approach/method/platform of teaching is a paradigm shift for all the stakeholders of higher education who are accustomed to the traditional practices of teaching learning (Kaufman, et al., 2002). If well designed and managed, E-learning can gain easy acceptance among various stakeholders of higher education (Hijazi et al., 2003). Just like all other educational endeavors, even in the E-learning platform, it is the teacher who has to take a lead and play an important role (Selim, 2007; Motaghian, et al., 2013, Wang & Wang, 2009). Not only initial acceptance of E-learning but its sustainable use determines the success of E-learning practices (Lee, 2010; Naresh,

et al., 2016) and many studies have shown that one of the most important factor that determines the success of E-learning is the teacher (Yuen & Ma, 2008; Soong et al. 2001; Volery & Lord, 2000; Govindsamy, 2002; Baylor & Ritchie, 2002). Hence, the first priority for success of E-learning practices is to prepare the teachers for it so that it will help in nurturing grassroot ideas from faculty members rather than imposing a top to down pedagogical approach (Saekow and Samson, 2011). E-learning readiness can be defined as the extent of mental & physical preparedness or the capacity to pursue the opportunities provided by E-learning. It includes several aspects like technological skills, online learning style, equipment/ infrastructure, attitude, human resources, financial etc. (Mutiaradevi.R, 2009; Parlakkiliç, Alaattin, 2015; Borotis, S., & Poulymenakou, 2004, Kaur & Abas, 2004; Schreurs, et al., 2008). With this theoretical framework, the present cross sectional study i.e., “Effect of Age, Gender and Discipline on E-learning readiness” was undertaken.

Objectives of the study

- a) To study the profile and E-learning readiness of higher education faculty members.
- b) To study the influence of age on the E-learning readiness of higher education faculty members.
- c) To study the influence of gender on the E-learning readiness of higher education faculty members.
- d) To study the influence of discipline on the E-learning readiness of higher education faculty members.
- e) To study the influence of interaction between Age and Gender on the E-learning readiness of higher education faculty members.
- f) To study the influence of interaction between Age and Discipline on the E-learning readiness of higher education faculty members.
- g) To study the influence of interaction between Gender and Discipline on the E-learning readiness of higher education faculty members.
- h) To study the influence of interaction among Age, Gender and Discipline on the E-learning readiness of higher education faculty members.

For these objectives, the Null Hypotheses formulated were:

H₀₁: There is no significant influence of Age on E-learning readiness of higher education faculty members.

H₀₂ : There is no significant influence of Gender on E-learning readiness of higher education faculty members.

H₀₃: There is no significant influence of Discipline on E-learning readiness of higher education faculty members.

H₀₄: There is no significant influence of interaction between Age and Gender on E-learning readiness of higher education faculty members.

H₀₅: There is no significant influence of interaction between Age and Discipline on E-learning readiness of higher education faculty members.

H₀₆: There is no significant influence of interaction between Gender and Discipline on E-learning readiness of higher education faculty members.

H₀₇: There is no significant influence of interaction among Age, Gender and Discipline on E-learning readiness of higher education faculty members.

Data and Method

In the present study an attempt was made to assess the E-learning readiness of higher education faculty members and hence a cross sectional survey design was adopted.

Sample

Out of the total 154 higher education institutions/colleges listed in All India Survey of Higher Education (AISHE), 2018-19, 60 colleges/institutions were selected randomly and from those 60 institutions, the tool was distributed randomly to around 800 faculty members. The selected institutions belong to various disciplines like commerce, medical, arts, pharmacy, technical, teacher education, physiotherapy, management, nursing, dental, computer application, engineering and technology, science etc. and faculty members fall under various designations like Director, principal, lecturer, reader, professor, assistant professor, tutor, visiting faculty, part time faculty etc. Out of the 800 faculty members to whom the tool was distributed, 421 faculty members filled up the tool and hence, they constitute the sample of the study.

Tool for data collection

An inventory was constructed to collect the data for the current study. A thorough review of literature helped to identify the possible statements to be included in the inventory. After making the corrections as per the suggestions given by the experts who were requested to validate the inventory, the final tool consisted of total 62 items including 10 negative statements. All the items in the tool were measured on five point likert scale. Thus the inventory had total four sections

excluding a section on demographic information. Section (1) consisted of items to assess technological readiness of faculty members. Section (2) consisted of items to assess pedagogical readiness of faculty members. Section (3) consisted of items to assess the resource readiness (split into two sub sections) of faculty members. Section (4) consisted of items which assessed the attitude of higher education faculties towards E-learning. Section (5) consisted of items to gather data regarding the demographic characteristics of respondents like discipline, designation, gender, age, their highest education level, teaching experience and their sources of learning. The inventory had a Cronbach-alpha coefficient of 0.89 indicating high level of internal consistency of the statements.

Analysis of data

Percentage, frequency and other descriptive statistics were used to study the profile and E-learning readiness of faculty members of higher education and presented through figure 1 and table 1. Further, to study the influence of Age, Gender and Discipline and their various interactions on E-learning readiness of higher education faculty members and to test the corresponding null Hypothesis inferential statistics were used. The data was analyzed with the help of 4 X 2 X 3 Factorial Design ANOVA using SPSS and the results are given in tables 2 and 3 and figures 2, 3, 4 and 5. A p-value of 0.05 was considered as significant for all the ANOVA tests.

Results

Demographic profile of the faculty members

The profile of the faculty members who participated in the survey is presented in figure 1. Around 45% of female and 55% of male faculty members participated in the study. The youngest faculty member who participated in the study was 21 years and the oldest was 60 years.

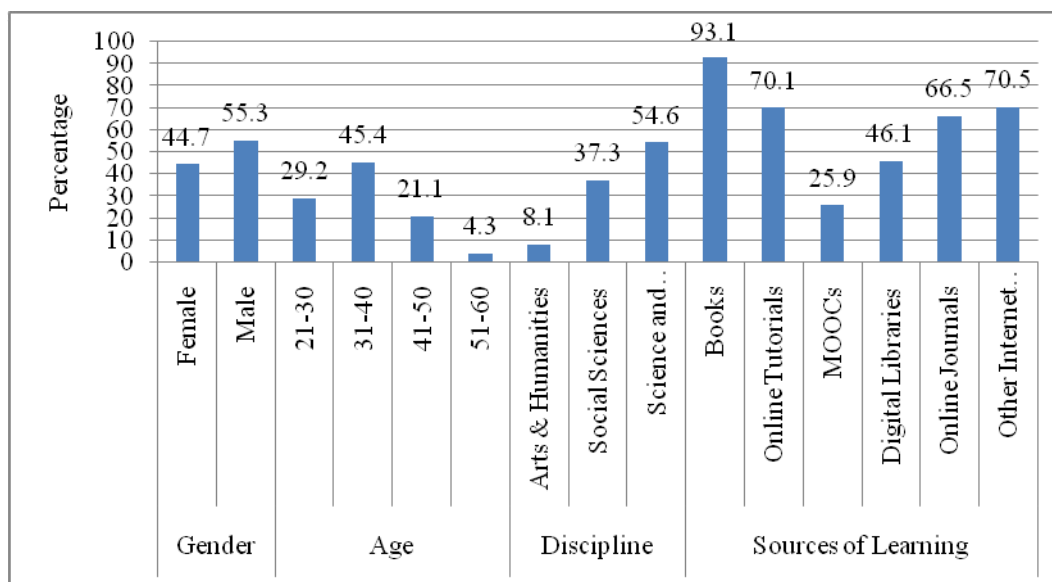


Figure 1: Profile of the faculty members (n= 421)

Around 85% of the faculty members belong to the age group of 21 to 40 years of age. All the faculty members who participated in the study were classified into three major disciplines i.e. Social Science; Art and Humanities; Science and Technology. Majority of the faculty members who participated in the study (81%) belong to Social Science and Science & Technology disciplines and a very few (8%) of the faculty members belong to Arts and Humanities discipline. Books are the major source of learning for around 93% of faculty members. Online tutorials and other internet resources are the sources of learning for around 70% of faculty members. Around 46% of faculty members use digital libraries as a source of their learning. However, a very less (26%) of faculty members use MOOCs as their source of learning.

E-learning readiness

In the present survey study, E-learning readiness is the criterion variable and Age, Gender and Discipline of faculty members are the predictor variables. The predictor variable Age had four levels of age groups i.e. 21-30 years, 31-40 years, 41-50 years, 51-60 years. Female and male were two levels of Gender variable and Social Sciences, Arts & Humanities and Science & Technology were three levels of subject Discipline. From table 1, it can be interpreted that the overall mean score of E-learning readiness of faculty members of higher education institutions is 229.83. The overall mean score of female faculty members is 227.69 and of male faculty members is 231.46. The E-learning readiness tool used for data collection consisted of 62 items

(divided into 4 sections- technological readiness, pedagogical readiness, resource readiness and attitude) measured on likert scale of 1 to 5 and hence, the minimum E-learning readiness score can be 62 and the maximum score could be 310. From the table, it is clear that the minimum score of E-learning readiness obtained is 163 and the maximum is 301 that resulted in a range of 138. The range showed the heterogeneity in the group in terms of their E-learning readiness and also indicates that the scale is able to differentiate the individual differences in the group. Further, Around 48% of the faculty members are above the mean score on E-learning readiness and 52% of them are below the mean score of E-learning readiness. From table 1 it can also be observed that the mean and median score on E-learning readiness are 229.83 and 229 respectively. It shows that there is no much difference between the mean and median score which reflects the normal distribution of the scores.

Table 1: Descriptive statistics summary of E-learning readiness score of faculty members of higher education institutions

		<i>Statistic</i>
E-learning Readiness	Mean	229.83
	Median	229.00
	Std. Deviation	26.519
	Minimum	163
	Maximum	301
	Range	138
	Interquartile Range	38
	Skewness	.063
	Kurtosis	-.303
Percentile	25	211.00
	50	229.00
	75	248.50

Source: Research Data

The E-learning readiness score of 25% of the faculty members is below 211 and of around 50% of the faculty members is above the mean score. Nearly, 50% of the faculty members' E-learning readiness score is below the mean score. The standard deviation (26.519) and the skewness of E-learning readiness (.063) indicate that the score is distributed symmetrically. Further, from the values of mean score and standard deviation, it can be concluded that 95% of the faculty members E-learning readiness score lie between 177 and 283 points while 68% of faculty members score lie between 203 and 256.

Interaction effects

To study the influence of Age, Gender and Discipline and their various interactions on E-learning Readiness of faculty members, there were four levels of age groups i.e. 21-30 years, 31-40 years, 41-50 years, 51-60 years. Gender was divided into two levels i.e., Female and male. The subject Disciplines were grouped as Social Sciences, Arts & Humanities and Science & Technology. Thus, to test the hypothesis H_01 to H_07 , the data were analyzed with the help of 4 X 2 X 3 Factorial Design ANOVA and presented in table 2.

Influence of Age on the E-learning readiness of higher education faculty members

The p-value for Age (0.626) is greater than 0.05 level of significance and hence it is not significant (Vide Table 2). It thus reflects that the mean scores of E-learning readiness of faculty members in age groups of 21-30 years, 31-40 years, 41-50 years, 51-60 years did not differ significantly. So there was no significant influence of Age on E-learning readiness of faculty members. The Null Hypothesis (H_01) i.e., there is no significant influence of Age on the E-learning readiness of higher education faculty members is not rejected. It may, therefore, be said that E-learning readiness was found to be independent of Age of faculty members.

Table 2: Summary of 4 X 2 X 3 Factorial Design ANOVA on E-learning Readiness of faculty members

Dependent Variable: E-learning Readiness						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Remarks
Age (A)	1228.574	3	409.525	.583	.626	Not significant
Gender (B)	239.158	1	239.158	.341	.560	Not significant
Discipline (C)	403.370	2	201.685	.287	.751	Not significant

A X B	1678.101	3	559.367	.797	.496	Not significant
A X C	1888.643	6	314.774	.448	.846	Not significant
B X C	699.117	2	349.558	.498	.608	Not significant
A X B X C	7026.749	4	1756.687	2.502	.042	P<0.05

Source: Research Data

Influence of Gender on the E-learning readiness of higher education faculty members

The p-value for Gender (0.560) is greater than 0.05 level of significance and hence it is not significant (Vide Table 2). It reflects that the mean scores of E-learning readiness of female and male faculty members did not differ significantly. So there was no significant influence of Gender on E-learning readiness of faculty members. The Null Hypothesis (H_02) i.e., there is no significant influence of Gender on the E-learning readiness of higher education faculty members is not rejected. It may, therefore, be said that E-learning readiness was found to be independent of Gender of faculty members.

Influence of Discipline on the E-learning readiness of higher education faculty members

The p-value for Discipline (0.751) is greater than 0.05 level of significance and hence it is not significant (Vide Table 2). It reflects that the mean scores of E-learning readiness of faculty members from Social Science, Arts & Humanities and Science & Technology disciplines did not differ significantly. So there was no significant influence of Discipline on E-learning readiness of faculty members. The Null Hypothesis (H_03) i.e., there is no significant influence of Discipline on the E-learning readiness of higher education faculty members is not rejected. It may, therefore, be said that E-learning readiness was found to be independent of Discipline of faculty members.

Influence of interaction between Age and Gender of higher education faculty members on the E-learning readiness

The p-value for interaction between Age and Gender (A X B) is 0.496 ($p > 0.05$) and hence it is not significant (Vide Table 2). It reflects that the mean scores of E-learning readiness of female and male faculty members in age groups of 21-30 years, 31-40 years, 41-50 years, 51-60 years did not differ significantly. So there was no significant influence of interaction between Age and Gender on E-learning readiness of faculty members. Thus the Null Hypothesis (H_04) i.e., there is no significant influence of interaction between Age and Gender on E-learning readiness is not

rejected. It may, therefore, be said that E-learning readiness was found to be independent of interaction between Age and Gender of faculty members.

Influence of interaction between Age and Discipline of higher education faculty members on the E-learning readiness

The p-value for interaction between Age and Discipline (A X C) is 0.846 ($p > 0.05$) and hence it is not significant (Vide Table 2). It reflects that the mean scores of E-learning readiness of faculty members in age groups of 21-30 years, 31-40 years, 41-50 years, 51-60 years from Social Science, Arts & Humanities and Science & Technology disciplines did not differ significantly. So there was no significant influence of interaction between Age and Discipline on E-learning readiness of faculty members. Thus, the Null Hypothesis (H_{05}) i.e., there is no significant influence of interaction between Age and Discipline on E-learning readiness is not rejected. It may, therefore, be said that E-learning readiness was found to be independent of interaction between Age and Discipline of faculty members.

Influence of interaction between Gender and Discipline of higher education faculty members on the E-learning readiness

The p-value for interaction between Gender and Discipline (B X C) is 0.608 ($p > 0.05$) and hence it is not significant (Vide Table 2). It reflects that the mean scores of E-learning readiness of female and male faculty members from Social Science, Arts & Humanities and Science & Technology disciplines did not differ significantly. So there was no significant influence of interaction between Gender and Discipline on E-learning readiness of faculty members. Thus, the Null Hypothesis (H_{06}) i.e., there is no significant influence of interaction between Age and Discipline on E-learning readiness is not rejected. It may, therefore, be said that E-learning readiness was found to be independent of interaction between Gender and Discipline of faculty members.

Influence of interaction among Age, Gender and Discipline on the E-learning readiness of higher education faculty members

The second order interaction among Age, Gender and Discipline (A X B X C) on E-learning readiness of higher education faculty members was analyzed with the information presented in table 3 and graphs presented in figures 2,3,4 and 5.

The p-value for interaction among Age, Gender and Discipline is 0.042 which is less than 0.05 level of significance and hence significant (Vide Table 2). It reflects that the mean scores of E-

learning readiness of female and male faculty members in the age groups of 21-30 years, 31-40 years, 41-50 years, 51-60 years from social science, Arts and Humanities and Science & Technology do differ significantly. So there is significant influence of interaction among Age, Gender and Discipline on E-learning readiness of faculty members. Thus the Null Hypothesis (H_0) i.e., there is no significant influence of interaction among Age, Gender and Discipline on E-learning readiness of faculty members is rejected. It may, therefore, be said that E-learning readiness was found not to be independent of interaction among Age, Gender and Discipline of faculty members. Thus, there was statistically significant three-way (Age * Gender * Discipline) interaction effect. To know the trend of influence of interaction among Age, Gender and Discipline on E-learning readiness of faculty members, the mean "E-learning readiness" score of "Age" and "Gender" with respect to each discipline are plotted and presented in a line graph, as shown in figure 2, figure 3 and figure 4.

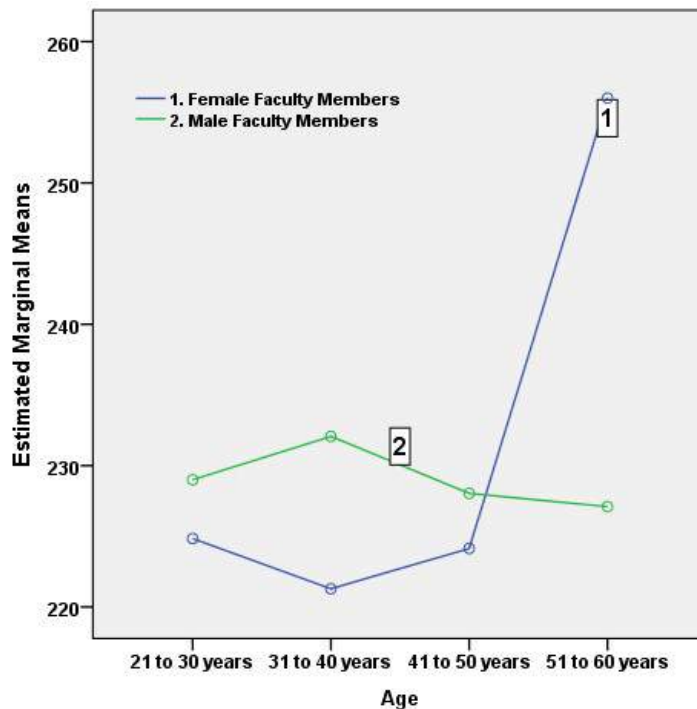
Table 3: Descriptive Statistics

Dependent Variable:E-learningReadiness					
Age	Gender of Faculty Member	Discipline	Mean	Std. Deviation	N
21 to 30 years	Female	SS	224.84	23.153	31
		Humanities and Arts	228.00	1.414	2
		Science and Technology	229.84	27.496	38
		Total	227.61	25.209	71
	Male	SS	229.00	34.243	8
		Science and Technology	239.00	28.718	44
		Total	237.46	29.488	52
	Total	SS	225.69	25.340	39
		Humanities and Arts	228.00	1.414	2
		Science and Technology	234.76	28.359	82
		Total	231.77	27.423	123

31 to 40 years	Female	SS	221.29	20.983	28
		Humanities and Arts	241.50	28.000	8
		Science and Technology	229.63	18.341	40
		Total	227.80	21.077	76
	Male	SS	232.07	25.043	29
		Humanities and Arts	221.40	24.218	10
		Science and Technology	230.79	28.173	76
		Total	230.30	27.027	115
	Total	SS	226.77	23.568	57
		Humanities and Arts	230.33	27.183	18
		Science and Technology	230.39	25.141	116
		Total	229.30	24.802	191
41 to 50 years	Female	SS	224.14	26.796	21
		Humanities and Arts	202.33	24.111	3
		Science and Technology	233.92	21.318	12
		Total	225.58	25.646	36
	Male	SS	228.04	34.109	27
		Humanities and Arts	232.10	25.714	10
		Science and Technology	226.87	25.858	16
		Total	228.45	29.874	53
	Total	SS	226.33	30.870	48
		Humanities and Arts	225.23	27.626	13
		Science and Technology	229.89	23.858	28
		Total	227.29	28.124	89
51 to 60 years	Female	SS	256.00	6.928	3
		Humanities and Arts	222.00	.	1
		Science and Technology	222.00	.	1
		Total	242.40	19.256	5
	Male	SS	227.10	36.846	10
		Science and Technology	247.67	16.258	3

		Total	231.85	33.818	13
	Total	SS	233.77	34.451	13
		Humanities and Arts	222.00	.	1
		Science and Technology	241.25	18.464	4
		Total	234.78	30.302	18
Total	Female	SS	224.59	23.607	83
		Humanities and Arts	229.79	27.843	14
		Science and Technology	230.20	22.692	91
		Total	227.69	23.532	188
	Male	SS	229.59	30.642	74
		Humanities and Arts	226.75	24.923	20
		Science and Technology	233.30	28.071	139
		Total	231.56	28.637	233
	Total	SS	226.95	27.177	157
		Humanities and Arts	228.00	25.794	34
		Science and Technology	232.07	26.068	230
		Total	229.83	26.519	421

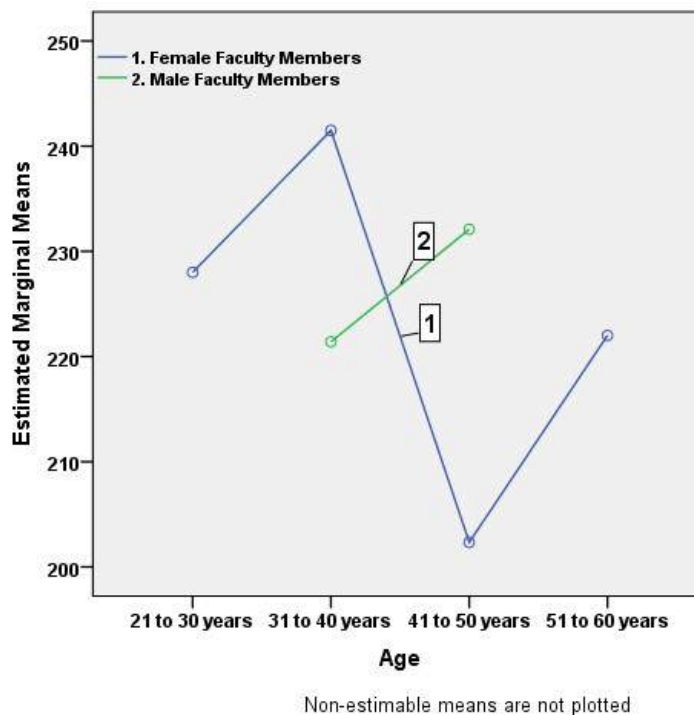
Source: Research Data



Source: Research Data

Figure 2: Trend influence of interaction between age and gender on E-learning readiness of faculty members of Social Science Discipline

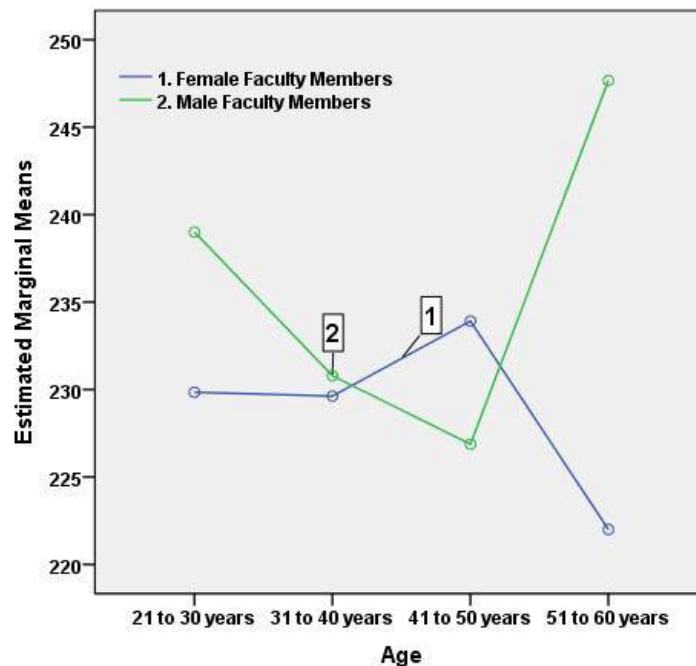
From figure 2 the interaction effect between gender and age in social science discipline can be seen at the age group level of 41 to 50 years. The mean scores of E-learning readiness shown in table 3 also support this fact. It can also be further interpreted that the E-learning readiness of female faculty members of Social Science discipline is increasing with their age, while the E-learning readiness of male faculty members shows a declining trend from the age level of 41 to 50 years. Thus, the significant interaction effect of A X B X C could be due to this interaction of Age and Gender at 41 to 50 years age group in social science discipline.



Source: Research Data

Figure 3: Trend influence of interaction between age and gender on E-learning readiness of faculty members of Arts and Humanities Discipline

Figure 3 informs us that at age group levels of 31 to 40 years and 41 to 50 years, there is an interaction between gender and age in Arts and Humanities discipline. From table 3 and figure 3, it can be interpreted that E-learning readiness of female faculty members of Arts and Humanities discipline is more than the male faculty members in the age group of 31 to 40 years and there is a steep fall in the E-learning readiness of female faculty members as we move from age group of 31 to 40 years and 41 to 50 years age groups. Due to lack of availability of enough sample in the few age groups with regard to gender, a further deep explanation of the interaction effect is not possible in the case of Arts and Humanities discipline. However, from figure 3 it is clear that the significant interaction effect of A X B X C is coming due to the interaction of Age and Gender of Arts and Humanities faculty members from the age group levels of 31 to 40 years and 41 to 50 years at 41 to 50 years.

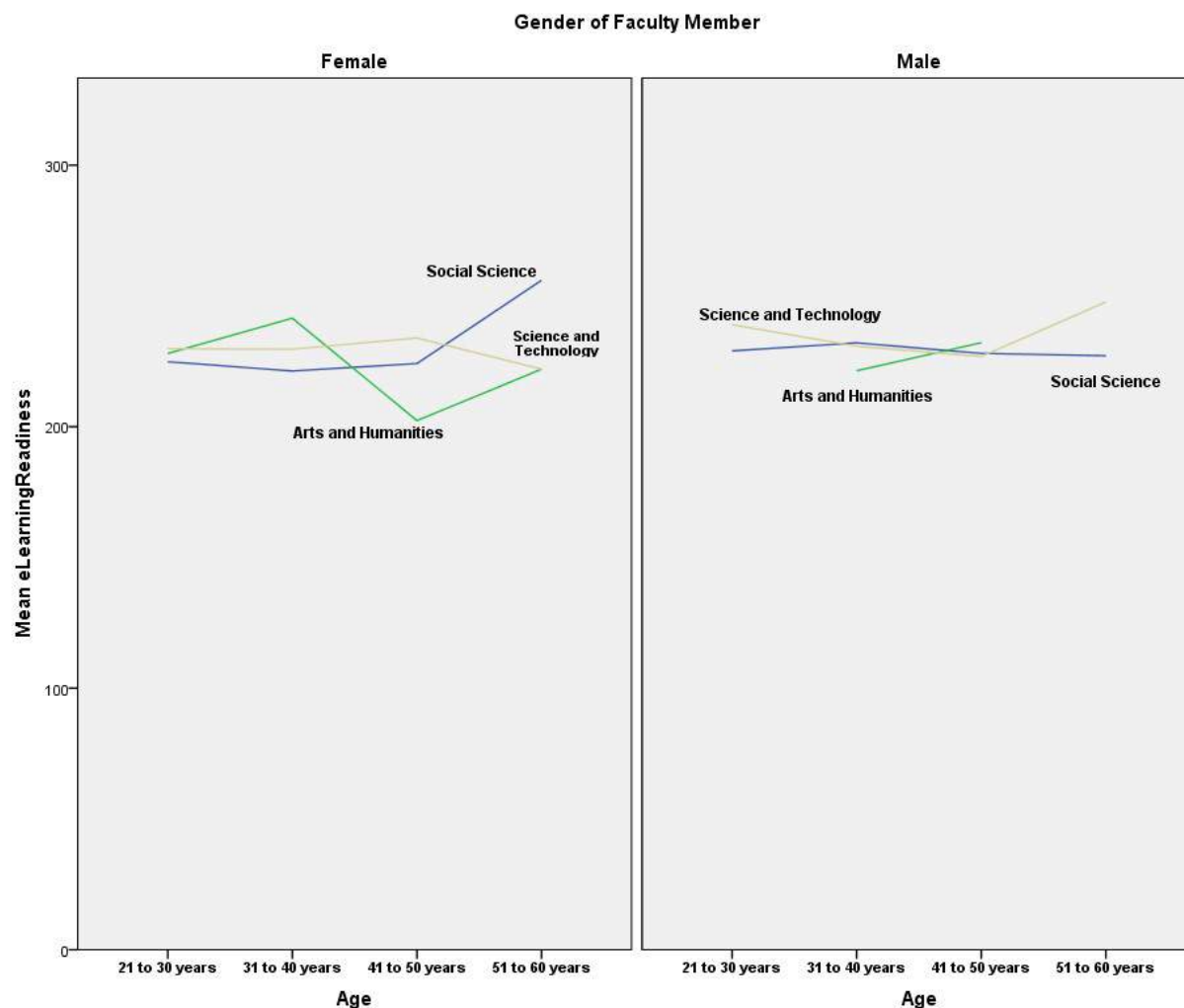


Source: Research Data

Figure 4: Trend influence of interaction between age and gender on E-learning readiness of faculty members of Science & Technology Discipline

Figure 4 shows that the interaction between gender and age in Science & Technology discipline is coming at two levels i.e., at the age group levels of around 31 to 40 years and 41 to 50 years. From table 3 and figure 4, it can be interpreted that E-learning readiness of male faculty members of Science & Technology discipline is more than the female faculty members in the age group of 21 to 30 years and there is a steep fall in the E-learning readiness of male faculty members as we move from age group of 21 to 30 years to 41 to 50 years. Thus, from figure 4 it is clear that the significant interaction effect of A X B X C is coming due to the interaction of Age and Gender of Science & Technology faculty members at two age group levels i.e. around 31 to 40 years and 41 to 50 years.

To explain about the second order interaction among "Age", "Gender" and "Discipline" (A X B X C), the plot of the mean "E-learning readiness" score for each combination of groups of "Age", "Gender" and "Discipline" are plotted in a line graph, as shown in figure 5. The figure shows clearly that there is both between group interaction among various levels of these three independent variables (Age, Gender, Discipline).



Source: Research Data

Figure 5: Interaction effect among A X B X C (Age X Gender X Discipline)

Thus, from the results it can be concluded that E-learning readiness was found to be independent of Gender, Age and Discipline of faculty members of higher education institutions. Further, E-learning readiness was found to be independent of interaction between Age and Gender; Age and Discipline and Gender and Discipline of faculty members. However, the findings also reveal that E-learning readiness was found to be dependent of interaction among Age, Gender and Discipline of faculty members.

Discussion

E-learning readiness of faculty members

The mean score of E-learning readiness indicates a positive sign of readiness of faculty members towards E-learning practices. Also, the scores of standard deviation reveal that faculty members are not much scattered in terms of E-learning readiness. Further, it is also good to see that faculty members are using many online resources as a source of their learning.

Effect of demographic factors and E-learning readiness

Regarding demographic factors, the need for considering the demographic variables like age, gender, experience, discipline etc as predictor variables has been emphasized in many studies (Basol, et al., 2018; Ng, 2012; Mbarek, 2013; Hashim&Tasir, 2014;Aristovnik, et.al., 2017). However, the influence of these variables on criterion variable has not been uniform in all studies. The findings of the present study that Gender does not have any significant influence on E-learning readiness adds support to the studies by Golband, et al. 2014;Panda & Mishra, 2007; Agboola, 2006;Soydal, et al., 2011;Navani& Ansari, 2016; Mutiaradevi, 2009;Oketch, 2014) who also reported that Gender does not have any significant influence on E-learning or its factors. Wong &Atan, 2007reported that there is no difference in the levels of positive perceptions towards E-learning of both male and female genders. Rasouli& Attaran, 2016;Wattakiecharoen&Nilsook, 2013 claimed that there is no significant relationship between Gender and E-learning readiness even with respect to students. The finding of this study also contradicts the findings of Doculan (2014) that gender is significantly related to technological skills. Gender also plays a great role with regard to faculty members whose views regarding effectiveness of E-learning (Islam, et al., 2011), technological and contextual challenges (Aldowah, et al., 2017); understanding the E-learning subjects (Gonzalez-Gomez, et al., 2012); E-learning readiness (MOHE,2014, Yasmine,2007; Muilenburg& Berge, 2005; Al Gamdi&Samarji,2016), use of E-learning (O'Donnell,1991) differ significantly. Even in case of students, Gender plays a significant role with respects to factors like in attitude of students towards use of computer, use of E-learning resources or use of instructional technologies, E-learning readiness (Rajagopal and Bojin, 2003; Shashanni, 1994;Owate, et al., 2017; Spotts, et al., 1997; Naresh, et al., 2016).

A majority of the studies in psychological and social science research consider Age as an important predictor variable. The present study reveals that age does not have any significant influence on E-learning readiness of higher education faculty members. This finding is inline with the findings of Golband, et al. 2014, Al Gamdi&Samarji , 2016; Wattakiecharoen and

Nilsook, 2013; Navani& Ansari, 2016, Mutiaradevi, 2009, Oketch, 2014who claim that Age does not have any significant influence on E-learning readiness. The finding is also in contradiction with the findings ofTusubira and Mulira, 2004 who claimed that age plays an important role in use of new technology or new e-learning resources. Shashanni, 1994; Owate, et al., 2017 revealed that students age has strong influence on their use of computers, E-learning resources, integration of technology into teaching learning and computer attitude. Islam, 2011; Soydal, et al., 2011 revealed that age has significant effect on E-learning effectiveness or components related to E-learning readiness and Adelabu, et al.,(2014) and Osika, et al., (2009) said that the perception regarding contextual challenges in implementing E-learning are highly influenced by age. Studies by McMahon, et al., 1999 reveal that age plays a very important influence on ICT anxiety. Doculan (2014) presents that age significantly influences technology access and skills of E-learning stakeholders. Al-Fadhli,2009 ;Nauaf, 2010 reported that younger faculty members are more ready to implement E-learning when compared to older faculty members.

Discipline to which the faculty members belong to is also considered as one of the predictor variable in E-learning readiness studies. The findings of the present study reveal that Discipline to which the faculty members belong to did not have a significant influence on E-learning readiness. This finding is inline with the findings of Rasouli& Attaran, 2016; Al Gamdi&Samarji, 2016; Soydal, et al., 2011 who reported that Discipline/department to which the faculty members or students belonged to did not have any significant influence on E-learning readiness or factors related to E-learning readiness while Owate, et al., 2017 reported that subject specialization of students greatly determines their usage of e-resources. Islam, 2011 reported that program of study had significant effect on E-learning.

With regard to interaction among Age, Gender and Discipline, the findings of the present study reveal that the first level interaction among these variables (A X B, A X C, B X C) are not significant but the second order interaction (A X B X C) is significant. This indicates that the inter and intra relationship among the predictor variables has a significant influence E-learning readiness of faculty members of higher education institutions (Owate, et al., 2017).

With regard to the readiness of faculty members towards E-learning, the results indicate that they are ready for E-learning and there is no much variation among the faculty members with respect to their E-learning readiness. The results also indicate that the differneces in the mean scores of faculty members with respect to Age, Gender and Discipline are not significant. However, it is to

be noted that the interaction among these three predictor variables has a significant influence on E-learning readiness scores of higher education faculty members.

Recommendations

The score of E-learning readiness of around half of the faculty members is less than the mean score and this indicates that there is a need for intervention mechanisms to improve their readiness towards E-learning. The intervention mechanisms should also be planned to encourage the use of MOOC's and digital libraries among faculty members. The difference in the mean scores of E-learning readiness with regard to Age, Gender and Discipline are not significant and hence these factors are not a barrier in implementation of E-learning practices. However, while implementing the E-learning practices in the institution, it should be kept in mind that the interaction among these factors can influence E-learning readiness.

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20. Information and Communication Technology (ICT) and Teachers' Education Programme in India: A Study of Peripheral Schools in Jammu and Kashmir

- **Dr Sonam Sharma** , PhD, Department of Public Policy and Public Administration, Central University of Jammu, sonumshona88@gmail.com
- **Mr Mehraj Ud Din Waza** , Research Scholar (PhD), Department of Sociology, University of Jammu, mehruwaza88@gmail.com
- **Sunil Kumar**, Research Scholar (PhD), Department of Strategic and Regional Studies, University of Jammu, kumarsunil3187@gmail.com

Abstract

Relations between teachers and students have changed enormously over the years, notably through the application of the Information and Communication Technologies (ICT) revolution in India. ICT refers to information and communication technologies and has become an indispensable part of our lives over the past decades. This revolution has radically changed the conventional teaching methods and learning for centuries in India's educational scenario. Today, teachers, students, administrators and all those working in education generally use Information and Communication Technologies (ICT). The teacher makes the learning process easy and exciting while the students make the learning process more understandable, accessible and practical. In developing countries like India, ICT for education has been much discussed and is of considerable importance. ICT advocates argue that they improve education quality by developing critical thinking skills, promoting inclusion, and expanding access to a rapidly growing information society. However, Jammu and Kashmir State remained one of the last to receive the ICT revolution's benefit due to its politically unstable nature. The state became the centre of attention recently regarding adopting technology into the education system, significantly higher secondary and college level. The present research thus aimed to understand the development of the teacher education program due to the use of information and communication technologies in India, particularly in Jammu and Kashmir State.

Keywords: ICT, Technology Innovative, critical thinking, inclusiveness, quality enhancement.

Introduction

ICT is a scientific, technological and technical discipline and management technique used in information processing, its application and its connection to social, economic and cultural issues (UNESCO, 2002). The rigorous analysis of various works of literature based on the purpose of the study revealed that, in particular, Indian decision-makers are beginning to recognize that

education is a profession that requires intensive preparation as in any other profession. This concern, expressed in the University Education Commission (1948-1949), remains relevant. The Education Commission (1964-1966) stated, "The fate of India is taking shape in its classrooms." The National Education Policy of 1986 also emphasized: "The status of the teacher reflects the socio-cultural ethos of society, which means that no one can rise above the level of their teachers." Such exhortations express the vital role teachers play as facilitators who promote and promote human knowledge's eternal pursuit. With the onset of the ICT revolution, which has overcome traditional teaching methods in the Indian education system, technology has broken these unattended barriers into the present system. The technological revolution has an impact on the transformation of the dynamics of teacher education. Two significant developments, notably the 2005 National Curriculum and the 2009 Free and Compulsory Education Act and the Core Principles enshrined in the Indian Constitution, have determined India's technological framework. However, these distinctive developments have not been adequately implemented in Jammu and Kashmir due to the political turmoil and geographical landscape. Throughout the world, teacher education programs have concluded that innovation and practice with Information and Communication Technologies (ICT) in these programs are responsive to its society's needs. Therefore this study starts with describing the teacher education context in India and its current scenario in Jammu and Kashmir State.

The Beginning of ICT Revolution

The comparative knowledge diffusion regarding e-governance program throughout the world led the growth of e-governance in India, which began in 1977 with the establishment of the National Informatics Centre (NIC). However, in the year of 1997, the Prasar Bharti collaborated with Indira Gandhi National Open University (IGNOU) and started a DD Gyan Darshan channel, and became the first exclusive telecast for schools, teacher enrichment education, open and distance learning, vocational courses, and courses for disadvantaged sections of India society. The critical goal has always remained to introduce and deliver education through electronic media. GSAT-3, known as EDUSAT, was the first dedicated satellite dedicated exclusively to distance educational learning facilities in the classroom, from school to higher education, in 2004.

The next major step was taken in 2006, when the National E-Governance Program with 31 Mission Mode Projects under the National E-Governance Programme, was introduced at the national level covering a wide range of fields as agriculture, land records, health, education,

passports, and police. The Government of India's Digital India programme was launched on July 1, 2015, to crown the Indian education system with the digital plane to develop digital infrastructure, link all institutions to high-speed Internet networks and enhancing digital literacy in rural India. Later on, in 2017, another initiative under the Digital India umbrella followed when the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) was released. In the same year, the Seventeen Point Action Plan on Digital Higher Education Initiatives was also launched by the Ministry of Human Resource Development, and under this scheme, MHRD instructed state government institutions to start online courses, establish a digital library, and construct a smart campus. It also involves installing DTHSWAYAM Prabha, a network of 32 DTH channels dedicated to 24X7 telecasting of high-quality teaching programmes using the GSAT-15 distance learning satellite.

Significance of Information Communication and Technology (ICT) in Teaching-Learning Assessment

Today, every aspect of life is linked to science and technology. In all regions of the world, a massive flow of information is emerging. Now information and technology are widely used in education to make the learning process more efficient and exciting for students and teachers. According to UNESCO (2002), "ICT is a scientific, technological and technical discipline and management technique used in the processing of information, its application and its association with social, economic and cultural issues". At the centre of any living community are teachers. Technologies play an essential role in the teaching process. Students use television, digital media, cable, the internet, social networks-Youtube, Twitter, WhatsApp, LinkedIn, IMO, Line, to access knowledge and information. For the 21st-century teacher training programme, ICT is very relevant.

Without adequate ICT skills, a teacher cannot play in his classroom and cannot be described as complete (Hussain, 2015). According to an expert, "This proved to be a blessing for teachers and students and finding material beyond textbooks is no longer a time and resource challenge" To contribute to the growth of ICT learning in the country, several brands are working to create options for educational institutions. Recognizing the importance of digital culture in rural India, Samsung India launched a Smart Class initiative in 2013 in partnership with Navodaya Vidyalaya Samiti. The initiative is available at 500 Jawahar Navodaya Vidyalaya, which will benefit more than 2.5 lakh students. The brand has trained more than 8,000 teachers in interactive technologies.

Technology has recently played a crucial role in ensuring effective and efficient learning evaluation. The assessment has become more straightforward and complete, "such as Edmodo missions, Kahoot questionnaires, or office forms, Microsoft forms have evolved considerably to facilitate assignment, and the technology has brought about significant changes in the way they train. Teachings and the learning process have shifted from a one-sided activity to an active exchange of ideas. The enjoyment of various creative tools and techniques has made the process a collaborative initiative. Today, students in the classroom are encouraged to participate in the learning process and become a dynamic thinker and thought maker.

Objectives of the Study

1. Document the different policy interventions to promote information and communication technologies (ICTs) in teacher training.
2. To understand the status of availability of ICT Infrastructure facilities of various Higher Secondary Schools in Jammu and Kashmir

Methodology

This study is based on primary data that has been conducted through survey method at various higher secondary schools in the erstwhile state, particularly peripheral areas of the districts. The survey was conducted in 2018 from June to September in Kashmir and from April to July in 2019 in Jammu keeping in view the active academic sessions and weather conditions of both the regions. The survey included the personal visits to schools, telephonic conversations with the staff and interviews with concerned faculty members. Secondary sources such as books, articles, journals, theses, university news, expert opinions, and websites, have also been consulted.

Sample Size

When a small group is selected as representative of the whole it is known as sample method. The method of selecting for study the portion of universe with a view to draw conclusions about the universe is called sampling (Myneni 2007). A study of about twenty Higher Secondary schools of Jammu and Kashmir was conducted regarding ICT infrastructure in the government higher secondary schools. The survey has been undertaken to have selected at least one school from each district, particularly in the district's peripheral areas.

Table 1: Distribution of Sample Size

S	Name of the school	District
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No.		
1	HSS Gundla	Jammu
2	HSS Palpora	Srinagar
3	HSS Kuller	Anantnag
4	HSS Bijhama	Baramulla
5	HSS Pakherpora	Badgam
6	HSS Lander	Udhampur
7	HSS Chiralla	Doda
8	HSS Saaj	Rajouri
9	HSS Chandak	Poonch
10	HSS Pallan	Kathua
11	HSS Gulabgarh	Reasi
12	HSS Hawl	Pulwama
13	HSS Zainapora	Shopian
14	HSS Chattergul	Ganderbal
15	HSS Guraz	Bandipora
16	HSS Dudi Machil	Kupwara
17	HSS Rajgarh	Ramban
18	HSS Kaloha	Samba
19	Madwa Dachan	Kishtwar
20	HSS Dannew Kandimarg	Kulgam
Tot al	20	20

The study respondents were the concerned staff of the school and official communications from the staff. The table above shows the distribution of sample of the study. A detailed survey was conducted in twenty higher secondary schools of both Jammu and Kashmir division. The rural schools were selected by using purposive sampling method. A detailed interview schedule was

prepared with relevant questions. In selected schools a concerned faculty or the principal were thoroughly interviewed based on the interview schedule.

Discussion and Analysis

Through the survey of various higher secondary schools, the present study found that many teachers and students in Jammu and Kashmir Information Communication and Technology-equipped classrooms are still a dream. The state-owned schools are way behind than schools of other states like Kerala and Delhi. A lot more has to be done to meet the modern technological challenges in the educational field. The study focused precisely on the availability of ICT facilities including infrastructure, experts and access in government higher secondary schools of various districts and surveyed mostly those located at the periphery of these districts.

Table 2: Data regarding the availability of ICT facilities in various Government Higher Secondary Schools in Jammu and Kashmir.

S N o.	Name of the school	District	Total NO. of Class room s	No. of Smart Classes Installe d	EDUS AT	Intern et Facilit y	Concer ned Faculty Availab le	Digital Librar y	Regular Electrici ty
1	HSS Gundla	Jammu	6	0	NO	NO	NO	NO	YES
2	HSS Palpora	Srinagar	8	1	NO	NO	NO	NO	YES
3	HSS Kuller	Anantna g	5	1	NO	NO	NO	NO	YES
4	HSS Bijhama	Baramul la	6	1	NO	NO	YES	NO	NO
5	HSS Pakherpora	Badgam	5	1	NO	NO	NO	NO	NO
6	HSS Lander	Udhamp ur	4	1	NO	NO	YES	NO	YES
7	HSS	Doda	4	1	NO	NO	NO	NO	NO

	Chiralla								
8	HSS Saaj	Rajouri	5	1	NO	NO	NO	NO	NO
9	HSS Chandak	Poonch	7	1	NO	NO	NO	NO	NO
10	HSS Pallan	Kathua	4	1	NO	NO	NO	NO	YES
11	HSS Gulabgarh	Reasi	6	0	NO	NO	NO	NO	NO
12	HSS Hawla	Pulwama	6	0	NO	NO	NO	NO	NO
13	HSS Zainapora	Shopian	5	0	NO	NO	NO	NO	NO
14	HSS Chattergul	Ganderbal	4	1	NO	NO	NO	NO	NO
15	HSS Gurazra	Bandipora	5	1	NO	NO	YES	NO	NO
16	HSS Dudi Machil	Kupwara	7	1	NO	NO	NO	NO	NO
17	HSS Rajgarh	Ramban	6	1	NO	NO	NO	NO	NO
18	HSS Kaloha	Samba	8	1	NO	NO	NO	NO	YES
19	Madwa Dachan	Kishtwar	7	0	NO	NO	NO	NO	NO
20	HSS Dannew Kandimarg	Kulgam	8	0	NO	NO	NO	NO	NO
To tal	20	20	116	14	0	0	3	0	6

Regarding the ICT infrastructure availability in the selected 20 higher secondary schools six schools were those in which no smart class has been installed yet, and rest of 14 schools were

equipped with one smart class each that too installed after the year 2018. According to the survey, these twenty schools have 116 functional classrooms of which only 14 (12.1 per cent) of classrooms have been enabled with a smart class. It has been further found that in those 14 schools with smart classes installed has no access to either the internet or EDUSAT facilities. These smart classes without concerned faculty or expert are wastage of country's resources. In the present study, only 3 (2.5 per cent) schools have been provided with the expert and rest claimed to have not used these smart classes since the installation as either concerned faculty is not available or has not been recruited. An academicians at the University of Jammu sees this situation as an injustice to the teachers and students deprived of this modern education way. This technological lag between facility and faculty in these schools will obliterate students' future, especially those who belong to far-flung areas.

The periphery always gets the least attention, especially in matters of transportation and communication. Some higher secondary schools in the present study like HSS Dudi Machil in district Kupwara and HSS Madwa Dachan in district Kishtwar have no access to mobile communication and remain aloof for 5 to 6 months in a year due to extreme weather conditions. Also, not a single school has been found with digital library and most schools, i.e. 70% have no access to the regular electricity supply. Most of the ICT types of equipment depend on steady electricity supply and for those institutions with no electricity such as HSS Dudi Machil, HSS Madwa Dachan, and HSS Dannew it remains a dream to use any kind of technological instrument. The ICT infrastructure is of no use without the access to electricity, and we kept avoiding telling our students about the smart class that initially brought a smile on many faces here, said a lecturer at HSS Dudi Machil.

Adaption of successful Policy Interventions in promoting Information Communication and Technology in Teacher Education in Jammu and Kashmir

The concept of ICT in schools was first applied in December 2004. The central government revised it in 2010 to create opportunities for secondary school students. Currently, the government has integrated schools under Rashtriya Madhyamik Shiksha Abhiyan, a national campaign for secondary education. Technological advances like E-Pathshala, Saransh, Shala Siddhi and Shaala Darpan are commendable.

Some essential policy interventions as elaborated by Amitabh Mattoo in his 'State of the State: J&K, Empowering Youth of Jammu and Kashmir' are as follows:

➤ **Teacher training management system:**

Karnataka has developed web-based software to manage teacher training. The system can plan an activity to suit local needs and fit teachers timetables.

➤ **Knowledge exchange for teacher training, Andhra Pradesh:**

The Andhra Pradesh E knowledge exchange (APEKX) began in 2011 as a mathematics forum for about 2500 teachers to discuss and share resources. Today it has more than 78000 registered teachers. The platform consists of discussion forums, a massive repository for curriculum-linked digital content for classes 1 to 10, blended courses, available online and offline and a research mechanism which allows teachers to collaborate on studies of different classrooms and pedagogical topics.

➤ **Prerna Learning Enhancement Programme, Himachal Pradesh:**

Prerna, which stands for results enhancement and resource nurturing and assessment has significantly improved students knowledge by presenting a reading, writing, and arithmetic in a creative format. The program was initiated in 150 government primary schools in district Hamirpur as a pilot and has now helped about 8000 students in six blocks.

➤ **Mission Digital School, Technology in Education, Maharashtra:**

The mission digital school aims to motivate government school teachers and parents to integrate digital technology into their school to enhance and enrich children's learning experience. The program introduces digital learning aids into schools, including tablets and interactive smartboards and interactive e – classes and virtual and global interactive classes. Workshops in digital enhancement are conducted across blocks, districts, and clusters. Under the programme up to April 2017- 53193 Zila Parishad schools have been upgraded to digital learning, more than 75972 teachers have received digital training.

➤ **Integrated data management system, Shaala Darpan, Rajasthan:**

A robust integrated real-time monitoring and management information system (MIS) has been created for schools, students, teaching, and the Department of School Education's teaching staff in Rajasthan.

Looking at the dismal status of ICT in higher secondary schools in Jammu and Kashmir, the policy mentioned above interventions if adopted at the school level in Jammu and Kashmir can widen the gap between technology teacher-student closer enough to help

them to compete with the other states. It will also impact the periphery through the use of Panchayats and local workforce that needs to be oriented with the latest technological developments in education.

Significant Observations of the study:

1. The technological lag between the teacher education and classroom in India, particularly in Jammu and Kashmir, needs a proper centralized policy and outsourcing of the implementing agencies regarding the same is necessary.
2. The study found the lag between ICT facility and faculty is wide in Jammu and Kashmir schools and need to be bridged through regular recruitments of concerned teachers.
3. The government has not done proper analysis before implementing the ICT enabled classrooms in schools, and the majority of these labs have not been used due to lack of facilities like electricity, EDUSAT, Internet and communication.
4. Irregular electricity supply or no electricity in most peripheral schools in Jammu and Kashmir has obliterated the fundamental aim of the ICT in schools.
5. Using essential technological tools in education like powerpoint and excel, LCD projector's use for lesson delivery is still a dream for many government schools.
6. A significant chunk of urbanites are getting benefitted with the revolution, but still, the rural people who are to be noted are excelling in academics are unfortunately not getting proper education through ICT.
7. Teacher education needs to orient and sensitize the teacher to distinguish between developmentally appropriate and detrimental uses of ICT. It needs to also equip teachers with the competence to use ICT for their professional development.

Conclusion

A glaring weakness of existing teacher education practices and ICT use in government higher secondary schools in Jammu and Kashmir is the restricted application of information technology in classroom teachings due to policy bottlenecks. The proper implementation of ICT in schools would have improved the quality of teaching, but the lack of vigil analysis before the policy formulation has kept the pace down. Today ICT has become an integral part of nearly all sectors and segments especially linked to the education landscape. Be in teaching, learning and assessment, it is crafting the role of future education in India. Besides all this, teachers and students at their own and for their own sake are training themselves for the use of ever-evolving

technologies, upgrading their skill continuously and keeping them abreast of the latest developments. However, some of the policy interventions both by state and central governments have made a positive impact on the teacher- students learning through the use of ICT but still, policymakers have been facing a lot of challenges. Despite all this, India and particularly Jammu and Kashmir's state are equally responding to the teacher education and use of Information Communication and Technology program.

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21. Role of District Institute of Education and Trainings (DIETS) in Promoting Teaching-Learning Transactions at Elementary School Level

- Dr. S.K. Panda, Assistant Professor, Department of Education, University of Jammu, Jammu
- Ms. Ashu Rajput, Research Scholar, Department of Education, University of Jammu, Jammu

Abstract

In-service teacher education plays an important role in the professional growth of teachers. There are various agencies at the national, state and district level to provide training to in-service teachers. At the district level, DIET provides training to the in-service teachers. This study attempts to study the role of DIETs in promoting teaching learning transactions at elementary school level. Objectives of the present study were 1). To study the role of DIETs in promoting teaching learning transactions at elementary school level; and 2). To obtain suggestions from the elementary school teachers for effective training programmes given by DIETs. For the present study, Descriptive research method was followed by the investigators. The sample was collected from 100 elementary school teachers from two districts of Jammu province i.e. Kathua and Poonch through purposive sampling technique. A self prepared questionnaire was administered to collect the required data and data were analyzed through percentages. The findings revealed that majority of the teachers responded that in-service training programmes proved useful in teaching- learning transactions, training programmes enable teachers to handle classroom situations more efficiently.

Key words: DIET, In-service teacher education, teaching-learning transactions, elementary level.

Introduction

Teachers occupy a very respectful place in our society because they are not only responsible for the intellectual development of the children but also keep the society civilized by making people aware about the ills of the society and arousing their consciousness. They owe a duty not only to the students but also to the society and nation. And a teacher should improvise his knowledge and skills continuously according to the existing demands of the changing time (Singh, 2011).

Teachers are capable of generating and imparting knowledge as per the commands and demands of the society. Society has abundant faith on them. Teachers are prepared and trained in the teacher training institutions. Therefore teacher education occupies a very significant place (Venkataiah, 2009). It is rightly said that as are the teachers so is the standard of education in any society and thus the teachers' preparation for education of children at different levels is a crucial task for the nation building. Teachers' preparedness gives good dividends in the form of producing good citizens. Like other professions such as doctors, engineers, lawyers etc. adequate training is also required for the preparation of teachers (Shanker, 1984). For preparing teachers to cope with the existing challenges pre-service teacher education is not sufficient. As there are new areas of learning, new methods and techniques of teaching, many other innovations and new emerging knowledge about which a good teacher should be made aware. Hence, teacher's education is to continue and this continuing education is called in-service education. In order to remain update on the changes occurring in their respective subject and other related fields, a teacher needs to remain in touch with the existing circumstances. And this can be possible with the help of in-service teacher training programmes. Teacher education is not merely concerned with acquisition of a training qualification or acquisition of teaching skills; it is shaping of persons for multisided development of the younger generation. Teacher education is the systematic process of unearthing the treasure within each and every teacher and consequently every learner. It is the continuous process, which makes the individuals to realize the magnitude and potentialities, if cherished and inculcated in the right perspective can make a tremendous contribution for society as a whole (Venkataiah, 2009).

Need of In-Service Teacher Education

Dr. Savrepalli Radha Krishnan aptly said, "Until and unless we have dedicated and committed teachers, who can take teaching as a mission in their lives, we cannot have a good educational system. Teachers should be the best minds of the country" (Venkataiah, 2009).

The progress of any nation depends on the quality of its teacher. That is why the teacher is called as the nation builder. The quality of teaching learning/ learning outcomes of a class does not depend only on students' cognitive abilities but also by other motivational factors. Classroom environment is powerful factor in motivating students and along with these teachers also play a

crucial role in creating motivational learning environment by applying a number of conscious and proactive motivational strategies (Singh, 2011). Training is necessary for performing any work efficiently. A trained person handles the tasks assigned to him in a better way than others. A trained teacher can do much more than an untrained teacher. In every field of knowledge new theories and principles are emerging day by day. Knowledge is increasing day by day and once knowledge is acquired becomes outdated after few years. We are receiving changes in our society and its norms. And due to technology new developments are taking place. And a teacher may forget whatever is taught to him in his pre-service training period. Thus he needs to remain updated about the latest changes and developments in his own and other related fields. Lifelong learning should be the motto of every teacher. If a teacher stops learning, this may affect his teaching and he cannot teach effectively. The strength of an educational system based largely upon the quality of its teachers.

However, a system provided with best and latest equipments with an efficient administration, teaching-learning process is determined by teachers. If a teacher has no living traffic with his knowledge, but merely repeats his lessons to his students, can only load their minds but cannot teach effectively. The strength of any educational system is mainly depends upon the quality of its teachers. And for improving the quality of teachers and educational system as a whole, continuous learning of teachers is must. Thus, there is a need of some sort of provision which can make teachers updated with respect to developments of his subject, emerging innovative ideas, latest methods of teaching etc. and for this reason there is a need to provide in-service teacher training to all the teachers (Veer, 2004)

As an elementary school teacher has to handle diverse group of pupils and also have to handle additional services in the school, proper education and training is very important for them. It will be difficult for improperly trained teachers to handle all the activities in a proper way. For managing all the tasks efficiently, an elementary teacher has to be properly trained (Shanker, 1984). Training is necessary for performing any work efficiently. A trained person handle the tasks assigned to him in a better way than others. A trained teacher can do much more than an untrained teacher.

Agencies of In-Service Teacher Education

There are agencies of teacher education at national and state level. At national level the agencies of teacher education are University Grant Commission (U.G.C.), National Council of Educational

Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), Centre of Advanced Studies of Education (CASE) and National Council of Teacher Education (NCTE), Inter University Centre for Teacher Education (IUCTE). And at state level agencies of teacher education are State Board of Teacher Education (SBTE), Universities Department of Education (UDE), Continuing Teacher Education Centre (CTEC), Distance or Correspondence Teacher Education (D.T.E. or D.C.T.E.), State Council of Educational Research and Training (SCERT), State Institute of Education (SIE) and College of Teacher Education (CTE) etc. And at the district level District Institute of Education and Training (DIET) is an important agency of teacher education.

DIET as an Agency of In-Service Teacher Education

DIET, an organization to strengthen in-service education, has been suggested by NPE, 1986. One of its main thrusts is to enhance and enrich the academic equipment of elementary school teachers, non-formal and adult education functionaries and other personnel down the lowest. It conducts different types of in-service training programmes in co-ordination with various agencies of state as well as national level.

DIET has the following seven branches:

1. Pre-service Teacher Education Branch.
2. Work Experience Branch.
3. District Resource Unit.
4. In-service teacher education programmes, In-service, Field Interaction and Innovation Co-ordination Branch.
5. Curriculum, Material Development and Evaluation Branch.
6. Educational Technology Branch.
7. Planning and Management Branch.

At present there are ten DIETs working in Jammu province. These are in Jammu, Samba, Basmohli (Kathua), Reasi, Kud (Udhampur), Banihal (Ramban), Doda, Kishtwar, Rajouri, Poonch. These DIETs are working under the direct control of respective SCERT wings, which are working under administrative control of Director, JK SCERT.

Functions of DIETs

Each DIET has the following three types of functions to perform as envisaged in the Programme of Action of National Policy on Education:

I. Training and orientation of the following target groups;

- Elementary school teachers, head of the institutions, instructors and supervisors of Non-formal and Adult Education Centers, Members of District Board of Education (DBE), Village Education Committees (VECs) and Resource persons.

II. Provide Academic and resource support (human and material) to the elementary and adult education system in the District.

III. Action research and experimentation to deal with specific problems of the district in achieving the objectives in the areas of elementary and adult education. (GOI 1989, DIET guidelines, New Delhi: MHRD)

Review of Related Literature/Related Studies

Mohalik (2008) conducted a study on Impact of In-service teacher education programmes on teacher effectiveness and students achievement in English and found that teacher effectiveness of secondary school English teachers was related to their participation in in-service teacher education programmes and students' achievement in English is also influenced by teachers' participation in such programmes.

Kumar (2013) conducted a study on attitude of elementary teachers towards In-service training programs (organized by SSA) and found that elementary teachers of Jharkhand have unfavorable attitude towards in-service training programme. Elementary teachers below 30 years age group have average attitude towards in-service training programme but elementary teachers in-between 30-40 years and above 40 years age group have below average attitude towards in-service training programme. Female teachers have slightly higher attitude than male teachers.

Roy & Das (2014) conducted a study on Effectiveness of in-service teacher education in teacher training institutes of Assam and found that majority (91.58%) of the student teachers agreed that teacher training course should be mandatory to all the teachers, 94.12% from DIETs expressed that present one year in-service primary teacher education curriculum is practical. Findings of the study revealed that a lot needs to be done to improve the quality of in-service teacher training programmes in Assam.

Omar (2014) conducted a study on the need for in-service training for teachers and its effectiveness in school and found that in-service training is important for teachers in school as a means for professional development and to improve their knowledge and quality of teaching and learning. They also concluded that teachers are facing new challenges and changes in the

education world and it is important for teachers to equip themselves with new knowledge & skills by attending in-service training in order to play an important & effective role as an educator.

Kumar (2017) conducted a study on In-service training programmes organized by District Institutes of Education and Training in Himachal Pradesh and found that after the completion of training programmes there was no mechanism adopted for monitoring and evaluation of in-service training programmes.

Shindey and Pandey (2016) conducted a study on in-service training programmes conducted by DIETs for teachers of primary schools and found that all the teachers used innovative methods for teaching in in-service training programmes, different teaching aids were used, near about 70% resource persons used ICT in training programmes.

Justification of the Study

In-service teacher education is important and urgently required due to changes in the syllabus, process of teaching-learning, mode of evaluation and changed role of teacher in the present time. Many teachers were trained several years back but teaching at present. Now the whole system of education has changed in its structure and functions. Thus there is a need to provide further training to serving teachers on continual basis after initial professional preparation. The need is most urgent in the teaching profession because of the rapid advancements in all the fields of knowledge and continuing evolution of pedagogical theory and practice (Mohalik,2008)

There are many agencies of teacher education at the national and state level. DIET is the district level agency of teacher education. DIETs organize different kind of trainings for the in-service teachers and upgrade teachers' knowledge and keep them update about their subject. The review of literature on in-service teacher training programmes of DIETs indicates that there have been very limited efforts to study the role of DIET. On the basis of above discussion, the present study was undertaken to know the role of DIETs in promoting teaching learning transactions at elementary school level.

Objectives of the Study

1. To study the role of DIET in promoting teaching learning transactions at elementary school level.
2. To obtain suggestions from the elementary school teachers for effective training programmes given by DIET.

Delimitations of the Study

1. The present study was delimited to in-service training programme of DIET only.
2. Further the present study was delimited to elementary school teachers only

Research Methodology

The study described the perception of elementary school teachers regarding the role of DIETs in promoting teaching learning transactions at the elementary school level. Out of 10 districts of Jammu province, two districts were taken randomly and these districts were Poonch and Kathua. 25 elementary schools were selected randomly from each district and 2 teachers were selected from each school randomly. In total, 100 teachers were undertaken as sample for the present study. For collection of data, a self prepared questionnaire was used for the elementary school teachers to know the role of district institute of education and training (DIET) in promoting teaching learning transactions at elementary school level and data were analyzed through percentages.

Findings of the Study

Findings of the study are divided into two sections.

- Section I deals with the responses of elementary school teachers regarding the role of DIET in promoting teaching learning transactions at the elementary school level.
- Section II deals with the responses of elementary school teachers regarding the suggestions for effective training programmes given by DIET.

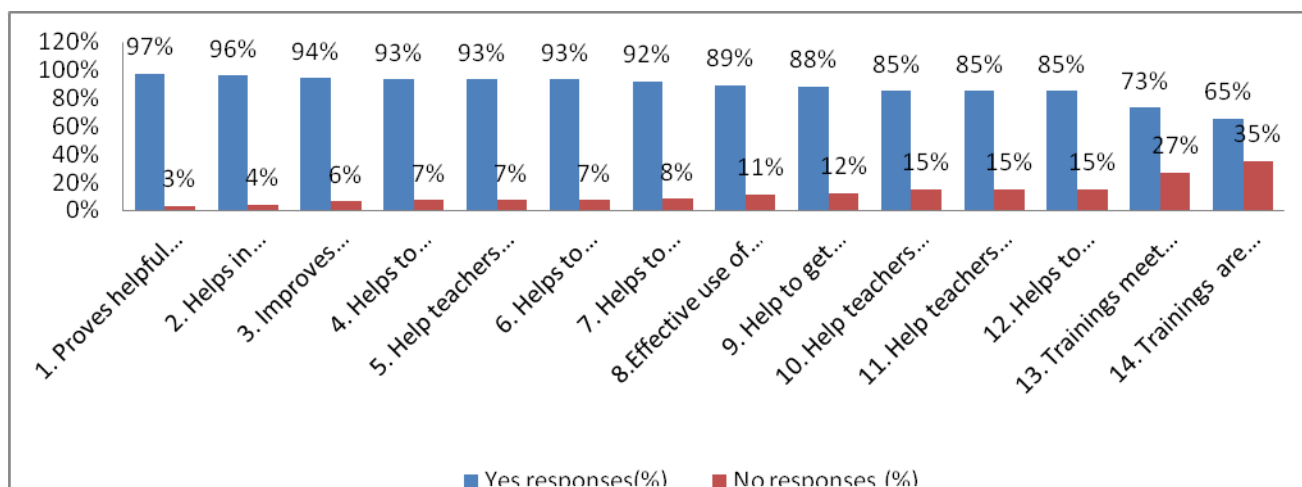
Section I

Section I deals with findings of the responses of elementary school teachers regarding the role of DIETs in promoting teaching learning transactions at the elementary school level which is given as under:

- 97% respondents were agreed that the in-service training programmes prove helpful to teachers.
- 96% respondents were agreed that the training programmes help in-service teachers in their professional growth.
- 94% respondents were agreed that the in-service training programmes improve classroom teaching learning process.
- 93% respondents were agreed that the training programmes help to develop confidence among teachers.

- 93% respondents were agreed that the training programmes help teachers to deliver the content effectively.
- 93% respondents were agreed that the training programmes help teachers to improve their knowledge about teaching methodology.
- 92% respondents were agreed that the training programmes help to improve teaching efficiency.
- 89% respondents were agreed that there is an effective use of teaching aids during the training programmes.
- 88% respondents were agreed that the training programmes help to get knowledge about innovative educational technologies.
- 85% respondents were agreed that the training programmes help teachers to manage classroom effectively.
- 85% respondents were agreed that the training programmes help teachers to resolve classroom problems.
- 85% respondents were agreed that the training programmes help to understand the concepts clearly.
- 73% respondents were agreed that the trainings meet the expectations of teachers.
- 65% respondents were agreed that the training programmes are organized as per the requirement of teachers.

Figure No. 1 showing the above findings given by elementary school teachers regarding the role of DIET in promoting teaching-learning transactions



Section II

Section II deals with Suggestions obtained from elementary school teachers for effective training programmes with regard to teaching-learning transaction given by DIETs which is given as under:

- Proper use of ICT, teaching aids, innovative idea and new methodology should be focused during the training programmes of DIET.
- Duration of the training programmes should be increased as per requirement.
- Provision of proper infrastructure facilities like latest technological gadgets during trainings.
- During training programmes more focus should be given on the practical aspect.
- Venues of the training programmes should be cluster wise.
- Before organizing any training programme DIET should organize meetings with the teachers for assessing their problems in the real classroom situations.
- DIETs should organize more training programmes on regular basis to enhance the professional skills of teachers.
- For developing the professional skills of teachers regarding innovative tools & techniques, DIETs should organize training programmes from time to time.
- There should be a provision of workshops to develop practical skills, to solve classroom problems more effectively & effective use of teaching aids.

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22. Questioning and Dialogue: Revisiting the Socratic Method

• Dr. Shiva Shukla, Assistant Professor, Department of Education, Central University of Punjab, Bathinda, Email: shiva.shukla@cup.edu.in, ORCID identifier 0000-0002-4036-4736

Abstract

Science is rooted in the conversations and co-operation of diverse individuals resulting in scientific outcomes of standing (Heisenberg, 1971). Since human civilization emerged, people have contemplated and experimented with the world around them. They enquired, investigated and explored the basic questions like why, how, what, when etc. The pursuit of finding answers is always alive because we never stop questioning. Few teachers have introduced pathbreaking concepts that have changed the world. The philosophy and praxes of Socrates were audacious as they challenged the prevalent practices, rationale and traditions. He initiated a profound transformation, two and a half thousand years ago, by igniting questions in minds. With his distinct dialogue and inquiry method, he compelled individuals to take onus for their actions, ethics, liberation, and actualization. Often credited with inquiry and discovery methods, Socrates created a benchmark for teachers to question and live by example. Methods are established norms of doing something, while practices are repeated activities that lead to skill development. This article seeks to systematically review the unique practices of the Socratic method in context to the distinctive questioning and dialogue, and explore how the technique manifests in the world around us today and influences contemporary pedagogy and practices. Also, suggest how teachers can change their classrooms to differentiate between redundant practices and needed actions, analyze grounded reality and experiences, and create new knowledge.

Key Words: Socratic Questioning, Socratic Dialogue, Maieutic Method, Inquiry, Pedagogical Technique

Introduction

'An unexamined life is not worth living,' said Socrates in times when the prevalent norms were unquestioned for the western world. He belonged to the time when sacrifices and offerings to Gods were considered an easy way to achieve absolution. Socrates argued that ethics relied upon man himself and not the caprices of Gods. He examined individuals, their motives and decisions. Socrates did not write anything down and hence remains an enigma. But, the effects of his thoughts and practices are still profound. He is mainly known from the writings of Plato and Xenophon. Xenophon portrays him in a picture of a kindly and uninteresting moralizer, whereas

Plato describes him to be a man of intellectual and moral genius(Huby,1967).Plato envisaged the concept of Philosopher King in his book *Republic*. Ruler of his utopian state, *Kallipolis*, has a love for wisdom, who lived by example and simplicity, was intelligent and reliable.Perhaps,this best describeshow the teacher Socrates was thought by his student Plato.

Socrates's dialogues were distinctive and posed a challenge to the society in his time. He questioned democratic practices and argued that the rightness of any judgment or soundness of an idea could not get decided by vote and majority. The praise bestowed and views reflected by many may not possess the importance attributed to it. He examined the individual's ethics, actions and motives. He considered life dedicated to philosophical examination to attain 'knowledge of good and evil,' the worthiest of living (Stefou,2018). He engaged people in dialogues that targeted to initiate reasoning and reflections.It is essential to conceptualize a dialogue by distinguishing it from a discussion.Both discussion and dialogue are shared activities.As a process, a 'discussion' is about getting ideas accepted. This involves convincing each other and undermining each other opinions. Whereas a 'dialogue' is all about investigating all the different views, listening and reflecting on other's points of view, posing questions to develop understanding, create a shared experience and try to build consensus (Bolten, 2001). Here, the questioning is purposeful because the questions aim to create shared meanings, and not offensive aimed to undermining the position.

Aristotle, a student of Plato, wrote a rule manual that discriminated the dialogue from a discussion.At the same time, he grouped discussion and advocacy as 'rhetoric'because they were persuasion techniques.The dialogue was'dialectic' because it was a technique of investigating through a series of questions and answers. Dialectics, in present times,is a discipline of philosophy, a catalyst investigative technique of learning that distinguishes falsity from the truth (Bennett, Anderson & Sice,2015).A reasonable investigation involves rich exploration and leads to discovery. It requires asking relevant and suitable questions. Questioning is an art because framing a good question requires mastery.It is also a skill because asking an adequately stated question to get an appropriate response is a skilled effort. Socrates' inquiry was unique as the questions he asked had a distinct structure and balance to them. Those questions were the lifeline to his dialogue.

Analyzing Socratic Questioning and Dialogue

Plato considered Socratic questioning as the only path in harmony with knowledge itself (Hansen,1988).As depicted in Plato's writings, Socrates is continually engaging people in dialogues

in a manner that compelled them to think. He cross-examined students, made them analyze their fallacies, asked challenging questions steering them towards introspection. So, the students could realize the right knowledge by deducing on their own. His questions distinguish into the primary question, subsequently followed by secondary questions. First, Socrates engaged people in a conversation where he proposed an ethical problem. That was the primary question. These fundamental 'primary question' were usually within the 'what is' frame. Like, what is knowledge, what is wisdom, what is justice etc. As he got an answer, he proceeded to examine it, employing a series of questions, and those were 'secondary questions' (Robinson, 1971). As the cognitive domain's taxonomy, these secondary questions are ordered according to the level of inquiry from simple to complex, i.e., memory, translation, interpretation, application, analysis, synthesis, and evaluation (Overholser, 1993). Secondary questions can also be grouped into three clusters, i.e., to clarify concepts, probe evidence, and explore implications (Stoddard & O'Dell, 2016).

Socrates never aimed for dialogue to arrive at definitive conclusions. That is the reason, framing of questions becomes crucial while preparing for a dialogue. When predetermined conclusions get incorporated into a question, it steers people towards desired answers. This process results in a struggle to change minds. This situation gives the impression that the questioner has nothing to learn from the respondent. Also, respondents might feel that their unique viewpoints are not valuable. Whereas, Socratic dialogue leads to 'guided discovery'. Here, greater inquisitiveness is for 'where the question will possibly lead to,' 'what probably would get uncovered,' and 'what the person will likely do with that discovery' (Westbrook et al. 2007). In ancient Greece, three philosophers practiced Socratic dialogue. Socrates, who introduced it, his student Plato who idealized and followed it, and Aristotle further developed it. Aristotle applied the technique of induction for his rendition of the dialogue. Here, the facilitator asked questions related to hypothetical instances for the respondent to clearly and intuitively develop the ability to analyze the nature of rules and principles. The questions would involve a hypothetical situation in a 'what would you do if' frame. Here, the questioner had the subject expert's role giving guidance to the responder (Kessels, 2001). When such questions are applied, dialogue not only leads to the development of ethical insights but also, these insights get contextualized to an individual action.

Virtues were the soul of Socrates's philosophy. Virtues for him were all interconnected and could not be separated. He called ethics 'knowledge of the good'. The topics of dialogue that Socrates engaged in were based on Greek society's overall moral framework, focusing on virtues

of justice, courage, righteousness, temperance, and wisdom. For developing moral judgments and accountability, the questions in the dialogue are 'non-empirical' in nature. When the questions are non-empirical, they require thinking and reasoning instead of giving evidence to put forward an argument (Bolton, 2001). Thus, the process of questioning in Socratic dialogue by its reflective practice becomes a facilitator of ethical maturity. The success of this Socratic questioning lies in its distinctive Socratic method.

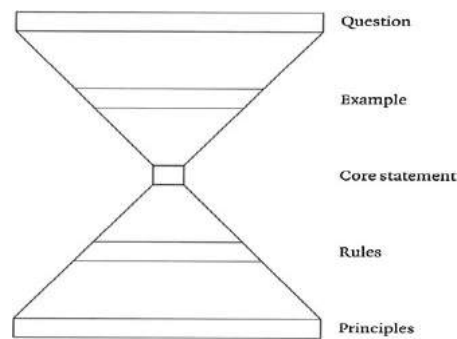
Reflections on the Socratic Method

In present times, the Socratic method has evolved into an investigation of conceptual, philosophical, ethical and general questions within the group (Nelson, 2004). Sometimes referred to as the Neo-Socratic dialogue or the Maieutic method, is often used as a pedagogical technique. German pedagogue Leonard Nelson developed the modern Socratic dialogue technique with the help of his student Gustave Heckmann. Their method was didactic and outcome-based. It differed from the traditional concept as Socrates presented dialogue as a dialectic experience that never concluded in finality. Traditionally abstraction or the generalized principles were to be experienced according to personal disposition. The modern maieutic method aims to arrive at a common platform (L'Arrivee, 2020). Both questioning and listening are utilized to investigate the issue at hand. It transforms the idea of shared perspectives into shared meanings (Sice et al., 2008). The Socratic method's traditional and contemporary forms differ on one critical point. The original one aims at the individual realization, and the second one aims to arrive on common grounds. Socrates himself argued that the majority could not justify the soundness of a judgment and aimed for constant inquiry rather than a consensus. Nevertheless, in both conditions, the process or method of dialogue remains the same.

Intellectual inquiry through the Socratic method initiates with a single question regarding the conceptual matter, followed by examples explored by the participants. The facilitator provides a counterexample, formulated to elucidate points that were left out and sum up when students re-evaluate their initial responses vis-à-vis new ones (Dillon, 2016). The metaphor of an hourglass can clarify this process. A dialogue begins where the facilitator poses a general question related to the topic under consideration. After the question is asked, the participants give related examples that they have experienced. Core principles and examples are identified for further reflection. An investigation into these identified judgments, assumptions and instances is the next step. They are examined, sharpened to justify and held to scrutiny. Insights or abstraction is

developed on the given topic, and the transition from the question to principles takes place in the form of an hourglass (Kessels, 2009).

Figure 1: Hourglass process of Socratic Dialogue



(Source Kessels et al. 2009, p. 40)

This hourglass process is transformative 'regressive abstraction,' implying that analysis and reflections are based on assumptions rooted in experiences, that lead to the realization of general principles. Here, the initial standpoint the participants possess leads to the acceptance of the present position or belief. Just as the sand moves in the hourglass making an individual journey altering in time and position, the dialogue also involves in a transitioning journey. The Socratic dialogue as a practice then becomes a liberating experience, as the participants are free to express their views without the burden of judgments on their positions. The journey becomes more important and the transformation of the standpoint becomes an individual journey that the participants take within themselves. The quality of investigation and questions in the dialogue determines the quality of reflections, insights and transformation.

Pedagogy, Practices and Socratic Method

Both in traditional and modern adaptations, Socratic dialectics and didactics require a specific code of conduct that is not as rigorous in other forms of formal pupil-teacher interaction. It does not insist on transmitting information from teacher to student but aims to end reliance on perceptual knowledge and steers to an introspective discovery of 'true knowledge' through logic and reasoning. It initiates self-directed learning for the participants. Teacher-learner interaction in a Socratic dialogue is to scaffold the students in two manners. The *designed scaffolding* is planned before the class and consists of purposeful activities. The *interactional scaffolding* is more impromptu and occurs according to the student requirements within a classroom discourse (Gibbons, 2002).

The classroom activities for a Socratic dialogue can be facilitated by the teacher providing questions in the form of challenges to push their limits and achieve higher learning aims. It can be done by incorporating six pedagogical strategies. Firstly, the teacher remains impartial on the topic. It would enable the utilization of student's independent judgments. The issue under consideration should be tangible and accompanied by concrete examples. It ensures maximum participation as most students would face difficulty participating if abstract phenomena are discussed initially. The teacher must see to it that all students participate in the dialogue process to achieve mutual understanding. The teacher prevents the group from getting defocused on the topic. The teacher also provides valid statements to the group to maintain a common consensus. And lastly, interventions whenever necessary to keep the dialogue in progression productive (Kenzic et al., 2010).

It is necessary to frame questions before the dialogue. While developing these questions, it is essential to avoid those requiring direct, brief or fixed responses. Instead, questions should be framed such that they motivate reflections. Questions should focus on exploring the reasons. Those reasons should initiate insightful information, interpret ideas, associate the beliefs with their implications, increase mental agility that helps to see multiple viewpoints, address the applicability of a topic, investigate the consistency and paradoxes within the issue compelling to question the logic behind one's beliefs (Griffith & Frieden, 2000). Ideally, the dialogue group comprises around five to eight participants who want to investigate a single question posed before them. The facilitator's role in a dialogue is to refrain from contributing to the dialogue's content and keep the dialogue going (Bolton, 2001).

The Socratic method aims for a 'productive discomfort' in students while abstaining from intimidation (Reis, 2003). A teacher can initiate Socratic dialogue by posing a set of questions in the class. This inquiry is interactive, where both the teacher and the student can raise questions. These questions can be framed based on nine categories. The 'questions of clarification' can be framed as- what do you mean by, can you give an example of, can you put it in another way, what is the fundamental point you are trying to make, can you explain further. The 'questions that probe purpose' can be framed as- what was your intention when you say, is the aim getting fulfilled, how does the purpose in two situations differ, can you justify the reason. For the 'questions that probe assumptions' the framing can be- what can we assume alternatively, why have you based your reasons on this argument, is it always this case. The 'questions that probe

information, reasons, evidence and causes' can be framed as- how did you know, why did you say that, what lead to your belief, can there be reasons to doubt the evidence, what do you think is the reason, what is the rationale of your conclusion. 'Questions about viewpoints and perspectives' can be framed as- what would a person who disagrees say in this situation, is there an alternative, how the ideas are similar or different, how would you answer an objection to your argument. The 'questions that probe implications and consequences' can be framed as- what likely outcome follows, what are other possibilities, the results you suggest will happen necessarily or probably, what are the implications of your rationale. The 'questions about questions' can be- how do we find out, what facts we need for the proposition, would someone put this question differently, what does this question assume, can this question be broken down further. 'Questions that probe concepts' can be- how is this idea significant, are the two ideas conflicting or complementary, is there a problem with this proposition, what are the distinctive ideas behind the rationale. Finally, 'questions that probe inferences and interpretations' can be framed as- can we draw another conclusion, what is the best possible solution, how should we interpret the data, how did you reach this conclusion, what is the conclusion we are coming to. (Paul & Elder, 2019).

Similarly, the 'skill of probing questions' of micro-teaching can also be adapted for a Socratic dialogue. It can be helpful in a situation where the students do not respond in a dialogue group. An attempt to prompt clues for the desired response would be helpful. If the student still faces difficulty in responding, the questions can be re-focussed by providing an alternative situation. The question can also be re-directing to the other participants. Here, the participants who could not respond earlier gets time to enable thinking and initiate answering. The facilitator of the dialogue can come back and involve them in the dialogue. Until this level of involvement, the questions are close-ended and factual for clarifying some specific detail of the topic. When the teacher or the facilitator is satisfied with the group's participation and performance, explores further, asking questions to seek further information and increase critical awareness (Singh & Sharma, 2002). Now the questions are within the 'why' and 'how' frame to improve critical thinking, evaluative thinking and in-depth knowledge of the topic. The questions would now be open-ended and welcoming of the student's opinions and feelings, making it a reflective activity. The Socratic method can also be applied in synchronous online classrooms using chatrooms where all participants involve themselves in the dialogue via online mode. For synchronous online classes, the Socratic dialogue proves to successfully achieve the

learning outcomes (Huffman & Whittingham, 2006). It is essential to take precautions here that the comments of the online instructor should be limited. The instructor's word is generally interpreted as the final authority and hinders peer-to-peer learning. Online conversation is informal, and interruptions regarding grammatical mistakes or typographical errors defocus the topic.

The jurisprudential inquiry model (JIM) of teaching was developed on the foundations of the Socratic method and advocated inquiry-based learning. The JIM model proposes to facilitate rethinking in the participant's disposition on the issue at hand. These issues are usually of ethical, legal or social character. Here, the process gets sectioned into two parts, i.e., analysis and argumentation. The analysis part is meant for orienting, identifying and recognizing one's position on the issue. The argumentation part consists of exploring ethical dilemmas and value conflicts, prioritizing them and examining similar situations. It is followed by probing into the relevancy of assumptions and the consequences (Joyce & Weli, 1972). Here, the teacher takes the role of an adversary and interrogates the assumptions underlying the student's position by posing purposeful questions. These questions aim to clarify the participant's viewpoint in terms of alternatives presented, consistency in different situations, relevance and validity, awareness of the consequences, and ability to sustain the perspective despite the outcomes. The consensus that results from this process is termed 'rational consent' (Jalajakumari, 2005). This process is known to strengthen the group's co-operative learning, identification of the problems and findings solutions to social and academic issues. The problem-solving activity uses rational inquiry for processing the information at hand. It leads to higher critical awareness among the participants.

In recent times Socratic dialogue proves its metal as a widely accepted technique applied in diverse fields. The Socratic dialogue is also used during cognitive-behaviour therapy very successfully (Padesky, 1996). Here, the counselor guides the counselee through a series of open-ended questions to stimulate automatic thoughts and suppositions in their response. Cognitive-behaviour therapy seeks to create introspection and insight development within the counselee. This method leads to a guided-discovery by examining evidence and logic, resulting in insight development. The desired change in the counselee is achieved (Leahy, 2001). It proves the Socratic dialogue can be applied in other fields where guided-discovery is aimed.

Conclusion

The benefits within the classroom, where Socratic dialogue is employed, are known to be many. Notably, the process leads to a secure environment and excellent interpersonal communication due to the non-judgemental deliberations. The Socratic dialogue as a process is such that the outcomes enhance the quality of experiences. The participants feel a sense of empowerment, as every participant's view is considered valid. No-exclusion leads to team building. Active listening results in empathetic understanding, and mental agility increases by incorporating multiple points of view. Initiation of discovery, based on reasoning, ethical, and accountable dealing as every conflicting idea is under consideration. Participants even reported the dialogue sessions as a rewarding and thought-provoking experience (Bennett et al., 2015).

Educational praxis builds on Socratic Dialogue reflect acceptance, emancipation and empowerment. 'Acceptance' because it is participatory in nature, where reflection and introspection consider both personal and others' perspectives. It is incomplete till every member and every point of view is recognized. 'Emancipation' because reasoning and logic, when combined with reflection and constant questioning, strengthen the moral framework. These reflections result due to thinking from a new point of view that otherwise would not have been explored. The dialogue group leads to discoveries, ideas and commences 'learn to learn.' The Socratic method and questioning, when applied together, form a critical but often ignored technique. It involves the questioner searching for knowledge actively. Modern pedagogical practices would benefit from it. Socrates belonged to the Athenian acropolis, one of the earliest known democracies of the west. He expressed his opinions freely and questioned all human decisions and activities. In a regular classroom, the Socratic dialogue, when applied to analyze a specific topic, inducts students in constant inquiry, truth validation, and examining the evidences with reasons and reflections. A thinking student is an empowered student. It is highly recommended to incorporate it as a teaching method worthy of regular classroom practices.

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23. Learning Styles and Scholastic Achievement of Day and Boarding Secondary School Students of Kashmir

- Dr. Arshid Ahmad Najar, *School of Education and Behavioural Sciences, University of Kashmir, India, arshpsy@gmail.com*
- Dr. Shabir Ahmad Bhat, *School of Education and Behavioural Sciences, University of Kashmir, India, dr.shabir@uok.edu.in*

Abstract

The main purpose of this research was to assess the learning styles and scholastic achievement of day and boarding secondary school students of Kashmir. The study was also aimed to assess the influence of learning styles on scholastic achievement of day and boarding secondary school students of Kashmir. The population for the present study consisted of all the day and boarding secondary school students of Kashmir division of Jammu and Kashmir. The sample in this study was confined to the students of secondary schools of ten districts of Kashmir division of Jammu and Kashmir. A sample of 800 (400 Day and 400 Boarding) students from 50 (35 Day and 15 Boarding) Secondary Schools were taken through simple random sampling technique. By descriptive method of research and by learning style inventory constructed by the investigator required data was collected. The findings of the study revealed that boarding school students have more inclination towards kinaesthetic style of learning than day secondary school students. The study also confirmed that boarding secondary school students were found to have better scholastic achievement than day secondary school students. The findings further revealed that learning styles positively and significantly influences the level of scholastic achievement.

Keywords: Learning styles, scholastic achievement, day and boarding secondary school students

Introduction

Learning Style refers to the ways preferred by the students to absorb, process, understand and retain knowledge. Learning is a process in which a stimulated person makes all the endeavours to adjust his behaviour in order to attain his target (Pressey, Robinson and Horrocks (1967). Learning is a long lasting and a very significant process in life of a human being. It is not confined to educational institutions or a particular age group only rather it is a broader term which is involved to every aspect of life at all developmental stages.

Everyone has their own way of seeing and understanding details. Some people discover through oral method, some by writing, and still others by work. So every student has his or her own way of learning. Learning styles play an important role in how effective information is stored. Each

student has a different learning style based on many personal factors and everyone has a different learning style of reading (Montgomery, 1998; Mumford and Honey, 1995). A learning style can be defined as a set of factors, approach, and attitudes that facilitate individual learning. It is the ability of learners to understand and process information in the context of learning. It is a common way for a student to find and process information. The concept of learning styles began in the 1970s, and has had a profound impact on education.

Each person has his or her own unique way of collecting and processing information, and finding out solution to the problems in everyday situations. These personal perceptual skills, acquired through a long process of communication with people are called “learning styles” (Reynolds, 1997). Riding (2005) confirmed that students are different and that each difference affects their learning and academic achievement. Knowing the reading style can lead to improved learning and helps the student to focus on developing weak points. Analysis of learning styles also helps to inform the learning and teaching process and can be used as a tool to improve achievement and inclusion (Rose & Nicholl, 1997).

Scholastic achievement is defined as the acquisition of academic content and skills successfully through a series of efforts in a certain period of time. Achievement is a set of measurable behaviours in a standardized series of tests (Simpson and Weiner. 1989). The level of proficiency in school subjects is measured through a series of tests usually constructed and standardized at school level. The mostly used and valued method of determining whether a successful achievement of learning has taken place for a learner is quantitative in nature. In other words, numbers (grades or marks) are used to indicate successful or unsuccessful mastering of academic content and skills of a student (Simpson and Weiner. 1989). Academic achievement is greatly influenced by the learner’s previous educational performance (Staffolani & Bratti, 2002), socio-economic status (Considine & Zappala, 2002), student’s social and emotional status or wellbeing (Erdogan et.al.2008) learner’s attitude (Erdogan et. al., 2008), among many other factors.

Objectives:

- To assess the learning styles of day and boarding secondary school students of Kashmir.
- To assess the scholastic achievement of day and boarding secondary school students of Kashmir.
- To compare day and boarding school students on learning style and scholastic achievement.

- To study the influence of learning styles on scholastic achievement of day and boarding secondary school students of Kashmir.

Methodology:

The descriptive method of research was used to achieve the selected objectives. The population for the present study consisted of all the day and boarding secondary school students of Kashmir division of Jammu and Kashmir. The sample in this study was confined to the students of secondary schools of ten districts of Kashmir division of Jammu and Kashmir. A sample of 800 (400 Day and 400 Boarding) students from 50 (35 Day and 15 Boarding) Secondary Schools were taken through Simple Random Sampling technique. Since the state of Jammu and Kashmir has different topography from the rest of the country and due to the conflict situation the number of boarding schools is very less as compared to other states. Therefore all the Vidhyalaya schools were taken as a sample for the study.

Instrument of measurement:

Learning Style Inventory:

The learning style inventory (LSI) was designed by the investigator to assess the learning styles of secondary school students. The questionnaire consists of 30 items with three dimensions viz. namely Audio, Visual and Kinaesthetic learning styles. The two major types of validity i.e. content validity and concurrent validity were used to ensure the validity of the Learning style inventory. The validity coefficient was found to be 0.81. The Test-retest reliability was also employed to find out the reliability of the learning style inventory. The coefficient of correlation was found to be 0.87.

Scholastic Achievement:

The scholastic achievement of the sample students was collected by providing them a self constructed blank in which they had to share the aggregate marks of previous two classes i.e., 10th and 11th. This was then also confirmed from the school records of the respective schools. The investigator was also able to collect the scholastic achievement record of the sample from the concerned heads of the institutions.

Statistical treatment:

The data collected from the field was put to different statistical techniques like percentage statistics, mean, t-test, standard deviation and regression analysis.

Results and discussion:

Table 1 showing the percentage of the categories of Learning styles among Day and Boarding Secondary School students:

Categories of Learning Style	Day Secondary School Students		Boarding Secondary School Students	
	N	Percentage	N	Percentage
Auditory	349	87.25%	327	81.75%
Visual	189	54.25%	292	69.00%
Kinaesthetic	181	57.25%	313	74.25%

Table 1 shows the percentage of the categories of learning styles among day and boarding secondary school students. The findings reveal that 87.25% day school students possess auditory learning style where as 81.75% boarding school students possess this type of learning style. It can be further observed that 74.25% boarding school students possess kinaesthetic learning style whereas only 57.25% day school students possess this type of learning style. As far as visual style of learning is concerned 69% of boarding school students possess this type of learning style and only 54.25% day school students possess such type of learning style.

Table 2 showing the levels of Scholastic Achievement among Day and Boarding Secondary School students:

Grade	Percentage of Marks	Day Sec School Students		Boarding Sec School Students	
		N	%age	N	%age
A1	91-100	06	1.5	12	3.0
A2	81-90	13	3.25	26	6.5
B1	71-80	71	17.75	100	25
B2	61-70	213	53.25	234	58.5
C1	51-60	66	16.5	28	7.0
C2	41-50	30	7.5	0	0
D	33-40	01	0.25	0	0
TOTAL		400	100	400	100

The above table reveals that out of 400 Day Secondary School students, 53.25% of students fall under B2 grade level, 17.75% under B1 grade, 16.5% of the students under C1 grade, 7.5% of the students fall under C2 grade level 3.25% under A2, 1.5% under A1 and 0.25% of the students fall under the grade level of D.

Out of 400 Boarding Secondary School students, 58.5% students fall under B2 grade level, 25% under B1 grade, 7% C1 grade, 6.5% under A2 grade and 3% students fall under A1 grade level.

Table 3 showing the mean comparison between Day and Boarding Secondary School students on Auditory dimension of Learning style:

Group	N	Mean	S.D	t-Value	Level of Significance
Day School Students	400	73.27	7.21	1.68	NS
Boarding School Students	400	74.21	8.42		

A quick look at the above table reveals that there is no significant difference between the two groups with regard to auditory dimension of learning styles. The statistical data reveals that both day and boarding secondary school students are almost equally inclined towards auditory learning style.

Table 4 showing the mean comparison between Day and Boarding Secondary School students on Visual dimension of Learning style:

Group	N	Mean	S.D	t-Value	Level of Significance
Day School Students	400	61.21	8.32	29.21	0.01
Boarding School Students	400	72.31	9.21		

The perusal of the above table reveals that there is a significant difference between the two groups on visual dimension of learning styles and the difference was found to be significant at 0.01 level.

It is evident that visual learning style is more prevalent among boarding secondary school students.

Table 5 showing the mean comparison between Day and Boarding Secondary School students on Kinaesthetic dimension of Learning style:

Group	N	Mean	S.D	t-Value	Level of Significance
Day School Students	400	64.21	7.32	26.31	0.01
Boarding School Students	400	79.21	8.91		

The above table shows that there is a significant difference between the two groups on kinaesthetic dimension of learning style and the difference was found to be significant at 0.01 levels of significance. The data reveals that boarding school students have more inclination towards kinaesthetic style of learning than day secondary school students.

Table 6 showing the mean comparison between Day and Boarding Secondary School Students on Scholastic Achievement:

Group	N	Mean	S.D	t-Value	Level of Sig.
Day School Students	400	65.21	8.72	9.57	0.01
Boarding School Students	400	71.24	9.31		

The perusal of the above table shows the mean comparison between Day and Boarding Secondary School students on Scholastic Achievement. The statistical data reveals that there is significant mean difference between two groups on Scholastic achievement and the difference was found to be significant at 0.01 levels of significance. As the mean difference favours the Boarding Secondary School students which confirms that Boarding Secondary School students were found to have better Scholastic achievement than the Day Secondary School students.

Table 7 showing regression analysis between learning styles and scholastic achievement of Day and Boarding Secondary School Students:

Dependent variable	Independent variable	R ²	Adjusted R ²	B	F	sig
Scholastic Achievement	Learning Styles	0.651	0.643	0.632	21.3	.000

A regression analysis was adopted to investigate the influence of learning styles on scholastic achievement. The findings reveal that there is a positive correlation between Learning Styles and Scholastic Achievement. The findings shows that Learning Styles positively and significantly influences the level of Scholastic Achievement ($\beta = .63$, $p < .05$). Learning styles has significant positive regression weights, indicating higher order learning styles leads to better scholastic achievement.

Discussion:

On the basis of levels of Learning Styles of Day and Boarding Secondary School students, the results reveal that 87.25% Day and 81.75% Boarding Secondary School students possess auditory type of Learning Style. 54.25% Day and 69% Boarding Secondary School students possess visual type of Learning Style. The statistical data further reveals that 57.25% of the Day Secondary School students were found to have kinesthetic type of learning style while as a good percentage of 74.25% of Boarding Secondary School students possess kinesthetic type of Learning Style.

On the basis of overall grades of scholastic achievement among Day and Boarding Secondary School students, the results reveal that 1.5% of the Day and 3% of the Boarding Secondary School students have A grade, 3.25% Day and 6.50% of the Boarding Secondary School students possess A2 grade, 17.75% of the Day and 25% of the Boarding Secondary School students possess B grade. The statistical data further reveals that 53.25% of the Day and 58.50% of the Boarding Secondary School students possess B2 grade, 16.50% of the Day and 7% of the Boarding Secondary School students have C grade level of scholastic achievement. The data also depicts that 7.5% and 0.25% of the Day Secondary School students have C2 and D grade respectively, while as none of the Boarding Secondary School students fall under C2 and D grades. Holden, (2010) found that the boarding nature of the system have clear impact on the academic and non-academic outcomes. Boarding school students spent a great amount of time with teachers and administrators and are involved in different kind of activities which influence their academic outcome. Maphaso & Mahlo, (2014) found that the boarding school

students have better academic performance. The study found that the boarding schools greatly help the students in their achievement of academic performance as it gives the space to students to spend the necessary time in their studies and deprive them a homely distraction that normally disturbs the student from studying hard and perform better in the academic assessments. The over stay in the schools helps the students to get connected with the fellow classmates and discuss academic issues which ultimately enhance the academic abilities of the students. Academic learning time is one of the most important correlates of school climate (Diperna Elliot, 2002).

Boarding Secondary School students were found to have better learning style than the Day Secondary School students. The Boarding Secondary School students possess better visual and kinesthetic learning style as compared to Day Secondary School students. Boarding Secondary School students present the information with the help of visual aids, while remembering any concept they prefer to get the picture of the concept in their mind. Boarding Secondary School students recognize words by sight rather than by listening repeatedly. Boarding Secondary School students were found to have better kinesthetic learning style as compared to Day School students. Boarding Secondary School students like the teachers who use real life examples to explain things. They like to participate in seminars, group presentations, student interactions and dialogues. Boarding Secondary School students prefer the method of learning by doing; they also prefer learning by direct involvement rather than listening or writing only. The finding is in line with Badola (2012) who found that there is significant difference between Govt. and Public Secondary school students on learning styles. The public secondary school students were found to have better learning styles than govt. secondary school students. Bhat and Govil (2014) also found that the type of institution significantly affects the preference of learning style. The results indicate that there is no significant difference between 9th standard boys and girls with respect to enactive, figural and verbal learning styles, but the study revealed that the type of institution affects the learning style of the students. Omar (2014) found that there is significant difference between the residential and non residential school children on learning styles ($t=4.04$). The mean score of the residential students 159.11) was found to be higher than the non-residential school students (154.28). The residential school students were found to have better learning style than the non-residential school students. The results indicate that the type of school (residential or non-residential)

significantly affect the learning style of high school students. On comparison between Day and Boarding Secondary School students on their scholastic achievement, the statistical data reveal that there is a significant mean difference between two groups and the mean difference favours the boarding secondary school students which reveal that boarding secondary school students are high on scholastic achievement than the day secondary school students. The finding is in line with Smith (2001) who found that the boarding schools students have high student achievement and educational excellence. The finding reveals that the boarding school students are having better academic achievement as compared to day school students. Boarding school students have better facilities, conducive school environment which boosts their academic achievement.

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24. Rural Undergraduate ESL Students' Difficulties of Understanding and Writing the Graphical Representation

- **Dr. E. Ramganes**, Professor, Department of Educational Technology, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India, dreramganes@bdu.ac.in
- **C. Hariharan**, Research scholar, Department of Educational Technology, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India, hariharanf@bdu.ac.in

Abstract

The aim of this study is to identify the difficulties of understanding and writing the graphical representation among rural undergraduate students at Bharathidasan university affiliated colleges in Tiruchirappalli region. It has adopted descriptive qualitative and quantitative research method. The subjects were 109 rural undergraduate students of English department at final year. They were instructed to understand the graphical representation and answer the following questions in one or two sentences. After investigating students' writing product, the result of the research revealed that the rural students faced some difficulties in both understanding and writing the graphical representation. It was suggested that provide specific descriptions for understand the graphical representation and writing to improve students' writing.

Key Words: graphical representation, rural undergraduate students,

Introduction

English language plays a vital role in communication particularly multilingual countries like India. Every people should try hard to acquire good communication skills which are important for his/her career (Sharma, 2019; Abilasha & Ilankumaran, 2018; Gomathi, 2014). Fareed, Ashraf, & Bilal (2016) findings reveal that the major problems of English as a second language (ESL) students' writing are insufficient linguistic proficiency in writing, lack of ideas, reliance on L1 and weak structure organization. And also they provided some challenges are influenced by different factors such as untrained teachers, ineffective teaching methods, lack of reading and writing practice, large classrooms, low motivation and lack of ideas. DelMas et al., (2005) study explored that students' difficulty in reading and interpreting graphical representations of distributions. Okumus (2020) reveals that reading is a complex process and students usually have difficulties in constructing meaning from writing text. Rastle (2019) arguing that the nature of the understanding system is a reflection of the writing system and that a deep understanding of reading can be obtained only through a deep understanding of written language. Atayeva et al., (2019) investigated how college students' understanding of the reading affect

students' academic writing and they reveal that reading and writing are very necessary for the success of their studies.

Sermsook et al., (2017) stated that writing in English has been perceived as the most difficult skill among the four skills of English. Even a native speaker fails to write a well manner of writing. Moses & Mohamad (2019) have revealed that writing competence in a second language (L2) is complex, challenging and difficult for students to acquire. It will be considered as difficult and complex when writing includes discovering a proposition or an idea. A number of recent research studies world widely have been conducted on writing in the ESL context revealed that learners face different form of challenges in writing in English such as paragraphs (Melati, 2020; Al-Ghabra, & Najim, 2019), essays (Ayana, 2020) research paper writing (Tuyena et al., 2019), and thesis or project (Jiang, & Yan, 2020). Hussain (2019) believes that performance of language development in subject to improve writing skills. A text of an effective ESL writer must be cohesive, logical, clearly structured, interesting and properly organized with a wide range of vocabulary and mastery of conventions in mechanics (Al-Ghabra, & Najim, 2019). In this way, the researchers have tried to found out the difficulties of writing of undergraduate students while describe to write the graphical representation.

Review of Related studies

Khanum & Siddiqui, (2018) stated that rural areas students are not aware of the importance of English. The students do not have equal opportunities to get good English education in institutions. Similarly, Ponmozhi & Thenmozhi (2017) conducted a study on problems and the difficulties faced by the rural students in English learning. They discussed many challenges were faced by the rural students in English language skills especially in writing. This study revealed that learning difficulty of English at rural students was very high. Tuyena et al., (2019) pointed out in their study, learning English as a second language (ESL) for students have been challenging, particularly in writing skills. Similarly a previous study has conducted by Maznun et al., (2017) revealed that undergraduate ESL Students' difficulties in Writing the introduction for research reports. Sholeha, Ghozali, & Mahbub, (2019) have examined challenges of undergraduate students in writing skills. The study reveals various difficulties of students in vocabulary problems, cognitive problem, punctuation, spelling, preposition, word order and subject verb agreement as a grammatical problem and sentence structure problems. A study by Ayana, (2020) has revealed that first year university students encounter various

problems in essay writing such as sentences errors, wrong use of grammatical structures, vocabulary and others. Rozimela & Wahyuni (2019) have indicated that the college students have various writing problems in developing and organizing their ideas even though their texts contained the components of the generic structure. Also, they reveal that students have complex grammatical problems. The result of the study has shown a gap between the students' perceived needs, their learning preferences, and their writing ability. DelMas et al., (2005) have examined the high school and college students to analysis through assessment items used in a large scale class testing of graphical representations. They focused on the use of items that revealed some consistent errors and misconceptions of the students' exhibit when presented with graphical representations of data. They found out that college students' have difficulties in bar graphs and time plots; they tend to confuse bar graphs and time plots with histograms.

Objective of the study

- To ascertain the understanding of the graphical representation and writing difficulties of rural undergraduate students in Tiruchirappalli region.
- To identify the language skills influencing the difficulties of the rural undergraduate students in relation to graphical representation understanding and writing.
- To provides valuable recommendations for policy decisions towards integrating to develop the writing skills at college level.

Hypotheses of the Study

To accomplish the objectives the following hypotheses were formulated for testing:

- There is no statistically significant differences between the rural undergraduate students have problems in understanding and writing of the graphical representation.
- There is no statistically significant difference between the male and female rural undergraduate students in relation to the understanding of the graphical representation and writing.

Methodology

The investigator adopted descriptive method with a survey technique to collect the data from the sample. SPSS Package was used to analyses the data. Survey technique is generally used for the type of research that attempts to find out the normal or typical condition or practice at the present time. It is most commonly used approach to solve educational problems. The type of

information the survey technique procedure is in wide demand and is capable of rendering important service because it determines the present trends and solve current problems (Fink, 1995). A sample of 109 rural undergraduate students was chosen by simple random technique for the present study. Out of the sample 109 rural undergraduate students are male and 58 of them are female. They belong to English multi-disciplinary. The main reason for selecting the rural undergraduate students as sample of the this study is that they have difficulties in competitive exams such as Union Public Service Exam, Banking, Management and Corporate sectors commit errors in the areas of linguistic and communicative competence.

Tool

The “Understanding of Graphical Representation scale” (UGRS) was developed by the investigators and validated by the experts. The tool was administered to the sample. The questions were taken from previous competitive examinations and based on the following two language skills such as reading and writing. For establishing face validity and content validity, the tool was subjected to the advice of a panel of experts. Based on their expertise, the tool was fine –tuned with necessary modification. The UGRS has divided as two dimensions such as reading and writing, each question has given 1mark and totally 30 marks.

Results

Analysis and interpretation of the results are the most important steps after the data collection. The collected data were analyzed by use of appropriate statistical techniques for the present study.

Descriptive Statistics

Descriptive analysis summarizes the data meaningfully. It is use to measure the central tendency and the variability of the research data.

Table-1 Difficulties of Understanding (Reading) and Writing the Graphical Representation

D	Topic	0 mark	%	1 mark	%	2 marks	%	3 marks	%	4 marks	%	5 marks	%
R	Bar chart	0	0	65	59.63	7	6.42	28	25.68	4	3.66	5	4.58
	Pie chart	0	0	8	7.33	85	78	5	4.58	8	7.33	3	2.75
	Table	0	0	0	0	42	38.5	51	46.78	10	9.17	6	5.5
W	Bar chart	9	8.25	71	65.13	17	15.6	12	11	0	0	0	0
	Pie chart	11	10.1	64	58.71	18	16.5	14	12.84	2	1.83	0	0

	Table	0	0	31	28.44	45	41.3	25	22.93	8	7.33	0	0
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D = Dimension, R = Reading, W= Writing

Table -1 summarized proportion of (marks 0-5 each topics) responses for each the UGRS's questions. For the overall sample, a very few rural undergraduate students obtained 5 marks only in reading dimension topics such as bar chart 5 students (4.58%), pie chart 3 students (2.75) and 6 students (5.5) in understanding the graphical representation. Also, below 10 students obtained 4 marks in each topics such as bar chart 4 students (3.66%), pie chart 8 students (7.33) and 10 students (9.17) in understanding the graphical representation but in writing no student obtain marks in bar chart, 2 students obtained in pie chart and 8 students obtained marks in table. Total number of the students more than ten students obtained zero marks in writing especially bar and pie chart. An analysis of the respondent for each questions showed a lot of variation between reading and writing in the table - 1. Most of the students obtained one marks in both reading and writing, especially in writing above (65 %) students obtained one mark in answer the graphical representation. So, the result reveals that most of the students have difficulties in understating and writing the graphical representation.

Table-2 Level of Understanding and Writing the Graphical Representation

Variables	low		Average		High	
	No	%	No	%	No	%
Reading	31	28.44	67	61.46	11	10.09
Writing	78	71.55	29	26.6	2	1.83
Total	54	49.54	46	42.2	9	8.25

From the above table -2, it is inferred that most of the rural undergraduate students have low level of understanding and writing skills in graphical representation with its dimensions such as reading (28.44), writing (71.55) and total (49.54). It can be seen from the table-2, that as many as 61.46 % understanding and writing skills in graphical representation have found to be average in reading, 26.6 % students were in writing and 42.2% were in total. Very few numbers of

students have found to be high, 10.09% in reading, 1.83 in writing and only 8.25% rural undergraduate students understanding and writing skills in graphical representation.

Differential Analysis

Table -3 Difference in understanding and writing the graphical representation with its dimensions on students' Gender

Dimensions	Gender	No	Mean	S D	Df	t value	P value	Result
Reading	Male	51	3.784	1.4045	107	4.641	0.000	S
	Female	58	5.621	2.6146				
Writing	Male	51	6.118	1.0516	107	3.508	0.000	S
	Female	58	7.569	2.9446				
Total	Male	51	9.902	1.735	107	4.491	0.000	S
	Female	58	13.19	5.2598				

S= significant

From the table-3, indicates that there is significant between the male and female rural students in their graphical representation understanding and writing such as reading ($t = 4.641$), writing ($t = 3.508$) and total ($p = 0.000$, $t = 4.491$, $df = 107$). The sub skills such as reading, writing and total p value are 0.000 less than at 0.05 level. Therefore, there exists a significant difference in the male and female rural undergraduate students in graphical representation understanding and writing such as reading and writing in Tiruchirappalli region. Although, male students mean score is lower than that of counterparts, male students were found to have more difficulties in graphical representation understanding and writing than that of their female students.

Findings

To help the rural undergraduate students' understanding and writing in graphical representation for their competitive examination competence to develop, understanding the base of English grammar and linguistic aspects are the most essential. The result of the research reported that the rural undergraduate students faced various difficulties in understanding and

writing the graphical representation. Table 1 revealed some topics to be low marks in graphical representation. The major findings of the study follow as:

1. Most of the rural students have difficulties of understanding and writing the graphical representation as high such as bar chart, pie chart and table.
2. The level of understanding and writing the graphical representation is low among the rural undergraduate students.
3. Gender of the rural undergraduate students has influenced the understanding and writing the graphical representation.

Recommendations

- The teacher must train their students to read more to add their knowledge about English rules and to add their vocabulary that being the most important aspect in surviving them in the competitive world.
- The teacher must focus on students' difficulties in the research finding and apply various methods in teaching which is being the most challenging area. Therefore, teachers' feedback were mostly important after taking exercises to improve students' writing and to reduce students' difficulties.
- The teachers should provide enough challenges reading comprehension passage to transfer meaningful chart or tables and novelty by using innovative and interesting material aids or examples which will stimulate the students' brain for knowledge acquisition and the long term retention in memory.
- The teacher should be trained to create fear free, stress free environment by providing positive reinforcement, using motivational techniques such as story writing, picture description, story completion etc.

Conclusion

Rural undergraduate students' difficulty of understanding and writing the graphical representation is various. The various of difficulties can be categorized into low level, average level and high level. These facts would influence their reading and writing product as long as their understanding about graphical representation. Here, it is suggested for future work provide more

specific description of linguistic aspects in writing to help the teachers for teach the reading and writing materials that promote the importance of linguistic aspects of English language skills.

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25. Paraphrasing as a Strategy to Develop Reading Comprehension at the Tertiary Level of Education

• Nivedita Malini Barua, PhD, Department of English Language Teaching, Gauhati University, nivedita.barua@gauhati.ac.in

Abstract

The three aims of this study are to determine (1) the reading proficiency and the motivation level of a group of tertiary level learners, (2) how far paraphrasing as a strategy can help in developing the reading comprehension of the learners, and (3) whether this strategy also motivates the learners to read more. This study employed a quasi-experimental design. The research population comprised all 18 students in the third semester of the MA in ELT (English Language Teaching) programme of Gauhati University. The data were collected by using (1) two types of tests to measure abilities in literal and inferential comprehension, (2) paraphrasing as technique for reading and (3) questionnaires. The results showed that there was a greater engagement with the text and higher levels of motivation while using the paraphrasing strategy. However, more research needs to be carried out to obtain conclusive evidence that the reading comprehension of students can be developed substantially with the use of the paraphrasing strategy.

Key words: motivation, literal comprehension, inferential comprehension, paraphrasing strategy

Introduction

According to Smagorinsky(2001), written texts are usually the main source of knowledge and therefore the ability to comprehend what students read becomes more important as they progress through their academic life. Reading a text can be for various purposes: to understand the gist of what is written, to glean some specific information from the text, to understand the meaning of some unfamiliar word etc. As Smith(1985) has pointed out, we read textbooks and technical works for specific information and some other books for the overall idea or for reference. There

are again other kinds of texts like dictionaries, directories, encyclopedias, timetables, bibliographies etc. which we read for various other purposes.

However, reading as a skill is neglected both by teachers and students. In Indian classrooms, teachers deliver lectures or explain the content of the paper word for word to the students. At the time of examinations, students memorize from readily available self help books from the market. Students develop the habit of 'rote memorization' in order to write examinations. Critical thinking skills are not employed by the students to read texts. They are unable to 'question' the text because they do not have the relevant questions to ask. As a result, they seldom work on developing their reading ability. According to Paris and Jacob (1984), the ability to critically think about the text, adopt effective reading strategies and also monitor their own reading is what distinguishes skilled readers from the unskilled ones.

Also, being able to read with proper comprehension makes students more independent. A student can be said to be an independent reader if they can read with a purpose, try to find answers to questions, analyse the text and are able to think critically. Therefore, practical comprehension strategies that can be used in the classroom are the need of the hour. According to Smith (1985), reading is an activity in which the reader needs to engage actively in a number of complex intellectual processes.

In India, the usual method of teaching is the teacher explaining the content word for word. There is no interaction or discussion on the content being taught. As such the students take down notes and rote memorize the ready- made notes that are available in the market to prepare for examinations. This arrangement is convenient for both the teacher and the student. The students become dependent on the teacher or the ready- made notes to pass the examinations. There is no effort made to read and understand the text.

For this study, the researcher worked with a group of student participants who were doing their M.A. in English Language and English Language Teaching (ELT) at Gauhati University, India. These students who come to study MA in ELT and who are considered proficient in the language are seen to be struggling with academic texts in English. They are seen to be reluctant to read the course books because they find them difficult.

The researcher teaches a content subject called *Testing and Evaluation* in the department of ELT. She uses the book, '*Testing for Language Teachers*' by Arthur Hughes as the textbook. The teaching method that is planned to teach them the course comprises of intensive reading followed

by classroom discussions, presentations etc. The researcher would also sometimes give them sets of questions that are intended to assess the extent to which the students could follow the text. She realized that the students could find the answers to the questions that required them to decode the text. However, for the more analytical questions, they mostly failed to find the answers. So, the conclusion drawn was that the students could decode the text, but had difficulty in understanding and comprehending the text.

In order to confirm her hypothesis, the researcher carried out an experiment. The student participants were first given a set of questions that required them to decode the answers from the text. They could locate the answers from the text by just matching the words in the questions. Most of them were able to answer the questions. To a questionnaire that was provided to them following the test, they replied that they found the questions very easy to answer as they could locate the answers with the help of similar words in the questions.

The second set of questions was more analytical and required the participants to read the text more critically. In this test, most of them scored significantly less than in the first set of questions. The participants admitted that they found the second set of questions more difficult as the answers were not readily available in the text. This experiment proved that the participants found it difficult to comprehend the text. However, when asked about the reading strategies that an efficient reader employs, they listed the following reading strategies.

- being able to summarize, paraphrase, evaluate, infer meanings, read between the lines, guess meaning of unfamiliar words from context, frame questions in their mind, note down important points, predict, scan and skim, locate key words, understand topic sentences, understand the overall idea without reading for the details and so on.

The exhaustive list above might indicate that the participants are quite proficient in reading. However, the awareness of these sub-skills of reading does not translate into actual reading proficiency. This awareness can be attributed to the fact that the participants are students of English language and English Language Teaching, and therefore they are taught about the different language skills and their underlying abilities. This point also reinforces the gap that exists between knowing about language use and actual language use.

This paper aims to determine whether paraphrasing as a strategy can make the learners comprehend the text better and whether it can also increase the motivation level of the learners to read more. The need for this paper can be understood in the Indian context of the teaching of the

language skills at the primary, secondary and higher levels of education. In the teaching of language skills to students, teaching of reading is the most neglected. Decoding the text is taught at the primary level, but it is assumed mistakenly that a student who can decode a text successfully will also be able to comprehend the text in an adequate manner.

Literature review

Studies on the use of reading strategies for comprehension are quite limited. There has been extensive research done on reading as a skill, but most of the extant work are on the foundational reading skills like vocabulary, fluency, decoding etc.(Boulineau et al, 2004). The importance given to foundational reading skill can be better understood in the light of the theory that successful decoding skills are essential for effective reading (National Reading Panel, 2000). It is assumed that successful comprehension of the text will follow from proficiency in decoding skills. However, it has been discovered that though this assumption holds true for majority of students, there are some problems related to comprehension that are not associated with decoding (Williams, 2005). Research has proved that some students cannot comprehend the text even after successfully decoding it (Caccamise and Snyder, 2005; Duke, Pressley & Hilden, 2004; Underwood & Pearson, 2004).

In his book, *Reading*, Smith (1985) has commented that reading involves active involvement of the reader and is not a passive process. He reiterates again and again that the teaching of reading should be more about making the students aware of the processes of reading than about teaching them how to read. And this can only be done by making them practice reading.

Suwanto (2014) found literature dealing with the use of paraphrasing strategy to be limited. However, *An Open Access International Journal* Vol.4 2014 proves that this strategy is an effective tool for better reading comprehension.

Research questions

1. Can paraphrasing enable learners to read with more comprehension?
2. Does the use of paraphrasing strategy motivate the learners to approach the text more actively?

3. Did the intervention make the participants consider paraphrasing as a useful strategy that could be adopted to read different kinds of texts?

Method

The method that was adopted for this study was the quasi-experimental method. The teacher researcher took the group of 18 participants through the paraphrasing strategy using the book *Academic Writing* by Ann Hogue (Level 4). Before this, the students were given two types of test to determine their reading proficiency. One test assessed their literal understanding of the text whereas the second test determined their comprehension of the same text.

Data for this study came from three sources: two types of reading comprehension tests, a questionnaire on their attitude towards reading as a skill, a questionnaire on their attitude towards paraphrasing as a reading strategy, the paraphrases that they wrote after undergoing the training on the use of the paraphrasing strategy

Participants

A cohort of 18 participants was taken. The participants were all postgraduate students in the department of English Language Teaching of Gauhati University. They were a mixed level group with no adequate training in reading and writing in English. In the Indian education system, students are taught basic decoding skills. However, higher level reading strategies like drawing the inferential meaning from the text, guessing meaning from the context etc. are not taught adequately. Interestingly, as mentioned previously, these students are aware of the different reading strategies, but when it comes to the actual implementation of those strategies they are seen to be lacking.

Setting

The study was conducted during the third semester of the M.A. in English Language and English Language Teaching (M.A. in EL and ELT) course in the department of English Language Teaching (ELT) of Gauhati University. There were 18 students attending the M.A. course. The

teacher researcher carried out her research as part of her daily routine classes in which she makes students read the text and gives them activities to do that are based on what they have read.

How the research was carried out

As discussed in the introduction, the researcher first tried to identify the students who were weak in reading and those who could read with comprehension quite effectively. She gave a set of questions from a text that required students to just decode the answers from the text. Almost all the students could find the answers to most of the questions. The second set of questions required them to analyse and interpret the text. Most of the participants failed to answer 50 percent of the questions.

The scores are given below.

Code	Score in test 1 (out of 12)	Score in test 2 (out of 12)
S1	11	5
S2	10	5
S3	11	5
S4	12	8
S5	11	6
S6	11	5
S7	12	8
S8	10	6
S9	12	8
S10	12	8
S11	10	5
S12	12	8
S13	10	5
S14	10	5
S15	11	9
S16	10	5
S17	11	6

S18	12	7
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Fig. 1: The scores obtained by the participants in Test 1 and Test 2

The students were also asked to rate the difficulty level of the text that they had to read in order to find the answers on a scale of 10.

Code	Difficulty level of text (on a scale of 10)
S1	8
S2	Not submitted
S3	Not submitted
S4	6
S5	7
S6	8
S7	5
S8	8
S9	5
S10	Not submitted
S11	8
S12	6
S13	7
S14	8
S15	6
S16	8
S17	7
S18	7

Fig. 2: The ratings given by the participants on the difficulty level of the reading text

On the basis of the combined scores in the two tests, the rating of difficulty level of text by the students and going by their views on their own, they were divided into two groups : the

participants who scored less than 6 were put in the LS (Less Score) group and those who scored 6 or more than 6 were grouped in HS (Higher Score) group.

In addition to the above tests, questionnaires were provided to the students to find out about their attitude towards reading as a skill.

There were mixed responses regarding their attitude towards reading as a skill.

- i. 80 percent of them think that they are average readers. Only one participant was confident that she was a proficient reader who could read any kind of text.
- ii. 80 percent said that they found texts that had too many unfamiliar words and long and complicated sentences difficult to comprehend. A few mentioned that lack of interest and lack of patience made them bad readers.
- iii. Almost all of them said that a good reader should be able to read any kind of text critically and with comprehension.
- iv. 80 percent of them like exercises that make them look for specific information, make notes while 10 percent like finding answers to questions, looking for the main idea and paraphrasing/ summarizing, while the last 10 percent like questions that require them to decode the text without thinking critically.

It was evident that most of the participants found questions that were inferential and questions that required them to think critically to be more difficult and did not enjoy doing them.

This paper aims to determine whether the use of paraphrasing as a strategy can assist and motivate weak readers to read texts with adequate comprehension.

What is the Paraphrasing Strategy?

A paraphrase is someone else's ideas rewritten in our own words. However, a paraphrase is not condensed and should be of the same length as the original text. The paraphraser's opinions about the topic, the content of the original text or the author's way of presenting it should not be reflected in the paraphrase. A paraphrase should not in any way copy the original text but should be the paraphraser's own writing. The only job of a paraphrase is to accurately and completely represent the relevant idea presented in the text you are paraphrasing.

The job of paraphrasing as a reading strategy is to indicate how well a reader has understood the text, including the complex points of information. It also facilitates the reader to establish connections between its main points and helps in ensuring that the reader has understood the text correctly.

For this study, the type of paraphrasing strategy that was taught was a step ahead of the RAP strategy. The RAP paraphrasing strategy (Schumaker, Denton and Deshler, 1984) is a three-step strategy: *Read* a paragraph, *Ask* myself “What was the main idea and two details?” and *Put* it into my own words. The RAP strategy is grounded in information processing theory using chunking and paraphrasing procedures to help improve memory of main ideas and details in text. The strategy requires students to break reading passages into smaller units or “chunks” (i.e., paragraphs) and remember information from these smaller units of text (Schumacher et al., 1984). Breaking material into smaller units can facilitate memory and recall (Swanson, 1996). Because the strategy requires students to paraphrase material they read in their own words, students are actively involved in reading rather than passively approaching text (Schumaker et al. 1984). Research shows that students who engage in strategies requiring a restatement of text or paraphrasing are more likely to recall text and understand main ideas (Best et al., 2005; Plake et al., 1981).

However, for the purpose of this paper, a more detailed paraphrase strategy was taught to the students as the students were required to read the text in a little more detail than the RAP strategy. Students were taught how to paraphrase using the *Academic Reading* by Ann Hogue. Steps that were taken to teach them ‘how’ to read with the help of the paraphrasing strategy are mentioned below.

Step One: The participants were made to do an activity from *Academic Writing* by Ann Hogue (Level 4) on paraphrasing. The different steps in paraphrasing are

- read the text several times.
- change the vocabulary and the order of words in each sentence of the paragraph. Reread the text to determine whether the overall meaning is intact.
- identify the main points, change the vocabulary and the sentence structure and paraphrase the text. In the process, they were
 - reading repeatedly.
 - selecting the main points.
 - changing the vocabulary and the sentence structure.

Step Two: The previous step was followed by a different activity in which the participants had to read the text and complete some incomplete passages. This involved reading and writing.

However, it was noticed that some students had copied from the text directly. The researcher had to ask them to read, understand and then rewrite in their own words.

Step Three: After making them practise the paraphrasing strategy, the student participants were asked to design incomplete paraphrases for their friends from any of the course materials and then exchange their paraphrases with them. This strategy, in addition to helping them read the passage for comprehension and also for information, reinforced the strategies they have been using but were not aware of. During the process they were engaged in reading, discussing, collaborating and also building their confidence in reading. This exercise made the students become more aware of the strategies used.

Students were also asked to design similar activities for their partners and then check if they had got them correct. This strategy helped them to read the passage for comprehension and also for information.

Lastly, the opinions of the participants were sought where they were asked if they would use the paraphrasing strategy in the future to read other texts.

Findings of the Study

It was observed that the participants attempted to read the text in more detail and understand it in order to rewrite it in their own words when using the paraphrasing strategy.

1. The students were asked to paraphrase the target text using the format provided to them. It was seen that though the paraphrases created by them had a number of problems in different areas like grammar, vocabulary etc. there was sufficient evidence that they had made an attempt to understand the content in more detail when they used the paraphrasing strategy.

Their responses to the questionnaire show that the paraphrasing activity helped in motivating the students to read the text with comprehension and in detail. Also, the students' approach to the text becomes more active.

2. The difference between the paraphrases of the LS group and the HS group of participants was evident. The paraphrases of the LS group were seen to be more similar to the original text, whereas a tendency to follow the steps taught in the paraphrasing class was observed in the HS group.

The LS participants were also the less motivated ones and were seen to have not understood the rationale behind the paraphrasing exercise. They copied the answers

from the original paraphrases provided by their friends. This also indicates lack of critical thinking.

3. Another very interesting finding was that both the LS and the HS groups shared with the researcher that they had very little interest in applying the paraphrasing strategy to read other kinds of texts in future. They found it helpful, but too time consuming.

Conclusion

Though it was found that the use of paraphrasing as a tool can make the students more involved in the reading process and also motivate them to read more, it cannot be conclusively claimed that the students would show similar motivation level to use the paraphrasing strategy when confronted with other academic texts without the interference of the teacher.

The teacher with adequate instruction and competence should be able to motivate the students to engage with the reading material in the class, and may also give them some assignment to do at home. However, how far the student wishes to apply the strategy to deal with different academic texts is not clear from this study.

The paraphrase strategy needs careful planning as weaker students who struggled in answering inferential and critical questions found the strategy to be not very helpful, and they were seen to have copied the answers from the original text. As opposed to that, the more motivated students and capable readers enjoyed the activity and found it challenging and quite helpful in understanding the text.

The acceptance of the paraphrasing strategy can also be attributed to the fact that students realised that they could use it to make their own notes from the textbooks instead of relying on ready-made notes, as the paraphrasing strategy is also a useful strategy in writing.

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26. Impact of Adolescent Girls' Education Programme: A Study on "Kishori Vikas Centres"

• Dr. K. Balaraju, Associate Professor, Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya

Abstract

This paper highlights the role of NGOs in ensuring quality education for adolescent girls and the management aspects of NGOs' education programmes. It is a case study of "Kishori Vikas Yojana" an adolescent girls education programme initiated by "Seva Bharathi" a national level NGO. In the present study 20 Kishori Vikas Centres selected and 300 adolescent girls were interviewed. The study revealed that 45 percent of Kishori Vikas Centres started during the 2015 and 2016 academic year and a majority number (70 percent) of KVCs functioning at Nirvahak's (centre coordinator) home and private school premises. 70 percent of KVCs located in below 500 meters of distance from the adolescent girls' residence. More than half of them (60 percent) Kishori Vikas Centres maintains attendance of the students on daily basis, 40 percent of KVCs having core team to monitor KVC. A majority number of adolescent girls benefited from the adolescent girls education programme "Kishori Vikas Yojana" offered by Seva Bharathi in both curricular and co-curricular activities and they have improved subject knowledge, actively participated in sports and games and learnt various new vocational education courses. Adolescent girls, who attended KVC programme also educated their family members on health and hygiene, most of the parents of adolescent girls are highly satisfied with their children performance.

Key Words: NGO, Adolescent Girl, KshoriVikas, Nirvahak

Introduction

In India literacy rate has grown up to 74.04 percent. The government and non-government organizations, even corporate and private limited companies are working in their own ways and trying to reach the unreached in the field of primary education. After the government sector, NGOs have been playing a key role in providing education to the needy and specially focusing on the problem of school dropouts, primary education, health education in government schools, and girl child education. Some of the parents from poor economic backgrounds are taking loans and even selling their property to pay huge amounts of money for providing quality education to their

children by joining them in private and corporate schools. With all these efforts of various responsible role players in the society, the enrollment of children including girl child in schools is increased.

The special initiations and awareness generation programmes of government and other stakeholders are contributing to increase the number of the girl child to continue their education. But still, there is a gender imbalance in the achieved literacy rate, according to the 2011 provisional census the male literacy rate is 82.14 percent and the female literacy rate is 65.46 percent. It clearly shows that there is a need to improve the female literacy rate to achieve the goal of social equality.

The Importance of Educating Adolescent Girls

The transition phase of growth and development between childhood and adulthood is considered as Adolescence, according to the world health organisation adolescent is any person between ages 10 and 19 years. During this age emotional separation from parents is arise, adolescents generally try to attain identity, friends and peer group influence child at this age, a child tries to establish his or her interests and personal value system. This is an essential period of physical and psychological development, adolescents go through physical, psychological, behavioural, hormonal and social developmental changes, if children are not guided properly during adolescence age it will affect their future career and personal habits. The personal habits and behaviour of adolescents and early adulthood will have a lifelong impact. Proper guidance and education are very much needed during adolescence and early adulthood.

NGOs and Adolescent Girls Education

Investments in adolescent girls' education will definitely yield the highest returns. The future of the future generations will directly be linked to the current status of girls and women. Early marriages and lack of parental support are affecting girl child education, in some cases lack of toilets in schools premises also stopping girls to attend school. Despite having several acts to protect girls from various types of violence still a considerable number of girls is working for family income. By realizing all these facts a good number of NGOs and other charity

organisations are working in collaboration with government, community-based organization and investing their resources in girl child education.

“Kishori Vikas Yojana” (KVY)

“Kishori Vikas Yojana” is an initiative of Seva Bharathi, Hyderabad. Seva Bharathi is a nongovernmental organization established in 1990. Since its inception, Seva Bharathi is working for the empowerment of adolescent girls and women welfare. Kishori Vikas Yojana started in 2005 with a special focus on adolescent girls’ health, education and vocational training. Seva Bharathi Extended this adolescent girls education programme to all over the state of Telangana, presently this KVY is implementing through 123 Kishori Vikas Centres, with nearly 2570 adolescent girls regularly attending these centres in various slum areas in Hyderabad city and rural blocks in Telangana state.

Literature Review

Educated Women cannot be poor, if we provide one extra year of schooling beyond the average for girls it can boost their earnings by ten to twenty per cent. (Psacharopoulos, G.; Patrinos, H. A. 2002) well educated women can more likely to have their children immunized at each defined cycle, against childhood diseases, which can contribute to reducing the burden of disease. (Gage, A.;Sommerfelt, E.; Piani, A. 1997)

Voluntary organizations are addressing the issue of engaging adolescent girls in livelihood activities, which can predict them to access primary education. Most NGOs coming up with their innovative education programmes and providing scholarships to reduce adolescent girls’ school dropouts Nanda P, Das P, Singh A &Negi R (2013).

Most empowerment programs for adolescent girls resulted in beneficial effects for them in the areas of health and wellbeing. (Nicole A. Haberland, Katharine, Mc.Carthy and Brady,M.S(2018) Extracurricular sports activities are essential and positively associated with wellbeing and health. (Oberle E, Ji XR, Magee C, Guhn M, Schonert-Reichl KA, Gadermann AM (2019). Social media has its positive impact on the education and behavioural aspects of adolescents. (Mary Indira Rani and Florence Daisy 2018)

Developing countries are facing major challenges that make it difficult for adolescent girls to access basic education. These include: the cost of education, poor school environments, the weak

position of women in society and social exclusion. The most important elements of quality education for adolescent girls are the distance of the school from their residence, proper facilities at school for girls, safe environment, if these elements are not met it is very difficult to parents to send their girl child to school. Social exclusion is another barrier to adolescent girls' to access primary education. Based on religion, caste and disability certain groups of girls are excluding from schools.

(DFID 2005) Levine et al. (2008) recommended that governments, technical agencies, donors and civil society should invest and act for adolescent girls' education. Government, NGOs and other many intuitions in the society contributing to adolescent education, studies show that education raises women's standard of living, social and health terms.

Need of the Study

Educating adolescent girls is now a most important agenda of developing countries. Apart from the efforts from the government, the non-government sector also working for the empowerment of adolescent girls by providing quality education. While providing quality education to adolescents, NGOs need to identify special focus areas which can contribute to filling the gap in achieving the target of quality education. Effective management practices are essential to execute planned programme outcomes, NGOs are practising their own management methods, most of the times these management practices vary, depending on the goals of the project and needs of the beneficiaries. The present study is important to understand the management methods adopted by select NGOs for the implementation of adolescent girls' education programme and their impact on target beneficiaries.

Objectives of the study

To understand the management aspects of KVC centre's of Seva Bharathi

To analyze the impact of KVC centres on adolescent girls empowerment

Methodology

Descriptive and analytic research design is adopted for the study. Towards the end of the objectives of the study mentioned above, 20 Kishori Vikas Centres was selected on the basis of a stratified random sampling principle. By using this method 300 adolescent girls were selected

from KVCs functioning in Hyderabad, Ranga Reddy and Medchal Malkajgiri districts and interviewed respondents with the help of a structured interview schedule.

Table: 1 Management of “Kishori Vikas Centres”

S.No	KVC started in the Year	Frequency	Percentage
1	Before 2010	3	15
2	2011 to 2014	3	15
3	2015 to 2016	9	45
4	2016 to 2017	5	25
Total		20	100
S.No	KVC Functioning from (Place)	Frequency	Percentage
1	Govt. School Premises	3	15
2	Community Hall	3	15
3	Private School	6	30
4	Nirvahaks' Home	8	40
Total		20	100
S.No	KVC Distance from Adolescent Girls' Home	Frequency	Percentage
1	Below 500 Meters	15	75
2	500 Meters to 1 Km	2	10
3	1 Km to 2 Km	2	10
4	Above 2 Km	1	5
Total		20	100
S.No	Regularity of Attendance at KVC	Frequency	Percentage
1	Daily Attendance	12	60
2	Alternate Day Attendance	5	25
3	Once in a Week	3	15
Total		20	100
S.No	KVC Timings (Time Table)	Frequency	Percentage
1	4:00 PM to 6:00 PM	4	20
2	5:00 PM to 7:00 PM	12	60

3	6:00 PM to 8:00 PM	4	20
Total		20	100
S.No	KVC has Core Team	Frequency	Percentage
1	Yes	8	40
2	No	12	60
Total		20	100

(Source: Compiled by primary data research)

Management of KVCs in Telangana

The highest number (45 percent) of Kishori Vikas Centres started during the 2015 and 2016 academic year and a majority number (70 percent) of KVCs functioning at Nirvahak's (centre coordinator) home or private school premises. 30 percent of Kishori Vikas Centres functions at community halls and government school buildings. 70 percent of KVCs located below 500 meters of distance from the adolescent girls' residence. More than half of them (60 percent) Kishori Vikas Centres maintains attendance of the students on daily basis and 25 percent of KVCs recording students' attendance on alternate days. All most all KVCs are maintaining a specific time table, starting from 4 pm to 8 pm. The majority number (60 percent) of KVCs following 5 pm to 7 pm as their working hours followed by 20 percent KVCs working from 4 pm to 6 pm and 20 percent Kishori Vikas Centres working from 6 pm to 8 pm. To monitor and guiding the KVCs' programmes nearly 40 percent of KVCs having a core team with local elder people, who are retired from their government school teacher service , working in other professions like I.T industry.

Table: 2:KVC Impact on Academic Performance of Adolescent Girls

S.No	Academic Performance	Frequency	Percentage
1	Improved in Mathematics Subject	84	28
2	Improved in Science Subject	63	21
3	Improved in English Language	69	23

4	Improved in Both Mathematics and Science	36	12
5	Improved in Reading and Writing Skills	24	8
6	Trained in vocational education	12	4
7	Learnt Stitching & Embroidery	12	4
Total		300	100

(Source: Compiled by primary data research)

A majority number (61 percent) of adolescent girls opined that they could improve subject knowledge in mathematics and science by attending Kishori Vikas Centre. 23 percent of the girl's students of KVCs improved their communication skills in the English language. 8 percent of adolescent girls perceived that they could improve reading and writing skills and 4 percent respondents opined that they have trained in vocational education at Kishori Vikas Centre and the remaining 4 percent of adolescent girls learnt stitching and embroidery work.

Table: 3: KVC Impact on Personality Development and Co-curricular Activities of Adolescent Girls

S.No	Impact on Personality Development and Co-curricular Activities	Frequency	Percentage
1	Learnt Singing and Dance	141	47
2	Actively Participating in Traditional Festivals	45	15
3	Caring about senior citizens at home	63	21
4	Learnt Drawing and painting	12	4
5	Taking care about personal health care	9	3
6	More disciplined in day to day activities than earlier	15	5
7	Practicing Yoga and Meditation	15	5
Total		300	100

(Source: Compiled by primary data research)

It is revealed that 47 percent of adolescent girls learnt singing and dance. A good number (21 percent) of the KVC students taking care of senior citizens. Some of the adolescent girls (15 percent) are actively participated in traditional festivals and helping family members in organizing the festivals at home. 5 percent of the adolescent girls opined that they could complete their daily tasks in a more disciplined manner than earlier and 5 percent of the adolescent girls practising yoga at home.

Table: 4: Adolescent Girls' Family Members Response and KVC Impact on Family Members

S.No	Family Members Response and KVC Impact on Family Members	Frequency	Percentage
1	Family members Encouraging to attend KVC	54	18
2	Parents Giving Feedback about their children performance at home in school subjects and co-curricular activities	48	16
3	Adolescent girls educating their family members on health and Hygiene	75	25
4	Family Members started practicing Yoga at Home	42	14
6	Family members of the Adolescent girls felt that vocational education training provided at KVC is very useful to their children	15	5
7	Parents who can't afford the extra money for tuitions are very happy with the services of KVC	66	22
Total		300	100

(Source: Compiled by primary data research)

One fourth (25 percent) of the adolescent girls educated their parents on health and hygiene. Interestingly 14 percent of the adolescent girls' family members are practicing yoga to maintain a healthy lifestyle. 22 percent of the parents from a poor economic background, who cannot afford

money for private tuitions, are very happy with the services offered to their girl child at Kishori Vikas Centre. 18 percent families encouraging adolescent girls to attend KVC classes regularly and 16 percent of adolescent girls parents given feedback about their children performance at home in school subjects and co-curricular activities lastly 5 percent of the parents opined that vocational education provided at KVCs is very useful to their children.

Conclusion

Many studies, international agencies reports, including millennium development goals discussed the importance of girl child education, According to UNESCO, if all females in developing countries completed primary education, child mortality would drop by a sixth, saving nearly one million lives annually and maternal deaths. Every educated girl will contribute to positive change in society and make education a high priority for the next generations. The poor economic background of the parent is unable to send their girl child to access quality education; at the same time, government schools are not in a position to address the problem of quality education with their limited resources and poor school environment. NGO sector is effectively attempting to address the needs of adolescent girls at the grass-root level. School distance from home is one of the important aspects for adolescent girls to continue their education. In the present study, this issue is addressed by Seva Bharathi, seventy-five percent of the Kishori Vikas Centres functioning at below 500 meters of distance from the adolescent girls' residence.

The administrative cost of the education programme is also a major concern for any NGO, to deal with this concern Seva Bharathi could pool the voluntary resources from the local community, engaged undergraduate students and paid them a minimum honorarium for teaching subject modules and courses in Kishori Vikas Centre, similarly, the highest number of KVCs established at Nirvahak's (coordinator) residence and private school premises, such efforts reduced the maintenance cost of the KVC. To maintain discipline among the adolescent girls Kishori Vikas Centres recorded students' attendance and encouraging them to attend regularly.

It is observed that some of the KVCs mentoring by core committee members these core committees are formed with retired government school teachers, private school teachers and other interested professionals like advocates, IT employees, this type of arrangement is assuring the quality aspects of services offered at KVCs. Adolescent girls who are attended KVC improved

existing subject knowledge, actively participating in extracurricular activities and some of them are educating their family members on health and hygiene. It can be concluded that desired social change can be achieved with committed NGO's efforts, voluntary approaches and better management practices.

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27. How do Adolescents Conceptualize Happiness? A Qualitative Inquiry

- **Sandeep Kaur** , PhD Scholar, School of Education, Guru Gobind Singh Indraprastha University, New Delhi, sandeepaneja27@gmail.com
- **Sangeeta Chauhan**, Professor & Former Dean, School of Education, Guru Gobind Singh Indraprastha University, New Delhi

Abstract

This study aims to conceptualize the construct of happiness from the adolescent's perspective and investigate differences in adolescent boys' and girls' perceptions of happiness. Furthermore, the study also intends to inform the policymakers to shape educational policies to adolescents' happiness. The study used a qualitative research design. Adolescents were asked to answer the questions on 'happiness,' and the Content Analysis was done using NVivo 12 to analyze open-ended responses to the questions "What does the word happiness mean to you?" and "What makes you happy"? The findings revealed that happiness is the concoction of five conceptions-namely, Spending time, Helping people, Sharing happiness, True friends &, Satisfying life. These conceptions indicated adolescents' proclivity to relate happiness to concrete needs and abstract feelings. The analysis of significant differences by sex shows that girls referred to happiness more to spending time in leisure activities and social relationships (Friends and Family). For boys, Leisure time activities, Friends, and satisfying life take precedence over family. The study offers a new way of looking at the adolescent's happiness through integrated lenses, previously overshadowed by a eudaimonic ideology. From the resulting dimensions, sharing happiness emerges as a new dimension previously missing from adolescents' conception of happiness.

Keywords: happiness, conceptualization, adolescents, hedonism, eudaimonia, qualitative analysis

1. Introduction

"Happiness is the meaning and the purpose of life, the whole aim, and end of human existence" – Aristotle

As laid down by Aristotle in the above quotation, happiness is one of the most universally desired goals (Larsen & Eid, 2008). The conceptual underpinnings of happiness have remained debatable for ages. Despite the research efforts in diverse fields, including philosophy, psychology, and theology, the uncertainty regarding the meaning of happiness still looms large (O'Higgins, Sixsmith, and Gabhainn, 2010). So far, researchers have interpreted the concept of happiness

through three approaches, namely hedonic (Kahneman, 1999), eudaimonic(Aristotle and Thomson, 1976; Huta, 2016; Waterman, 1993), and integrated approach(Seligman, 2016; Tomer, 2011). In the debate about these three approaches to happiness, researchers favoring the hedonic perspective stressed the acquisition of pleasure and avoiding pain as a criterion to attain happiness(Ryan & Deci, 2001). In contrast, the eudaimonic perspective supporters stressed 'developing inner strengths, virtues' to achieve happiness(Vella-Brodrick et al., 2009). The third school of thought believes that hedonia and eudaimonia are complementary rather than opposite or disjunctive (Huta, 2015).

It is the concept and the terminology of happiness, which is beset by the problem of attaining its true identity. Extant literature frequently conceptualized happiness in terms of subjective wellbeing (Diener, 1984; Diener et al., 1999; Diener & Diener, 1996), life satisfaction(Antaramian et al., 2008; Diener, 1994; Pavot & Diener, 1993), or quality of life (D. C. Shin & Johnson, 1978; Veenhoven, 2005), thus leading to a lack of solidarity among happiness research(Veenhoven, 1994). The concept of happiness is so mysterious that some researchers associated the nature of happiness with chamaeleon(Carter, 2016).

As brought out in a recent systematic review of the literature on happiness by Jain, Sharma, and Mahendru (2019), there is much inconsistency in the current literature regarding the sense of happiness. For resolving this inconsistency, positive psychology favored the advancement of adult-led, quantitative research on happiness, but studies related to the conceptualization of happiness remain deficient (Alarcón, 2006). In a critique of the quantitative measurement of happiness, Cheng and Furnham (2003) argue that since happiness is a subjective issue, the meaning of happiness remains different across people, which can be assessed through qualitative rather than quantitative measures.

The existing research on adolescents mainly focused on the determinants of happiness rather than understanding the term happiness for adolescents (López-Pérez, Sánchez, and Gummerum, 2016; Sutton, 2018). Moreover, the prevailing conception and theories of adolescent happiness are grounded on adults' perspectives (Sixsmith et al., 2007), hardly acknowledging differences in their viewpoints (Ruck et al., 2016).

Consequently, considering physiological, psychological, and social changes influencing happiness during the adolescence phase (Erikson, 1968), there is a dire need to study the meaning of happiness for adolescents (O'Higgins, Sixsmith and Gabhainn, 2010). Adolescents' happiness can

be best studied in a country with a high and rapidly growing population of adolescents. Presently India has the largest share of adolescents globally, with 243 million adolescents (Central Statistics Office, Ministry of Statistics and Programme Implementation, 2017; MoHFW, 2014) forming an integral part of the population. Furthermore, India being a country with income disparity (Lawson et al., 2019; Ministry of Finance, 2020), Indian adolescents are specifically focussed as the findings in the Indian context can be generalized. Therefore, the present study's primary purpose was to address the gaps in happiness research for Indian adolescents, employing a qualitative approach. The study also probes whether gender determines the conceptualization of happiness. The study contributes to the existing body of knowledge in the field of happiness research. Knowledge of the conceptualization of adolescents' happiness will help the stakeholders develop interventions to meet adolescents' psychological and social needs, thereby enhancing their happiness.

2. Theoretical Background: From historical to contemporary perspectives

Deliberation about happiness began hundreds of years ago. Notably, the ancient Greeks were interested in happiness (Nawijn & Veenhoven, 2013). Socrates, a Greek Philosopher from the 5th Century B.C., has a unique place in the history of happiness. He was the first to argue that happiness is obtainable through human effort and that only wisdom and virtue are needed to secure happiness (White, 1996). Another Greek philosopher from the fourth century B.C., Aristippus, taught that life's goal is to achieve the maximum amount of pleasure and that happiness is the sum of all the hedonic moments. (Ryan & Deci, 2001). Aristotle, the fourth century B.C. Greek notoriety and proposer of the concept of Eudaimonia, who (alongside Plato) is known as the "father of Western philosophy, stated that happiness consists of living virtuously in accord with human reason (McMahon, 2004) and regarded pleasure as a crucial part of a virtuous character (Russell, 2005). Epicurus, a third-century B.C. Greek philosopher agrees with Aristotle that happiness is an end-in-itself and the highest good of human living. Still, at the same time, he contended that virtue and pleasure are interdependent (Kesebir & Diener, 2008).

Nonetheless, due to some unusual happening in the 18th century, people's outlook on happiness shifted. The widespread utilitarianism promoted a new understanding of happiness "as the sum of pleasurable sensations" (McMahon, 2017). The eastern concept of happiness is also basically eudaimonistic (Joshnloo, 2013), and hedonism as a way of pursuing happiness is not similarly preferred (Y. C. Lee et al., 2013).

With society's transformation, seeking pleasure becomes an absolute and viable way to define happiness (Rosari Gabriele, 2008). In psychological terms, pleasure is closely associated with happiness (Kringelbach, Morten L; Berridge, 2010). Adolescents (Rosari Gabriele, 2008) and young adults (Peterson et al., 2005) also considered a pleasure to be progressively significant in defining happiness. The lack of pleasure is associated with many mental illnesses, including depression (Watson et al., 2020). Nonetheless, “hedonic happiness also gratifies all human needs, including physiological and physical needs, while eudaimonic happiness is equated with the gratification of particular psychological needs, although the scope of hedonic happiness is broader” (Veenhoven, 2019). Even then, hedonic happiness is unsustainable in the absence of eudaimonic happiness (Braun & Arjoon, 2015). Contemporary philosophers like Nagraj and His Holiness, the Dalai Lama, believe that happiness is a state of being in harmony within and with the world outside, and one can get happiness through their senses, relationships, and learning (Agrahar Nagraj, 2015).

Presenting a more integrated view, Schueller and Seligman (2010) echoed that happiness is related to hedonic and eudaimonic orientations and somewhat more to a eudaimonic orientation, and in practice, both these approaches work together (Kashdan et al., 2008).

Previous studies also pointed out the cultural variation in the concept of happiness (Uchida & Ogihara, 2012). Schimmack, Oishi and Diener (2002) found that positivity and negativity are contradictory within European-American cultures, whereas they are seen as more complementary in Asian cultures. In a qualitative study conducted by Lu and Gilmour (2004), it was figured out that Asian people conceptualized happiness as socially-construed instead of individually-construed happiness for Euro-American individuals. In another study conducted by Lu, Gilmour and Kao (2001), it was recognized that cultural values are the predictor of student happiness, so although the meaning of happiness varies across individuals, nonetheless, the crux remains the same for a given culture (Kapoor, Rahman, and Kaur, 2018).

The conceptualization of happiness is also determined by age and gender (López-Pérez et al., 2016). In comparison with children's conceptions of happiness, adolescents are more adept at abstract thinking (Gelman, 1969). In contrast, reasoning in children (9-11 years) is still considered limited to concrete examples rather than abstract (López-Pérez et al., 2016). Concerning gender, happiness's conceptualization has received mixed results so far (López-Pérez et al., 2016). Giacomoni, Souza and Hutz, (2014) found that the girls conceptualized happiness as positive

feelings, while the boys referred more to recreation. No significant differences in gender were found in adults' conception of happiness by Lu and Gilmour (2004). Thus, we can say that happiness is such a concept whose boundaries are vaguely defined as a result of which its meaning varies somewhat across individuals, languages, cultures, and historical periods (Delle Fave and Bassi, 2009; Wierzbicka, 2004).

So, during its evolution, the meaning of happiness flipped between "leading a virtuous life" as conferred by Socrates, Plato, and Aristotle and "leading a life of satisfaction"(Nawijn& Veenhoven, 2013).

3. Method

3.1 Research Design

The study employed a qualitative research design. "Qualitative research is a form of systematic empirical inquiry into meaning." (Shank, 2002). In the present study, the meaning of happiness is explored through structured interviews of adolescents.

3.2 Participants

Three hundred adolescent students (147 boys, 153 girls) were selected through a purposive sampling technique. Participants were between 13 to 18 years. All respondents were from Ludhiana district of Punjab (India). Before the data collection, the study's objective was made clear to the participants.

3.3 Data Collection and Analysis

A qualitative approach is adopted to represent the exploratory nature of the research. Data reported here mainly responds to open-ended questions, "What does the word 'Happiness' mean to you?" and "What makes you happy?" No word limit and time limit were set, and the saturation principle was adopted; that is, the researcher terminated an interview when the respondent stopped providing new information (Guest et al., 2006). The gathered data was analyzed with a qualitative data analysis software, NVivo 12, and possible themes of happiness were extracted.

4. Results & Discussion

In answer to the questions- "What does the word happiness mean to you?" and "What makes you happy"? Adolescents define happiness in terms of concrete needs and abstract feelings. Adolescents were expected to define happiness in abstract terms(Gelman, 1969), but concrete terms were also obtained. From the findings, happiness from the perspective of Indian adolescents can be conceptualized as “ a state of spending time doing enjoyable activities, sharing happy

moments with loved ones, helping needy people, possessing true friends and thus, living a satisfying life.”



Figure 2 exhibits different dimensions of happiness which allow unveiling five thematic categories: spending time, sharing happiness, helping people, friends, and satisfying life.

FIGURE 2: Treemap showing dimensions of happiness (Source: Nvivo coding of adolescents' qualitative interviews by the authors)

The respondents stated their preference in spending time engaging in leisure time activities of their choice such as relaxing and listening to music, playing games on computers and mobiles, and sports activities, which is in line with the existing studies. (Freire *et al.*, 2013; Giacomoni, Souza and Hutz, 2014). From the categories extracted, it is possible to observe a tendency among adolescents to relate the term "happiness" to leisure time, which shows that adolescents use leisure as an opportunity to cope with stress (Trenberth *et al.*, 1999) caused by physical and emotional changes. Thus, participation in leisure activities enhances their happiness (Baldwin and Tinsley, 1988; Dowall *et al.*, 1988; Lloyd and Auld, 2002; Shin and You, 2013; Wankel and Berger, 1990) as it is the primary source of pleasure (Stebbins, 2001). Moreover, doing activities of their choice allows them to express their likings and give them the chance to establish a unique self-identity (Exenberger *et al.*, 2019) and fulfill the need for autonomy (Ryan & Deci, 2000). Leisure satisfaction had been reported as a single predictor of happiness among Russian adolescents (Balatsky & Diener, 1993). Significant differences are found between genders in this category, with boys citing items related to outdoor activities while girls are citing indoor activities (Chaplin, 2009; Giacomoni *et al.*, 2014).

The respondents also expressed their fondness for true friends with whom they can spend their quality time, which is the most important predictor of happiness (Saphire-Bernstein, Shimon; Taylor, 2013). Friends are considered necessary by adolescents as it guarantees an environment where they can feel safe while engaging in their preferred behavior (Holder & Coleman, 2015). They perceive that their basic psychological needs, like the feeling of self-worth and emotional security, are met. (Berndt, 2004; Bukowski *et al.*, 2008). The links between 'happiness' and friends also seemed to reside in activities that give intrinsic pleasure. Such strong cohesiveness makes it possible for one group member to create happiness for another (U. Kim, 1995).

Spending time with the family was also conceived by adolescents for giving happiness. This result echoes the findings reported by previous studies (Gray *et al.*, 2013; Hamka, Yuniarti and Kim, 2015; Huebner, 1991; Mahon and Yarcheski, 2002 and Primasari and Yuniarti, 2012). Adolescents derive social support from the family in advice, motivation, comfort, and guidance, enhancing their happiness (Mahon & Yarcheski, 2002).

Again, there were found significant gender differences about family as being a category for defining happiness. It was the most mentioned category after friends by the girls (Fave et al., 2016), while boys mentioned satisfying life to be more important than family for making them happy. Lee *et al.* (2000) found Parents to be the most influential figure in adolescents' happiness. Thus, the participants conceptualized happiness in terms of their close relationships, as they mentioned Friends, Parents, Mother, Father, Brother, and Sister. They have not stated anything about their Grandmother, Grandfather, and other extended family members to conceptualize happiness. This view depicts India's nuclear family culture, but defining happiness in terms of friends and family members represents that adolescents' happiness is socially constructed (Lu & Gilmour, 2004).

However, the participants of the present study tend to give more importance to their relationships with school peers rather than family (Demir and Weitekamp, 2007; Fuligni and Eccles, 1993; Goswami, 2012; Greenberg, Siegel and Leitch, 1983; Thoilliez, 2011), which is in contrast to the study by (Hamka et al., 2015). The growing importance of friends over family as children move toward adolescence is a notable trend (Banerjee & Dittmar, 2008). So, extensive research has also vouched for the influence of cultural contexts on adolescents' happiness (Hamka, Yuniarti and Kim, 2015; Kim *et al.*, 2007; Lu, Gilmosur and Kao, 2001; Uchida, Norasakkunkit and Kitayama, 2004). Despite this, the present study's result highlights the importance of connectedness for adolescents' happiness.

The respondents maintain that helping the poor, homeless, and older people make them feel happy. This result is coherent with previous findings (Feingold, 1983; Krueger, Hicks and McGue, 2001; Lucas, 2001; Rigby and Slee, 1993). Being helpful or showing altruistic behavior is a distinct feature of a collectivistic society (Datu & Valdez, 2012), which increases through the teenage years (Fuligni, 2019). According to Self-Determination Theory (SDT; Deci & Ryan, 1980), helping others is a means to fulfill adolescents' need for autonomy, relatedness, and competence (Martela and Ryan, 2016; Ryan, Huta and Deci, 2008; Weinstein and Ryan, 2010).

Further, the research explores an additional dimension of happiness. Respondents mentioned happiness as 'sharing happiness' with their loved ones.' Charlotte Brontë, an English novelist, and poet observe, "happiness quite unshared can scarcely be called happiness; it has no taste." "Happiest are the people who give the most happiness to others" (Bandela, 2008). In the

words of His Holiness The Dalai Lama, “The more we care for the happiness of others, the greater our sense of wellbeing becomes.”

Finally, the respondents believe that a satisfying life is a happy life, which is viewed as the satisfaction of needs, sense of achievement, appreciation, praise, enjoyment, receiving gifts, and getting the things of one’s choice. The conception of happiness as satisfaction showed consistency with the previous findings (Lu and Gilmour, 2004; Tkach and Lyubomirsky, 2006; Primasari and Yuniarti, 2012). According to the Telic theory, the satisfaction of wants and achieving life goals increases individuals' happiness (Emmons, 1986). Some participants also considered a happy life to be a life free from worries, stress, and other negative emotions, which obstruct happiness (Schiffrin & Nelson, 2010).

Thus, adolescents are very much clear about their preferences for attaining happiness, positively impacting their future wellbeing. The obtained conceptions of happiness for adolescents converged towards relationships. The adolescents want to spend their time in leisure activities that include playing games with their friends, going on an outing with family and friends, and spending a great deal of time with their loved ones. Similarly, the conception urging for a satisfied and stress-free life also points out that if their family, friends, and others fulfill all their wishes, they become satisfied. Likewise, conception sharing happiness also points out that they want to share their happy moments and positive experiences with their loved ones. Having real friends indicates their urge to have true relations with friends, and the last one is helping people also show their instinct for relations.

So, it is evident that adolescents want to drive their happiness from different relations, and they strongly believe in relationships for experiencing happiness. Secondly, it is also clear that adolescents focus more on driving present happiness than their future happiness. For them, happiness is what they are having at this prevailing moment. Renowned Indian philosophers (A Narayan and Dalai Lama) also maintained, present to be vital than the future, and overlooking the present can be harmful to achieve a happy life.

5. Directions for future research

Happiness is the primary aspiration of all human beings, which can be attained by fulfilling needs (Wilson, 1967). Fulfillment of social requirements is the prerequisite for happiness (Maslow, 1943; Tay & Diener, 2011), the absence of which leads to loneliness, anxiety, and depression (Doman & Le Roux, 2010). Figure 3 portrays that happiness can be ensured by the

right understanding, relationship, and physical facilities. Right understanding is about knowing oneself that is one's needs and desires. If we have the right understanding of our needs, we will proceed in the direction of their fulfillment and thence towards happiness (A Nagraj, 2008).

Similarly, good relationships provide emotional support, enhancing psychological wellbeing (Umberson & Karas Montez, 2010). Accumulation of Physical facilities provides only momentary happiness, which fades away in a short while. So, the fulfillment of relationships based on the right understanding of our needs and desires leads to happiness. Unfortunately, all our education and training in the modern education system concentrate on accumulating physical facilities. In contrast, no consideration is given to the relations and knowledge about the self, leading to adolescents' internal contradictions. Such conflicts, later on, becomes the primary cause of their unhappiness. The longing for physical facilities transforms human consciousness into animal consciousness. Modern education, previously meant for socializing the youth's minds (Ballantine & Spade, 2003), is losing track. Being wealthy is considered more important than being happy. Figure 3 depicts the current state and the desired state of education for enhancing adolescent's happiness.

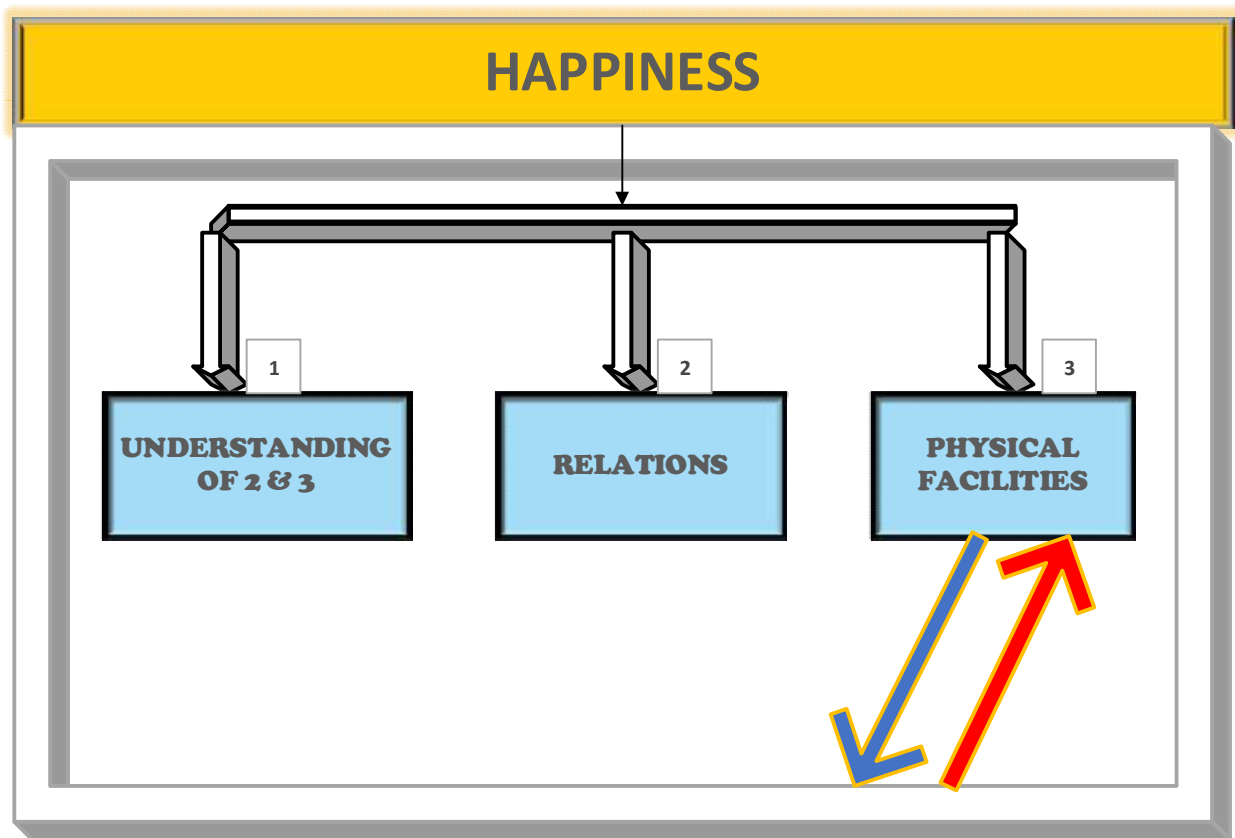


Figure 3

FIGURE 3: Current state and desired state of Education for enhancing adolescent's happiness

Maslow, an American psychologist, through his Need Hierarchy, emphasized five basic human needs (physiological, safety, social, self-esteem, and self-actualization needs) which should be satisfied for happiness. Proper understanding of these needs is vital for their fulfillment (Ventegodt et al., 2003). PERMA model, one of the most popular theories of happiness developed by Dr. Martin Seligman, also considers relationships an essential element for happiness. Similarly, Social Determination Theory (Deci & Ryan, 2000) asserts relatedness or a desire for social relationships as a psychological need fundamental to happiness and wellbeing. Subsequently, our findings underline the adolescents' internal desire to have real friends, affectionate family, and supportive people around with whom they can share their emotions and spend their quality time, which may help dampen emotional turbulence and satisfy their needs and boost happiness.

Hence, the existing education system's framework should provide training to build and maintain quality relations rather than accumulating physical facilities. The lust for more wealth always distorts relations. It should also enable adolescents to understand their needs appropriately and ensure their fulfillment. Encouraging them to cultivate social skills may be helpful in this regard.

6. Conclusion

The present study viewed happiness through the lens of adolescents. The results revealed happiness as a state when an individual spends time involving in leisure time activities, sharing happiness with loved ones, helping others in time of need, having true friends, and leading a satisfying life. The study established a new dimension of happiness: 'Sharing happiness,' previously not found in the existing literature on happiness.

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28. Digital Divide: A Burning Issue in India

- Deepanjana Khan, Assistant Professor, Department of Education, Dukhulal Nibaran Chandra College, Aurangabad, Murshidabad , West Bengal, India
- K.N. Chattopadhyay , Professor, Department of Education, The University of Burdwan, Golapbag, Burdwan, West Bengal, India

Abstract

In the 21st century the progress of the nation depends on its technological advancement. Being the second largest populous country, India has taken several challenges for becoming a progressive nation because majority of skilled working population is the significant criterion of a developed country. However the disparities between rural and urban sectors due to the absence of proper knowledge of ICT and its execution, is observed irrespective of area, gender, time makes a large gap and creates “Digital Divide”. The knowledge of ICT plays the significant role in this part. In the previous period pupils receded in rural areas are can’t compelled to communicate digitally whereas the current situation makes them to obliged to access data and built interactive communication digitally. As digital diffusion brings dynamism in the society yet report says that due to the absence of proper knowledge of ICT and its related issues, a huge number of pupils especially in rural areas can’t get access digital information. As its span is immense therefore the present paper envisages to identify the significant determinants of digital divide and necessary steps undertaken by concerned Govt. on the related issue.

Key Words: Digital Divide, Digital Literacy, Preventive Initiatives

1.0 Introduction:

In the 21st century the progress of the nation depends on its technological advancement. Being the second largest populous country, India has taken several challenges for becoming a progressive nation because majority of skilled working population is the significant criterion of a developed country. However the disparities between rural and urban sectors due to the absence of proper knowledge of ICT and its execution, is observed irrespective of area, gender, time makes a large gap and creates “Digital Divide”. This division gets a large shape due to the recent devastating attack of Novel Corona Virus and its allied issues. The aftershock of this wave changes the

structural and functional pattern of our society. For controlling the overwhelming spread of this Virus it is better to maintain safe distance between two or more than two person. Therefore in this new normal situation human being is maintaining a restricted lifestyle, spends maximum time in their residence by involving own self in work from home. As a result the communication system gets more digitalized than the previous situation.

The knowledge of ICT plays the significant role in this part. In the previous period pupils receded in rural areas are can't compelled to communicate digitally whereas the current situation makes them to obliged to access data and built interactive communication digitally. As digital diffusion brings dynamism in the society yet report says that due to the absence of proper knowledge of ICT and its related issues, a huge number of pupils especially in rural areas can't get access digital information.

Therefore digital divide indicates the unequal and disproportionate pace of accessing digital information and services irrespective of gender and locality. As its span is immense therefore the present paper envisages to identify the significant determinants of digital divide and necessary steps undertaken by concerned Govt. on the related issue.

2.0 Objectives:

- To find out the significant determinants of digital divide in India
- To identifying the necessary steps undertaken by the government to bridge digital divide in India

3.0 Methodology:

The present study is based on literature survey.

4.0 Results and Discussion:

The present hour is the era of digitalization. During this new normal situation pupils especially in rural areas are obliged to adopt digital services irrespective of gender and locality but they have not enough knowledge and skill to execute it properly.

Being a developing country it is necessary to find out the responsible determinants of digital divide in India.

These are as follows:

- **Low literacy rate:**

High literacy rate is one of the significant socio-economical determinants for built up a progressive nation. As per census of India 2011, a gradual improvement is noticed in literacy rate. It is reached from 65.38% (2001) to 74.04% (2011) i.e. almost 9.2% improvement where male literacy rate is almost 82.14% and female literacy rate is 65.46% (India Online, 2016).

By the gradual advancement of technology there felt a necessary need to change the previous definition of literacy. The decorum of functional literacy in the social institution transforms its shape to digital literacy. It is such a kind of literacy where one has to gain competency for accessing, managing, communicating, understanding and evaluating data digitally.

But the present status explains that rural areas face more difficulties in accessing digital services than urban areas creates a hindrance in the way of digital literacy.

In comparison to the global internet users i.e. 75% only 22% of internet penetration is seen in India. The condition becomes more dangerous when comparing to urban with rural areas. The internet consumption is in upward rate in urban phenomenon (64.84%) with comparing to rural areas (20.26%) (Gordon , 2018).

- **ICT service in schools:**

Inadequate ICT service is another one responsible factor in digital divide. Institutions which provide sufficient ICT services to the students and those who can practice ICT from the lower level is more competent than the students who are not accessing it. Inclusion of ICT skilled based content in the curriculum is a mandatory activity for reducing digital divide.

According to an ASER study conducted in India in 2018 in 596 government schools of 619 districts overall, only 21.3% of the students have access to computers in their schools (ASER, 2018).

- **Language:**

Absence of communicative language is the significant hindrance in digital divide. Adequate knowledge of English language helps to access and communicate one digital service. No matter how one is wealthy, brilliant, educated and motivated internet accessing is quite effective and easier to the English knowing persons. Problems help to create preventive measures. Several hindrances are responsible for accessing digital services between have's and have's not but numerous initiatives are taken to bridge up this divide.

These are as follows:

- **Kisan Call Centre:**

The Department of Agriculture and Cooperation (DAC) under Ministry of Agriculture, Govt. of India launched Kisan Call Centre on 21st January, 2004 across the country. The main purpose of this centre is to facilitate easier communication in local language related to agriculture and allied sectors among farming community.

- **Life line India:**

It is a charitable organisation for promoting human rights and sustainable development across the world. The main purpose is to facilitate a telephone based information services among the farmers where after recording a query in local language a prompt recorded reply is generated.

Currently in India 700 villages with on an average 350 calls is received each day. Maximum 88000 frequently asked questions has been created. As a result call satisfaction rate is very high (96%) (Sipre, Malik, 2017).

- **Bhoomi Project:**

It is another initiative taken by Karnataka Government by holding millions of land ownership record of 6.7 millions farmers. These centers are presented in every state. The main purpose of this project is to reduce the delays of responding to several queries relates with state land revenue department (Sipre, Malik, 2017).

- **Gyandoot Project:**

Gyandoot is an intranet service first launched in Dhar district. The main purpose is to connect rural cybercafés for catering several needs of masses.

- **TDIL:**

The department of information technology initiated the TDIL (Technology Development for Indian Languages). The main purpose of this project is to develop ICT based tools and techniques to facilitate interactive communication by reducing language barrier to access multilingual knowledge resources.

5.0 Conclusion:

In the 21st century the progress of the nation depends on its technological advancement. Being the second largest populous country, India has taken several challenges for becoming a progressive

nation because majority of skilled working population is the significant criterion of a developed country. However the disparities between rural and urban sectors due to the absence of proper knowledge of ICT and its execution, is observed irrespective of area, gender, time makes a large gap and creates “Digital Divide”.

The knowledge of ICT plays the significant role in this part. In the previous period pupils receded in rural areas are can't compelled to communicate digitally whereas the current situation makes them to obliged to access data and built interactive communication digitally. As digital diffusion brings dynamism in the society yet report says that due to the absence of proper knowledge of ICT and its related issues, a huge number of pupils especially in rural areas can't get access digital information. As its span is immense therefore it is necessary to identify the significant determinants of digital divide and necessary steps undertaken by concerned Govt. on the related issue for overcoming the increased issues and to spread digital literacy in every corner of the society.

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29. Community Participation in Schooling: Myth or Reality? The Case of Kerala

- **Jamshid**, Junior Research Fellow (UGC), M.Phil Research Scholar, School of Economics, University of Hyderabad, Hyderabad, Telangana. E-mail: jamshidvml@gmail.com
- **Dr. K Laxminarayana**, Professor, School of Economics, University of Hyderabad, Hyderabad, Telangana. E-mail: klnhcueco@gmail.com

Abstract

Policy makers and educators realised the relevance and importance of community participation in education as an important strategy to improve access and quality of education through increasing accountability and ensuring sustainability. The Right to Education Act 2009, recognised the need for community participation in its section 21, that demands for the constitution of School Management Committees (SMC). This paper examines the working of School Management Committee proposed by RTE Act, 2009 in schools of Wayanad district of Kerala. The study is particularly significant in the context of the state Government's aim of making Wayanad a 'zero drop-out district'. The findings suggest that neither the schools nor the communities are aware of SMC and they identify SMC with school Parent Teacher Association (PTA). A proper initiative from the concerned authorities to implement this crucial Act is required to achieve the desired goals.

Keywords: *School Education, Right to Education Act, School Management Committee, Community participation, Weaker Section, Inclusive Development*

Introduction

The Human Capital investment decision (quality and quantity) and government policies have leverage on the economic and social transformation of a country. Schultz (1961) and Dreze and Sen (2002) believed that education enlarges the 'range of choice' available to the people. Only public education, supported by government policies, could provide equitable distribution of education which is inclusive towards the disadvantaged groups. Educational inequality in most of the countries is declining and equal access to education is considered to be part of basic human rights (Thomas, Wang and Fan, 2001). The devolution of authority with provision of community participation has received wide acceptance in the contemporary world (Bray, 2003., Jimenez and Paqueo, 1996).

“The remarkable neglect of elementary education in India is all the more striking given the widespread recognition, in the contemporary world, of the importance of basic education for economic development” (Dre`ze and Sen, 2002)

The government of India took many initiatives to improve school education system which includes introduction of District Primary Education Programme (1994), National Programme of Nutritional Support to Primary Education (1995) or Mid-Day-Meal programme, Sarva Shiksha Abhiyan (SSA, 2001-02), and Right of Children to Free and Compulsory Education Act (2009). While the DPEP programme aimed at improving the enrolment or Universalisation of education, the SSA focused on quality component and community participation in school education system. The RTE Act, which makes elementary education a fundamental right, is lauded for its scope of reducing educational inequality and elevating the quality of schooling in India.

“Reduction in educational inequality at primary education stage can have a long-lasting impact and could be the most leveraged investment a society can make” (Desai & Thorat, 2013).

In India, Scheduled caste (SC), Scheduled Tribe (ST), Women and differentially abled people constitute the weaker section or backward social group. Even though India has made remarkable progress in schooling system, literatures pointed out that the educational status of these weaker sections did not progress much when compared to other sections. Gandhi (2014) critiqued that inclusive education failed in India as it failed to meet the demands of the tribal population especially the De-Notified Tribes (DNT). Pradhan (2015) found that the RTE norms were not seriously implemented in the tribal areas of Orissa. Sanjeev et al. (2017) pointed out that the promotion of ST education was necessary to attain the target of ‘inclusive growth’ set by Eleventh Plan. Ramdas Rupavath (2016) pointed out that the existing education policies by the government are not reaping the expected benefits at ground level, considering the education of the tribal community. It was found that many tribal people hate schools and hence policies that suit their or localities needs should be formulated. Coming to Kerala, studies by Ajith Kumar N and K.K George (2009), K.K George (2011) stated that current education system in the State is not inclusive. N.D Joshi (1982), K.K George and Sunaina Parvathy (2005) found that the coverage of schools and the inclusion of tribal children in schools were very less in Kerala. Dr. Manju (2015) concluded that the RTE would not be a success unless and until the people are well educated about their rights

On the backdrop of the above literatures, the objective of the study is to examine the implementation of section 21 of RTE Act (2009) that requires every schools (except unaided private schools) to constitute School Management Committee which targets devolution of power from a single authority (School authority) to the community (community participation). Since the performance of weaker section is comparatively low to other sections in India, the study targets the participation of these weaker sections (especially from ST community) in SMC of Wayanad district of Kerala, a federal state in India.

Relevance of the Study

Like many other states in India, tribal community of Kerala fall behind other communities in development index. The literacy rate of tribal community in Kerala is about 75.8 percent when the State scored 94 percent literacy rate. Moreover, in 2016, Kerala was declared as the only 100 percent primary educated state in India. But some studies pointed out a significant number of school drop-outs among the tribal community. When the official data showed only 3.71 percent dropout rate among tribal community, the study by Kerala Mahila Samakhya Society (KMSS) (School Dropout Rate Among Tribals Remains High, 2014) revealed a dropout rate of 46.02 percent at primary and 38.56 percent at the secondary level. Since community participation in school education is considered as a solution for improving school accountability and retention rate (low dropout), functioning of the SMCs, which came into existence through RTE Act 2009, needs to be evaluated.

Profile of the Area

The Wayanad district is the north-eastern part of Kerala, India. The district has an area of 2131 Sq.km, where 787.87 Sq.km are forest area and provides residence to 32 percent (as per Census 2011) of the State's tribal population. The district has a vast number of the Adivasi (Tribal) population consisting of Paniyar, Kurichiyar, Kattunaikkar, Mullukkurumar, Adiyar, Ooralis, Kadans, and Kurumar. The ST community constitutes 18.5 percent of the total population of Wayanad district.

Methodology

A simple percentage analysis was used to analyse and compare the data collected for the study. Secondary data was availed from U-DISE statistics and primary data was collected using a schedule for both ST schools (ST enrolment above 50%) and Non-ST schools (ST enrolment below 50%) during the academic year 2017-18. The samples were selected using Purposive

sampling method and Wayanad district was selected since 32 percent of ST population of the state is from the district. The District is divided into four development block consisting of 25 panchayats and a total of 307 schools. The samples were selected from four development blocks in Wayanad district; Kalpetta, Mananthavady, SulthanBatheri and Panamaram. Each development blocks were given proportional representation in the sample set, based on the proportional contribution of each block to the total number of school in the District (as per Deputy Director of Education office data).The schools were divided into two strata; ST and Non-ST and were selected proportionally from each development blocks. The sample set consisted of total 32 schools, which included 15 ST schools and 17 Non-ST schools.

Community participation in Education: Definition and Various Forms

The concept of community participation and decentralisation of governance in school education system at district level was born in United States while the concept of decentralisation of education to local level and governance to local educational authorities was born in UK and Wales (Gamage, 1993). According to Gamage (1993) community participation in education refer to a ‘formal alteration of governance structures, and a form of decentralisation that identifies the individual school as the primary unit of improvement and relies on the redistribution of decision-making authority through which improvement in schools might be stimulated and sustained’. The Global Campaign for Education called for a ‘robust governance mechanism’ that ensured participation of community and civil society in educational planning and monitoring which can lead to better participation of weaker sections like girl child and disadvantaged groups. Inclusion of community in decision making bodies of schools can instil a form of belongingness among the community members and can instigate them to work for the development of the institution.

A community can be defined as a group structure sharing a degree of collective identity that includes culture, language, tradition, law, geography, class and race, and whose members better knows the collective goals and problem within the group and has a degree of local autonomy and responsibility (Zenter, 1964). And ‘Participation’ can refer to mere use of service like enrolling children in school, providing or assisting in financial requirements, and presence in decision making bodies.

The literature pointed out different forms of community participation in education. Fantini (1974) identified three modes of community participation; consultative approach, shared decision making model and community control model. Here, first one is the most common form where all

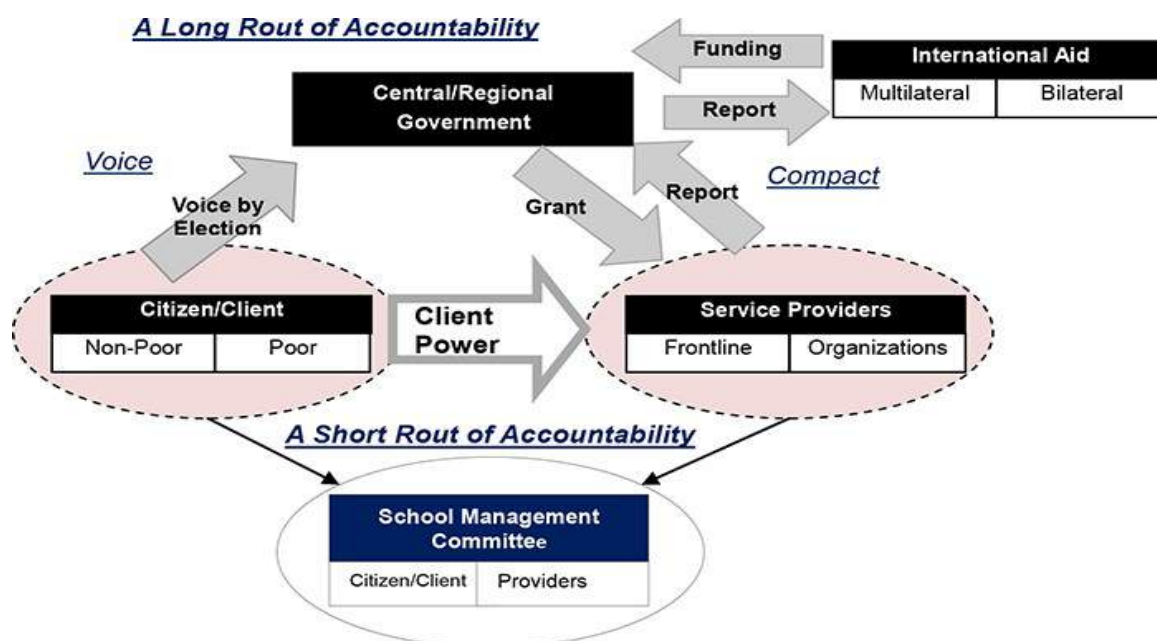
decision making power vested with school authority while community members were approached for just suggestions and opinions. The second one, conferred equal power to both participants and later one provided full authority of decision making to the community. Williams (1994) also put forward three forms of education and community participation. First one is traditional community-based education where community takes the responsibility of education, second, is the government-provided education where responsibility of providing education is bestowed upon government and last, is the collaborative model where community played supportive role in government led education system. Epstein's (2002) three participant model included parents, school and community with student at the centre, where three of the participants influence the working and outcome of education (Overlapping spheres of influence). Rose (2003) classified participation into 'genuine' participation and 'pseudo' participation. The 'genuine' participation involved the members in real decision making and governance and but the later form maintains the members as spectators, who would accept the decisions that were already made.

A critical evaluation of community participation in Malawi by Rose (2003) claimed that the concept of 'community participation' was the by-product of 'post-Washington consensus' (termed by Stiglitz, 1998). The 'Washington Consensus' advocated for the reduction of state intervention and expenditure as the shortcut for economic development. Thus the concept of 'community participation' was identified as a solution to tackle the rising demand for universal primary education, complying with the basic principle of Washington Consensus. Moreover, equity and efficiency argument were proposed to support the promotion of community participation. In reality, the withdrawal of government from schooling system would only perpetuate inequality since the advantaged group, who already has resources prosper, while the disadvantaged group within society suffers.

It is a common notion that the community participation in education helps in effective utilisation of limited resources, shaping of curriculum and teaching technique that caters the need of community, identifying and addressing problems related to schooling, promoting weaker section participation in schools, increasing accountability, ensuring sustainability etc. (Uemura, Mitsu. 1999). The criticism of community participation as a by-product of 'Washington Consensus' or part of liberalisation policy cannot be applied to the community participation through SMC since it is a form of decentralisation rather than complete withdrawal of government.

By 1980's the role of community was elevated as the main actor of development rather than just a recipient. This critical role played by community in education was explored by World Bank in 2003 and the report provided an analytical framework of accountability mechanism for improvement of service delivery. Figure 1 points out that the school management committee is the short route of accountability where the provider (school) and the receiver (citizen or client) are part of the decision making body. The short route of accountability is time saving as the long route of accountability involves a third party (Government and a funding agency) in decision making, apart from service provider and receiver.

Figure 1: Framework of Accountability for School Management Committee



Source: Created by M.Nishimura (2017), based on World Bank (2003, p. 188, figure 10.3).

Community participation through School Management Committee in RTE Act, 2009

Right to Free and Compulsory Education Act was enacted by Indian Parliament in 2009 and came into effect on 1st April 2010. The Act made 'free and compulsory elementary education' a fundamental right which was earlier a directive principle. Apart from making primary education a fundamental right, the Act targets to elevate the quality of schooling. The RTE Act has many flaws in itself as it has provided only an outline of the targets to be achieved and, most importantly, the definition of 'quality education' is ambiguous.

The section 21 of the RTE Act, 2009 recognise community participation as an important tool for improving quality of schooling. It adheres to the principle of Participatory Rural

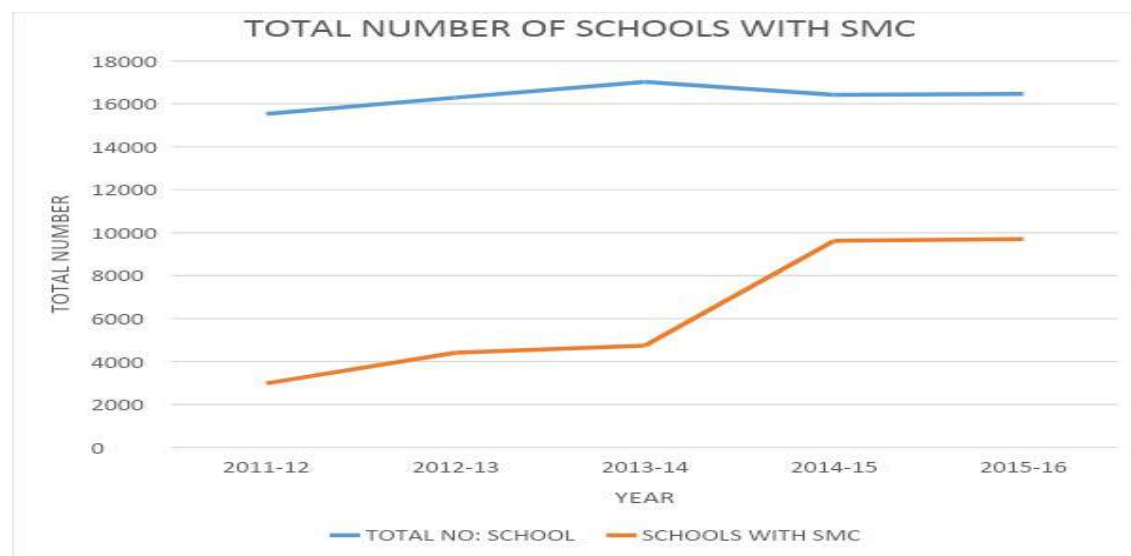
Appraisal (PRA) method that calls for accommodating the community in decision making process since they have better knowledge about the community requirement. The Section 21 ensured proportional representation of each section within the society which can help in altering the power dynamics within the society and school administration.

The subsection (1) of section 21 of the RTE Act demands every school except the unaided private schools and minority owned schools to constitute School Management Committee (SMC) within six months of an academic year which shall be reconstituted in every 2 years. And the SMC is vested with the power to look after the day-to-day functioning of school and act as an authority (stake holder) over school related matters.

School Management Committee in Kerala

In 2011-12, 2981 schools in Kerala formed SMC and this increased to 9703 in 2015-16 (U-DISE Statistics). About 81.84 percent and 84.85 percent of schools formed SMC during the year 2014-15 and 2015-16 respectively. The ASER Report of 2016 shows that 96.6 percent of schools in Kerala has constituted SMC. After 2010-11, there was an increase in number of schools as well as schools with SMC but still, there were number of schools without an SMC (figure 1).

Figure 1: Elementary Schools with SMC in Kerala



Source: U-DISE statistics

According to U-DISE and ASER data 2016 report, most schools in Kerala constituted SMC but the primary survey in Wayanad district showed a different picture. Only 50 percent of the sample schools have constituted SMC in Wayand (Table 1). But these schools failed to follow

the full guidelines, especially training of committee members, put forward by the RTE Act for constituting an SMC. These schools with SMC has clubbed the Parent Teacher Association (PTA), Mother PTA and included a local ward member to form an SMC. The SMC meetings were conducted on necessary occasions, such as before school festival, sports day, and other important and convenient occasions. A PTA or MPTA meetings were followed by the SMC meetings as the members of both committee were the same.

The primary survey pointed out that while 73.3 percent of the government school has constituted SMC, only 30.77 percent of aided school has an SMC (Table 1). In constituting an SMC, the aided schools followed the RTE guidelines pertaining to membership in the committee better than government schools. But it was government schools that has included a local educationist in the committee and conducted SMC meetings as per RTE guidelines. It was surprising to find that none of the committee members had attended capacity building courses. The study could not find even a single member in the committee who attended capacity building programme as suggested by RTE Act.

Table1: SMC in Government and Aided schools

Schools with:	Government schools (%)	Aided schools (%)	Total (%)
SMC	73.33	30.77	50
Satisfying membership criteria for the committee	72.27	25	60
75% parents in committee	0	25	6.67
50% women members in committee	27.27	50	33.33
proportionate representation given to SC and ST in committee	0	25	6.67
1 teacher in the committee	0	25	6.67
1 ward/division member in the committee	90.90	100	93.33
1 local educationist in the committee	45.45	0	33.33
committee meetings conducted once in two months	54.54	0	40

Committee members attended capacity building courses	0	0	0
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Source: Primary survey

While the Kerala RTE rules Section 3(7) demands one member of the Committee to be teacher, school leader, local ward/division member and a local educationist, most of the schools failed to ensure membership from these groups as set by RTE Rules (either no representation or over representation), except for local ward member. None of the school had a single teacher (only one teacher) representation in the committee and none of the members has attended capacity building courses. Only a single school (with SMC) had 75 percent of committee members with parents. Only 50 percent of ST schools and 14.29 percent of Non-ST schools has provided 50 percent women representation in the committee (as required by RTE Act). Even proportionate representation of ST community was not seen in SMCs, except for one school. Since the Act did not state the required qualification of an 'Educationist' in the committee, schools with SMC included their retired teachers or head masters as the 'educationist' member.

Table 2: SMC in ST Majority Schools and Non-ST Majority Schools

Schools with:	ST Majority Schools (%)	Non-ST Majority Schools (%)
SMC	53.33	41.18
Satisfying membership criteria for the committee	75	57.14
75% parents in committee	12.5	0
50% women members in committee	50	14.29
proportionate representation given to SC and ST in committee	0	14.29
1 teacher in the committee	0	0
1 ward/division member in the committee	87.50	100
1 local educationist in the committee	37.50	28.57
committee meetings conducted once in two months	37.5	42.6

Committee members attended capacity building courses	0	0
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Source: Primary survey

Even though there was no much difference in the functioning of SMC in schools with majority of ST enrolment and less ST enrolment, the former followed RTE guidelines comparatively better (Table 2). The experience from field survey conveyed that the community nearby ST majority schools were concerned in school related matters and has developed a sense of belongingness. While visiting some of these schools, the local people followed the researcher till school to understand the purpose of the visit. Even a ward member reached school to enquire about researcher's visit. This can be attributed to the successful functioning of tribal agents who works as a link between tribal community and school. The ground reality reveals that the Schools and parents were uneducated on the importance of SMC and the concerned authority took no initiative to ensure community participation in school activities through SMC.

Conclusion

The Literature identified different forms of community participation in education depending on the participation level of community. While 'pseudo' participation is the most common form of community participation, only 'genuine' participation can bring the desired level of positive outcome. The ground reality in Wayanad district of Kerala shows that a 'disguised' form of 'pseudo' participation is working in place of the desired 'genuine' community participation.

The RTE Act, 2009 enacted to provide compulsory education for children of age group 6-14 has acknowledged the importance of community participation. Section 21 of the act demands for constituting SMC which includes at least 75 percent parents, 50 percent women, a local educationist, a local representative, head teacher, etc. in order to make school management inclusive and encourage community participation in decision making body. The primary survey in Wayanad district of Kerala reveals that even school authorities are unaware of the importance and relevance of section 21 of RTE Act 2009. This finding is in line with the findings of Rajni (2021). Many schools have constituted SMC in a vague manner without following RTE guidelines on membership criteria. Many schools have wrongly identified SMC with PTA and some schools have constituted SMC with same members of PTA. The PTA and SCM are different since PTA

focus on academic progress of students where SMC is intended to include the community including parents into the functioning of school.

Without attention from the government, the community participation through SMC may suffer the same fate of School Education Management Committee (SEMC) proposed by SSA. A case study by Vasanta Srinivasa Rao (2009) pointed out that the lack of training and awareness about community participation resulted in the failure of the SEMC. Moreover, the government plan of transforming Wayanad district as a 'zero dropout' zone will be difficult to achieve without creation of a sense of belongingness and the cooperation of communities involved.

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30. Comparative analysis of teacher profile in government colleges of Uttarakhand

- **Dr. Pavan Kumar**, Department of Education, H N B Garhwal University Srinagar Garhwal, Email- pavankmredu@gmail.com
- **Prof. P. K. Joshi**, Former Professor and Head, Department of Education, H N B Garhwal University Srinagar Garhwal, Email- peekayjay@rediffmail.com

Abstract

Education plays an important role in the social, economic, political and intellectual development of any nation, in which higher education has a special importance. Therefore, it is necessary to make higher education more robust, transparent, productive and accountable. For which it is absolutely necessary to have competent, qualified and professional teachers. The present study is an attempt to assess the educational and professional status of teachers working in government colleges in the state of Uttarakhand. In which the researcher took the educational and professional data of 194 teachers of 25 state government colleges through a self-made teacher information schedule. Findings reveal the comparative strengths and weaknesses of teachers working in government colleges and model colleges covered under the Rashtriya Uchchatar Shiksha Abhiyan on several quality standards.

Key Words: Government Colleges, Model Colleges, Academic Profile and Professional Profile of Teachers, RUSA, Quality issues.

Introduction

Education is the means through which a person can contribute significantly to the development of himself, society and the country by acquiring the right skills, knowledge and training. Hence it is necessary that the present education system beyond the scope of bookish knowledge and examination should be based on the standards of quality and moral values. By providing good quality education to the masses, we can get rid of the prevalence of inequality, poverty, hunger, unemployment and superstitions. Higher education is considered to be the most contributing factor in removing these social, economic and cultural inequalities.

It is the higher education that provides the edge towards the ability of individuals and nation to compete and survive in the global world. Higher education is also a form of social development as ultimately it is the improvement in the lives of the people that determines the success of such efforts (Soni, 2010). Therefore, it is very important that, if a country is to be empowered socially, economically, politically and intellectually, the higher education of that country should be made more accountable, responsible, useful, transparent and productive. A good teacher can play an

important role in this direction. He is a foundational pillar of education. Teachers are the backbone in any education system. So quality or excellence of the teachers is the basic requirement of an educational institution. In this context a famous quote given by William Arthur Ward is more relevant on teachers that “the mediocre teacher tells; the good teacher explains; the superior teacher demonstrates and the great teacher inspires”.

The quality of a teacher depends on his/her teaching competence, efficiency and educational progress and this is possible only when they are constantly striving for teaching as well as professional development. For which they should be constantly engaged in research, development and extension to address the problems, complexities and possibilities related to their teaching profession. Kothari Commission (1964-66) rightly said that the quality, competence and character of teachers to be the most significant factors, influencing the quality of education and its contribution to national development. Therefore, teachers’ academic profile also impact upon the overall quality of any education system. To carry out the present study, the researcher identified educational institutions based on a list of "higher educational institutions selected for infrastructure grants under the Rashtriya Uchachtar Shiksha Abhiyan in Uttarakhand.

Objectives

- To analyze academic profile of government college teachers of Uttarakhand
- To analyze professional profile of model college teachers and degree college teachers related to quality issues
- To assess the academic status of female and male teachers

Methodology

Population

All government degree colleges and model colleges which were covered under the scheme of RUSA comprised the population.

Sampling Technique

The selection of locale for the present study becomes cumbersome due to the fact that a large number of educational institutions in the higher education system are scattered over wide geographical area of mountainous and plain region of Uttarakhand state. Sampling for the present study followed following stages:

- (i) Identification of universe

- (ii) Selection of Districts from the notified districts of RUSA in Uttarakhand
- (iii) Selection of government college from the notified colleges (Degree Colleges, Model Degree Colleges) under RUSA
- (iv) Selection of teaching faculties working in these institutions

Sample

(i) Selection of Districts from the Notified Districts of RUSA

Uttarakhand state is comprised of 13 districts. These districts are scattered in a wide geographical area, including mountainous and plain areas, covered under two major administrative commissioners, i.e. Garhwal and Kumaun. All these districts are notified districts of RUSA. Attempt was made in this study to include all the districts covering different setup of institutions, with specific purpose of identifying government degree colleges. District Haridwar has been however excluded from the study, keeping in view that there is no government college covered under RUSA.

(ii) Selection of Higher Educational Institutions

The identification of the government colleges for the purpose of sample was made on the basis of list of selected colleges for infrastructure grant under “Rashtriya Uchchar Shiksha Abhiyan in Uttarakhand”.

The total number of 35 government degree colleges and model colleges were covered under the scheme, out of these 35 colleges, 30 government degree colleges and 5 model colleges (up graded from government post-graduate college) were approved for infrastructure grants (6th-Meeting of the Project Approval Board, M H R D, 27th March 2015, New Delhi). The final sample of selected colleges comprises 21 government degree colleges and 4 model colleges.

(iii) Selection of Teachers

Teacher being the vital stakeholder of the education system, selection of teacher the sample was necessary to not only seek their opinions for the qualitative but also to seek quantitative data on the multiple aspects, especially data related to quality of education. All the available teachers were selected in the sample on the bases of their availability on the days of researcher's presence in the campuses. Care was however taken to give due representation to the different categories of teachers viz. professors, associate professors, assistant professors and also to include maximum teachers from the both genders. Attempt was also made to ensure that both regular and contractual teachers are given adequate representation in the sample.

The final sample included 83 (62 Male and 21 Female) from model colleges and 111 (75 Male and 36 Female) from government degree colleges teachers. The final sample give 61 percent to model colleges teachers and 81 percent to government degree colleges teachers.

Tool Used

One self-made data gathering instrument i.e., Teacher Information Schedule was constructed. This teacher information schedule is mainly prepared for the assessment of quality aspects of teaching faculty. This tool collects information regarding teachers' present job, academic, professional profile etc. The details of dimensions are as follows:

- Job Related Information
- Personal Information
- Academic and Professional Information
- Information Related to Major Assignments in Addition to Teaching
- Job Conditions and Working Environment in the Institution

Results and Discussion

As per the objectives of the study, findings are given below.

Table and graph 1 represents the post-postgraduate (Post-PG) qualification of teaching faculties working in government degree college and model colleges. Table and graph reveals that 1.2 percent in model colleges and 0.9 percent in degree colleges, teachers are not having any type of post-PG qualification. Whereas, the highest percentage of teaching faculties those are having Ph.D. degree, come from degree colleges followed by the model colleges. The second highest percentage of Post-PG degree (NET) holder teaching faculties comes from model colleges followed by the degree colleges. Although at the government degree colleges level, the percentage of PDF degree holders and JRF qualified teaching faculties is higher than that of model colleges. The percentage of M. Phil. degree and SET qualified teaching faculty is again high at model colleges, followed by government degree colleges. If data is compared on the basis of gender, it is found that the male teaching faculties possess more post-PG qualifications as compared to female. The poor academic background of female teaching faculties in the state government colleges is a matter of serious cause of concern for creating well skilled, qualified and talented citizens. Overall data reveals that the major strength of the model college faculties is in

the context of M.Phil., D. lit., SET and NET qualifications. Government degree colleges are however strong as far as number of Ph.D. are concerned.

Table 1
Post-Postgraduate Academic Profile of Teachers

Qualification (Completed)	Model College			Degree College		
	Male	Female	Total	Male	Female	Total
No Additional Qualification	1	0	1	1	0	1
	(1.6)	(0)	(1.2)	(1.3)	(0)	(0.9)
M.Phil.	14	1	15	9	4	13
	(22.6)	(4.7)	(18.3)	(12)	(11)	(11.7)
Ph.D.	43	17	60	59	26	85
	(69)	(81)	(73.2)	(78.6)	(72)	(76.6)
D. lit.	1	1	2	0	0	0
	(1.6)	(4.7)	(2.4)	(0)	(0)	(0)
PDF	1	0	1	3	0	3
	(1.6)	(0)	(1.2)	(4)	(0)	(2.7)
SET	8	1	9	8	3	11
	(12.9)	(4.7)	(11)	(10.6)	(8.3)	(9.9)
NET	29	9	38	33	7	40
	(46.8)	(42.9)	(46.3)	(44)	(19.4)	(36)
JRF	2	0	2	8	9	17
	(3.2)	(0)	(2.4)	(10.6)	(25)	(15.3)
Total No. of Respondent	62	21	83	75	36	111

**Figures in parenthesis denote percentage*

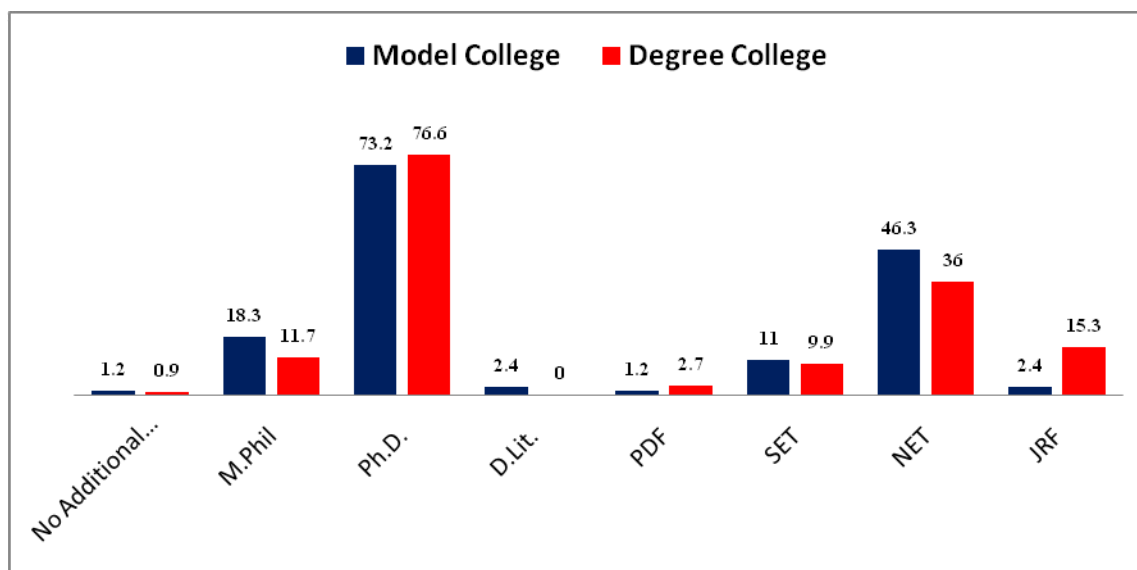


Figure 1: Post P.G. Qualification of Teaching Faculties

The comparative data given in the **table 2** reveals that 91.6 percent model colleges and 93.7 percent government degree college's teaching faculties are not having any post-Ph.D. research experience. The remaining teachers are having a variety of research experiences ranging from one year to 20 years. Generally, Universities are supposed to be research centers, however need is also to encourage research culture within the model colleges and government degree colleges; otherwise they will remain confined to teaching learning activities only.

Table 2

Research Experience of Teachers

No. of Years	Model College			Degree College		
	Male	Female	Total	Male	Female	Total
Zero	55	21	76	69	35	104
	(88.7)	(100)	(91.6)	(92)	(97.2)	(93.7)
1-5	4	0	4	2	0	2
	(6.4)	(0)	(4.8)	(2.7)	(0)	(1.8)
6-10	1	0	1	2	0	2
	(1.6)	(0)	(1.2)	(2.7)	(0)	(1.8)
11-15	1	0	1	0	0	0
	(1.6)	(0)	(1.2)	(0)	(0)	(0)
16-20	0	0	0	2	1	3

	(0)	(0)	(0)	(2.7)	(2.8)	(2.7)
21-Above	1	0	1	0	0	0
	(1.6)	(0)	(1.2)	(0)	(0)	(0)
Total	62	21	83	75	36	111
	(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Table 3 reveals that 95.2 percent teaching faculties in the model colleges have not supervised even a single research student; on the other hand only 3.6 percent and 1.2 percent teaching faculties have supervised 1-5 and more than 5 research students, whereas 2.4 percent teaching faculties are supervising 1-2 research students only. It is evident from the data that the presence of research supervision work is almost negligible in model colleges, which a cause of concern.

Table 3
Research Guidance by Model Colleges Teachers

No. of Student	Ph. D. Awarded			No. of Student	M. Phil. Awarded			No. of Student	Ph.D. Under Supervision (Pursuing)		
	Male	Female	Total		Male	Female	Total		Male	Female	Total
Zero	58	21	79	Zero	61	21	82	Zero	60	21	81
	(93.5)	(100)	(95.2)		(98.4)	(100)	(98.8)		(96.8)	(100)	(97.6)
1-5	3	0	3	1-5	1	0	1	1-2	2	0	2
	(4.8)	(0)	(3.6)		(1.6)	(0)	(1.2)		(3.2)	(0)	(2.4)
Above-5	1	0	1	6-10	0	0	0	Total	62	21	83
	(1.6)	(0)	(1.2)		(0)	(0)	(0)		(100)	(100)	(100)
Total	62	21	83	Total	62	21	83				
	(100)	(100)	(100)		(100)	(100)	(100)				

**Figures in parenthesis denote percentage*

Table 4 reveals that 95.5 percent teaching faculties in government degree colleges have not supervised even a single research student; on the other hand only 1.8 percent and 2.7 percent

teaching faculties have supervised 1-5 and more than 5 research students respectively, whereas 2.7 percent and 0.9 percent teaching faculties are supervising 1-2 and 3-4 research students only. The comparative analysis of both types of educational institutions reveals that a miniscule fraction of teaching faculties of model colleges and government degree colleges are engaged in research related activities.

Table 4
Research Guidance by Degree Colleges Teachers

No. of Student	Ph.D. Awarded			No. of Students	M.Phil. Awarded			No. of Students	Ph.D. Under Supervision (Pursuing)		
	Male	Female	Total		Male	Female	Total		Male	Female	Total
Zero	71	35	106	Zero	74	36	110	Zero	72	35	107
	(94.6)	(97.2)	(95.5)		(98.7)	(100)	(99.1)		(96)	(97.2)	(96.4)
1-5	2	0	2	1-5	1	0	1	1-2	3	0	3
	(2.7)	(0)	(1.8)		(1.3)	(0)	(0.9)		(4)	(0)	(2.7)
Above-5	2	1	3	Above-5	0	0	0	3-4	0	1	1
	(2.7)	(2.7)	(2.7)		(0)	(0)	(0)		(0)	(2.8)	(0.9)
Total	75	36	111	Total	75	36	111	Total	62	21	83
	(100)	(100)	(100)		(100)	(100)	(100)		(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Table 5 represents the details of research projects conducted by various teaching faculties working in the both types of educational institutions. 95.2 percents teaching faculties of model colleges did not conduct any type of research project, whereas 3.6 percent teaching faculties conducted 1-2 research projects. Remaining 1.2 percent teaching faculties conducted 3-4 research projects. The percentage of those faculties who are not engaged in any type of ongoing research project is again very high, i.e. 96.4 percent. Rest of 3.6 percent teaching faculties of model colleges are engaged with 1 or 2 ongoing research projects only. As far as government degree college teaching faculties is concerned, around 92 percent teaching faculties of degree colleges have not conducted even a single research project. Whereas, only 7.2 percent teaching faculties of degree colleges had been involved in some kind of research projects. Presently 98.2 percent

teaching faculties are not engaged in any type of research projects. Overall analysis of data reveals that, in model colleges and government degree colleges, a very high percentage of teachers are not involving themselves in research projects is a cause of concern.

Table 5
Research Project Conducted by College Teachers

Model College							
No. of Research Projects (completed)	Male	Female	Total	No. of Research Projects (Ongoing)	Male	Female	Total
Zero	58	21	79	Zero	59	21	80
	(93.5)	(100)	(95.2)		(95.2)	(100)	(96.4)
1-2	3	0	3	1-2	3	0	3
	(4.8)	(0)	(3.6)		(4.8)	(0)	(3.6)
3-4	1	0	1	3-4	0	0	0
	(1.6)	(0)	(1.2)		(0)	(0)	(0)
Total	62	21	83	Total	62	21	83
	(100)	(100)	(100)		(100)	(100)	(100)
Degree College							
Zero	71	31	102	Zero	73	36	109
	(94.7)	(86.1)	(91.9)		(97.3)	(100)	(98.2)
1-2	4	4	8	1-2	2	0	2
	(5.3)	(11.1)	(7.2)		(2.7)	(0)	(1.8)
3-4	0	1	1	3-4	0	0	0
	(0)	(2.8)	(0.9)		(0)	(0)	(0)
Total	75	36	111	Total	75	36	111
	(100)	(100)	(100)		(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Table 6 shows that 90.4 percent model colleges teaching faculties and 89.2 percent government degree colleges teaching faculty has not published even a single book. If below table data is compared on the basis of gender, female teachers are less involved in writing books. Overall comparison reveals that model colleges and government degree colleges teaching faculties are similar in this regard.

Table 6
Books Authored by College Teachers

No. of Publications	Model College			Degree College		
	Male	Female	Total	Male	Female	Total
Zero	58	17	75	64	35	99
	(93.5)	(81)	(90.4)	(85.3)	(97.2)	(89.2)
1	4	4	8	6	1	7
	(6.5)	(19)	(9.6)	(8)	(2.8)	(6.3)
2	0	0	0	2	0	2
	(0)	(0)	(0)	(2.7)	(0)	(1.8)
3	0	0	0	1	0	1
	(0)	(0)	(0)	(1.3)	(0)	(0.9)
4	0	0	0	1	0	1
	(0)	(0)	(0)	(1.3)	(0)	(0.9)
5	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Above 5	1	0	0	1	0	1
	(1.6)	(0)	(1.2)	(1.3)	(0)	(0.9)
Total	62	21	83	75	36	111
	(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Table 7 depicts that majority of teachers in higher education within Uttarakhand show poor interest in editing books. Only a small percentage of both types of institutions teachers, that to primarily the male teachers is somewhat interested in editing books.

Table 7
Books Edited by Colleges Teachers

No. of Publications	Model Degree			Degree College		
	Male	Female	Total	Male	Female	Total
Zero	58	20	78	67	34	101
	(93.5)	(95.2)	(94)	(89.3)	(94.4)	(91)
1	2	1	3	5	2	7
	(3.2)	(4.8)	(3.6)	(6.7)	(5.6)	(6.3)
2	1	0	1	1	0	1
	(1.6)	(0)	(1.2)	(1.3)	(0)	(0.9)
3	0	0	0	1	0	1
	(0)	(0)	(0)	(1.3)	(0)	(0.9)
4	1	0	1	0	0	0
	(1.6)	(0)	(1.2)	(0)	(0)	(0)
5	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Above- 5	0	0	0	1	0	1
	(0)	(0)	(0)	(1.3)	(0)	(0.9)
Total	62	21	83	75	36	111
	(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

As evident from the data, there is not much interest among teachers on contribution in the edited books; however whatever little contribution, model colleges appear better than government degree college in this regard.

Table 8
Chapters in Edited Book of College Teachers

No. of Publications	Model College			Degree College		
	Male	Female	Total	Male	Female	Total
Zero	51	16	67	60	35	95
	(82.3)	(76.2)	(80.7)	(80)	(97.2)	(85.6)
1	4	1	5	6	0	6
	(6.5)	(4.8)	(6)	(8)	(0)	(5.4)
2	2	1	3	1	0	1
	(3.2)	(4.8)	(3.6)	(1.3)	(0)	(0.9)
3	1	1	2	3	0	3
	(1.6)	(4.8)	(2.4)	(4)	(0)	(2.7)
4	1	0	1	0	0	0
	(1.6)	(0)	(1.2)	(0)	(0)	(0)
5	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Above 5	3	2	5	5	1	6
	(4.8)	(9.6)	(6)	(6.7)	(2.8)	(5.4)
Total	62	21	83	75	36	111
	(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Research publication is the integral part of teaching learning process. It is expected that a teacher should be a teacher as well as a good researcher. Through his innovative research work, besides contributing to new knowledge, he makes his teaching more interesting and meaningful. **Table 9** reveals that 43.4 percent model degree college and 42.3 percent degree college teaching faculties are not having a single research paper in the national journals. Gender wise, male teachers are more involved in research publications as compared to the female teachers. Government degree colleges also appear poorest in this context. As regards international publications, trend is more or less identical as above. Though percentage teachers contributing in international journals are comparatively low, but those who are involved in such activities are doing it more or less on continuous basis.

Table 9

Research Papers Published by College Teachers

Types of Journals	No. of Publications	Model College			Teachers College		
		Male	Female	Total	Male	Female	Total
Journals	Zero	25	11	36	30	17	47
		(40.3)	(52.4)	(43.4)	(40)	(47.2)	(42.3)
National	1-5	17	4	21	32	17	49
		(27.4)	(19)	(25.3)	(42.7)	(47.2)	(44.1)
	6-10	13	3	16	7	1	8
		(21)	(14.3)	(19.3)	(9.3)	(2.8)	(7.2)
	11-15	5	2	7	4	0	4
		(8.1)	(9.5)	(8.4)	(5.3)	(0)	(3.6)
	16-20	0	1	1	0	1	1
		(0)	(4.8)	(1.2)	(0)	(2.8)	(0.9)
	21-25	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)
	26-30	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)
	Above 30	2	0	2	2	0	2
		(3.2)	(0)	(2.4)	(2.3)	(0)	(1.8)
	Total	62	21	83	75	36	111
		(100)	(100)	(100)	(100)	(100)	(100)
International	Zero	35	15	50	54	24	78
		(56.5)	(71.4)	(60.2)	(72)	(66.7)	(70.3)
	1-5	21	6	27	17	10	27
		(33.9)	(28.6)	(32.5)	(22.7)	(27.8)	(24.3)
	6-10	5	0	5	1	2	3
		(8.1)	(0)	(6)	(1.3)	(5.6)	(2.7)
	11-15	1	0	1	0	0	0
		(1.6)	(0)	(1.2)	(0)	(0)	(0)
	16-20	0	0	0	0	0	0

		(0)	(0)	(0)	(0)	(0)	(0)
	21-25	0	0	0	2	0	2
		(0)	(0)	(0)	(2.7)	(0)	(1.8)
	26-30	0	0	0	1	0	1
		(0)	(0)	(0)	(1.3)	(0)	(0.9)
	Above 30	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)
	Total	62	21	83	75	36	111
		(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Table 10 shows that 62.7 percent faculty in model colleges and 77.5 percent faculties in government degree colleges have not published even a single article. Out of these two types of institutions, highest percentage of faculties comes from government degree colleges. Faculties publishing 1-5 research articles, higher percentage come from model colleges followed by government degree college. If data is compared on the basis of gender, male teaching faculties have published more articles as compared to female, in both types of educational institutions.

Table 10

Articles published by College Teachers

Categories of Publication	No. of Articles	Model College			Degree College		
		Male	Female	Total	Male	Female	Total
Articles in Journals/Magazines/News Papers	Zero	41	11	52	55	31	86
		(66.1)	(52.4)	(62.7)	(73.3)	(86.1)	(77.5)
	1-5	12	8	20	9	3	12
		(19.4)	(38.1)	(24.1)	(12)	(8.3)	(10.8)
	6-10	6	1	7	6	0	6
		9.7	4.8	(8.4)	(8)	(0)	(5.4)
	11-15	1	0	1	2	1	3
		(1.6)	(0)	(1.2)	(2.7)	(2.8)	(2.7)
	16-20	2	1	3	3	1	4

		(3.2)	(4.7)	(3.6)	(4)	(2.8)	(3.6)
	Total	62	21	83	75	36	111
		(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

In-service programmes like, workshop, training, orientation programme and refresher courses are necessary for professional development as well as career advancement scheme for promotion of a faculty. Orientation as well as refresher courses are however mandatory for teachers under CAS scheme. These are also essential for a faculty to inculcate professional ethics and increase academic performance in higher educational institutions. In spite of basic requirement for the faculties, large percentage of model college and degree college teachers have not attended even a single orientation/refresher course, which is serious cause of concern. If gender wise comparison is made, it is clear that female teacher especially in government degree colleges are lagging behind their male counterparts in this regard. Whereas, model college female teachers appear better than their male counterparts in the participation in orientation/refresher courses. Overall participation in orientations/refresher courses of the model college teachers appears best followed by government degree colleges. Similar trends are also visible as regards participation in the workshops/training programmes.

Table 11
Workshops/Training/Orientations/Refreshers Programs Attended by
College Teachers

Types of Programmes Attended	No. of Programmes Attended	Model College			Teachers College Teachers		
		Male	Female	Total	Male	Female	Total
Refreshers/Orientations Programs	Zero	48	10	58	59	26	85
		(77.4)	(47.6)	(69.9)	(78.7)	(72.2)	(76.6)
	1-2	5	8	13	9	7	16
		(8.1)	(38.1)	(15.7)	(12)	(19.4)	(14.4)
	3-4	9	3	12	7	2	9
		(14.5)	(14.3)	(14.5)	(9.3)	(5.6)	(8.1)
	Above	0	0	0	0	2	2

	4	(0)	(0)	(0)	(0)	(5.6)	(1.8)
	Total	(62)	(21)	(83)	75	36	111
		(100)	(100)	(100)	(100)	(100)	(100)
Workshops/Training Programs	Zero	39	9	48	47	21	68
		(62.9)	(42.9)	(57.8)	(62.7)	(58.3)	(61.3)
	1-2	17	5	22	15	5	20
		(27.4)	(23.8)	(26.5)	(20)	(13.9)	(18)
	3-4	2	5	7	8	8	16
		(3.2)	(23.8)	(8.4)	(10.7)	(22.2)	(14.4)
	5-6	1	1	2	3	2	5
		(1.6)	(4.8)	(2.4)	(4)	(5.6)	(4.5)
	7-8	1	0	1	0	0	0
		(1.6)	(0)	(1.2)	(0)	(0)	(0)
	Above 8	2	1	3	2	0	2
		(3.2)	(4.8)	(3.6)	(2.6)	(0)	(1.8)
	Total	(62)	(21)	83	75	36	111
		(100)	(100)	(100)	(100)	(100)	(100)

**Figures in parenthesis denote percentage*

Conclusions:

The present study suggests that the educational background of teaching faculty working in model colleges in Uttarakhand is not encouraging. While talking about the academic profile of women teachers, there is a worse situation with regard to having additional qualifications like PDF/JRF/M.Phil/SET/NET. This is a concern in making skilled, qualified and talented citizens. Research is considered the most important indicator of excellence in higher education; on the other hand, the presence of more than 90 percent teachers in Uttarakhand colleges without research experience is a serious cause for concern. Therefore it is necessary that more and more teachers, mainly women teachers, be involved in research and development. So that research culture can be encouraged in model colleges as well as degree colleges. The negligible participation in research projects of teachers working in government colleges of Uttarakhand indicates the poor state of research in the state. More or less the same situation can be seen in the context of publication and editing of

books by teachers of both types of colleges. Good research publications also reflect the professional development of the teacher. This shows how much a teacher is contributing to the creation of new knowledge. But In the context of higher education college teacher are lagging far behind as regards to the publications of research papers and articles. Continuous professional development of the teachers is require to participate and organize seminar/conferences on a regular basis, whereas, in Uttarakhand government colleges, majority of teachers whether in the model colleges and degree colleges are showing poor presence in this regard. In spite of basic requirement for the faculties, presence of model college and degree college teachers, not having even single refresher/orientation course, is a serious cause of concern.

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31. Entrepreneur to Ecopreneur: A Roadmap to Sustainable Development

- Dr. Happy Agrawal , Assistant Professor, Department of Management, St. Xavier's College, Jaipur, Rajasthan, guptahappy29@gmail.com
- Moon Moon Lahiri, Assistant Professor, Department of Management, Compucom Institute of Technology & Management, Jaipur, Rajasthan, lahirimoonmoon@gmail.com

Abstract

With the deterioration of planet Earth along with the worsening of climate change, green business has emerged as one of the significant ways to cope up with environmental challenges. Globally, the corporate world has considered this issue as their prime concern for moving towards sustainable growth. The transformation of entrepreneurship to 'green entrepreneurship' and from entrepreneur to 'ecopreneur' has been considered as one of the crucial steps towards sustainable development of both business and society. Despite struggling with numerous issues, ecopreneurs have come up with "greening" strategies to increase the sustainability of their business and heading towards a green economy. The present study aims to bring out major 'push' factors and the challenges which are faced by 'green entrepreneurs' in creating green products and services and contributing towards a green economy. The study concludes with some prominent case studies of green businesses in India.

Keywords: Green Economy; Ecopreneur; Sustainability; Green Entrepreneurship; Environmental challenges; Green Business in India.

1. Introduction

Our ecology has been tremendously grasped by the disastrous effects of climate change. As warned by many scientists and researchers that time is running short and if the various tasks of the economy do not change their pattern, the results are going to be ruinous.

"Time is running short. We are past pledging politicking. We are past commitments with little accountability. What's at stake is life, and society, as the majority of us know it and enjoy it today...It's clear that we need to transform the way our economies work, and the way we value the things that we consume." (Joyce Msuya, Deputy Executive Director, UN-Environment).

A green economy is people focused. It's high time that people need to understand their shared accountability towards the environment along with enhancing economic, social & natural wealth and prosperity. A green economy extends opportunities for sustainable livelihoods and

employment (Coalition, 2019). At this point of time, the role of an entrepreneur rather, *Ecopreneur* turns to be of prime importance. An ecopreneur layout innovative ways towards investing in sustainable natural processes. The green business framework has been indicated as the key sustainability pathway for the humanity (Chyne, 2020; Potluri & Phani, 2020). Many researchers have attempted to explain the concept of eco-innovation. Shukla (2019) has discussed various green strategies through a systematic conceptual framework. Although consistent research has been done on mentoring the social entrepreneurs (Raman & Vijayalakshmi, 2015), but effective mentorship on eco-entrepreneurs may bring a significance change in the perception towards creating green business. The present study is an addition to the existing literature emphasized on green entrepreneurship by presenting prominent cases of Indian ecopreneurs from varied sectors along with the push and pull factors which are faced by 'Ecopreneurs' in their way to develop a sustainable environment.

2. Review of Literature: Green Economy and Eco-entrepreneurship

The idea of green economy originated from a report of UK Department of the Environment, which put forth the potential benefits of funding the green sectors to tackle the economic recession and to draw a framework for long-term financial stability and to combat with the ecological degradation (Barbier E., 2009; Dalal-Clayton, 2013). Green economy is all about re-organizing the entire business process and infrastructure to attain organizational & economic goals, while at the same time it takes the edge off the carbon emissions, pollution and environmental risks and more importantly managing industrial waste (Dalal-Clayton, 2013a). The emergence of the Green Economy is regarded as a new line up towards sustainable economic and social development, removal of poverty and a betterment of quality life of people. A sustainable economic growth of a country largely depends on the pattern which industries and organizations tend to follow. A continuous focus on green strategies will promote sustainable growth in business. In this matter, 'green entrepreneurship' has been adulated globally as one of the key expedients, although the identification and acceptance of green entrepreneurship is still in its budding age (Ahmad et al., 2015; Soomro et al., 2019). A report on the Green Economy, by UNEP (2011) has already pointed out eleven various sectors which are considered to be prospective for the conversion towards a green economy. They are – water, agriculture, forest & fisheries. As stated, these sectors have the optimum potential of natural capital for renewable energy, manufacturing, construction, transport, tourism and many more. This report convinces that

greening the economic statue does not hinder its growth, rather it paves new ways towards financial and social development by generating employment and results in removing poverty(Dalal-Clayton, 2013a).Flygansvaer et al., (2019) examined the significant factors of recycling business which act as a driving force to sustainable economy. They emphasized on strategic knowledge driven framework and systematic investments in technology and innovation for recycling business solutions.Beside this, several studies (Chyne, 2020; Potluri &Phani, 2020) put forth the importance of creating stimulating environment for women eco-entrepreneurs through proper education backup, skill centric training programs,infrastructural support and ease of loan formats for the development of female owned green businesses. Several studies have focused on the green practices which could be followed in hospitality sector. Ecotourism plays a contributory role in upholding green economy by systematic branding and marketing drive (Kaur & Arora, 2018).However, shifting towards a green business do comes with several structural constraints like high innovation costs, insufficient capital and a skeptically demand which hinders the entrepreneur's vision towards going green (Shukla, 2019).In this context, (Dasgupta & Sahay, 2011) mentioned the issue of reluctance of customers for changing mindset and trust in new and innovative products and services. The study states that an innovative concept may take time to get accepted by its potential users.However, it has been found in the studies that educated and conscious customers have more acceptance and adaptability towards green products (Srivastava & Chawla, 2017). This calls for a wide awareness programs at Government's and organization's end to develop a conscious adaptable mentality for ecofriendly products and services. Not only that, by considering the significance of adopting green technologies and procedures, the industries may be successful in building a green identity which presents a 'go green' image of the organization for creatingeco-friendly customers (Guan et al., 2020).

3. Objective of the Study

The present study aims to exhibit an immediate call for ecopreneurs to build up a green economy. It is an addition to the existing literature emphasized on green entrepreneurship by presenting prominent cases of Indian ecopreneurs from varied sectors along with the push and pull factors which are faced by 'Ecopreneurs' in their way to develop a sustainable environment.

4. Methodology

This is a conceptual study and the data has been gathered from an extensive literature survey from various research papers, articles and secondary reports. Also, a substantial study has been done to

present prominent cases of green entrepreneurship from diverse sectors of eco-entrepreneurs in India.

5. Green entrepreneurship: the 'PUSH' factors

As the human race is gradually moving towards a massive technological advancement, the more this planet has been grabbed by social and environmental challenges. Climate change, pollution, natural resource exhaustion, health hazards are few in the list. Despite of this fact, economic survival is dependent on such developments which are resulting in devastating consequences(Hart, 1997). Not very lately, researchers and environmentalists are trying to push forwards the benefits of 'Green Lifestyle' in the society. A big concern for the environment, lead to environment-friendly products in the market. They include choice of raw materials, manufacturing process, technology used and importantly the waste management(Manaktola&Jauhari, 2007). Over the years, the awareness of green business and its benefits has been explored by both, researchers and corporate. Business is moving towards sustainability.

Entrepreneurs turned 'Ecopreneurs' are trying to explore new and innovative avenues towards green business and green growth. Ecopreneurs are persistently looking for eco-friendly opportunities for business growth and to make profits(Volery & Thierry, 2002). Ecopreneurs, who are also termed as green entrepreneurs possess certain distinct qualities of taking risks, highly motivated and they do a constant allegiance towards the ecosystem and the economic sustainability of the nation (Farinelli et al., 2011; Sharma, 2017). Yet, a major portion of the business world, especially in developing countries are facing challenges in setting up green business due to limited resources and a lack of supportive mechanisms (Ponzi, 2019). Researchers have presented a green business model to facilitate ecopreneur and to achieve distinct goals. Even innovation-driven niche market can be developed for eco-friendly products & services to motivate customers and switching their interest towards local products and encouraging them to use sustainable products & services. Green entrepreneurship not only supports the growth of socio-economical development but also helps in changing the mindset of people towards achieving sustainable development (Gast et al., 2017).

6. Entrepreneur to ecopreneur: a challenging transformation

Ecopreneurs face many hurdles in comparison to the mainstream entrepreneurs. Linnanen (2005) put up his arguments that challenges are right from the creation of green markets for environment-

friendly products and services; to face hardships in finding investors for their green ideas, ecopreneurs tend to face challenges in attracting financier's interests and obtaining investment for their startups. Also, the ethical approach of the entrepreneur takes into major consideration including the urge to make only profits out of his business.



7. Green business opportunities in India: the present scenario

Entrepreneurs of a developing nation like India, it tries to develop products that should be cost-effective and also help develop a green economy (Mathur & Tandon, 2016). The below table shows a short and summarized compilation of few significant green businesses that have been carried out by Indian ecopreneurs.

S. No.	Product	Location	Description of business
1.	Male Grooming	Gurugram	The entire product range is free from harmful

	Startup		chemicals and is infused with essential oils.
2.	Eco-Friendly Bags	Ahmedabad	Eco-friendly jute bags.
3.	T-shirts, Caps, and Bags	Delhi	They collect pre and post-consumer packaging waste from factories, offices, hotels, motels, and institutes. This waste is recycled into products to manufacture T-shirts, caps, and bags, etc..
4.	One Stop Gardening Solution	Noida	Selling exotic plant species and stratum and offer unique and affordable greens.
5.	Sustainable Urban Farming	Mumbai	An eco-friendly set up that encourages farming among urban citizens and offers workshops, consultancy and gardening resources.
6.	Zero-Electricity Air Conditioner	New-Delhi	It is a low-tech, energy-efficient, and artistic solution enterprise works to the sweltering heat harnesses the power of evaporative cooling.
7.	Bioplastics Carry Bags	Bengaluru	These carry bags are made out of 12-14 biological ingredients like potato, tapioca, organic oil extracted from banana, flowers and other vegetables along with natural starch.
8.	Mitti Cool Clay Products	Morbi-Gujarat	Fridge made of clay and clay products.
9.	Edible Cutlery	Hyderabad	This start-up innovated edible cutleries that are made up of millet, rice and wheat flours.
10.	Compostable Sanitary Napkins	Ahmedabad	Biodegradable & Compostable, using plant-based materials for the leak-proof outer layers of the napkin through Banana fiber.
11.	Organic Clothing	Tirupur	India's first online shopping store for organic

			clothing, which are mostly made of organic cotton and bamboo.
12.	Innovated a new process to extract Fiber from banana stems	Pune	Created a simple mechanical process where a machine can efficiently extract the fiber. This banana fiber extracting machine can be easily operated by unskilled workers and gives a maximum output of fibers. These eco-friendly fibers have suitable properties like low density, appropriate stiffness, highly disposable and renewable.
13.	Handmade Paper (100% wood free and eco- friendly and eco 100% recycled handmade paper)	Sanganer, Jaipur, Rajasthan	This company has come up with a wide range of Handmade Floral Paper, Handmade Crocodile Paper, Handmade Batik Paper, Handmade Embossed Paper, Handmade Dew Paper, Handmade Leather Paper, Handmade Paper Note Book, Handmade Paper Bags, Handmade Paper Stationery, and many more.
14.	Electric Vehicles	Bengaluru	This start-up has been initiated by a pro-environment consciousness Go GreenEOT (Energy of Things). This enterprise has committed itself to search for and build an eco-friendly solution for its loyal consumer segment.
15.	Hydroponics and Vertical Farming	Delhi	Under this innovative process, products are grown in humidity-controlled greenhouses, using proprietary hydroponics and vertical farming systems, in an ecologically sustainable manner.
16.	Bamboo House	Hyderabad	A business that offers sustainable livelihood opportunities by utilizing bamboo as a low-

			cost eco-friendly substitute for wood, steel, and plastic.
17.	Sustainable Footwear	Mumbai	A sustainable fashion brand that conceptualizes and manufactures upcycled, handmade, and locally crafted footwear and are manufactured by hand with utmost attention through local artisans and workers using Eco-friendly up-cycled materials. Straps From Scraps, Soles From Recycled Tyres.
18.	Natural Gas (Bio-methane)	Jaipur	An innovation-based waste to energy company that specializes in renewable energy and enriched organic manure from dry as well as wet organic waste.
19.	Chemical Free Home Care- Complete range	Chennai	Chemical-free detergent, Fruit-based detergent, etc.
20.	Skincare products made of Donkey Milk	Delhi	Organic beauty products manufactured by the most unexpected of ingredients including Donkey Milk.

Source: Compiled by Authors

8. Conclusion

Green Entrepreneurship is undoubtedly a stream of knowledge that is bridging the gap between the conventional business needs and sustainable growth of an economy, benefitting the society and environment as a whole. Although the ecopreneurs are stuck up with several challenges but opportunities are enormous in this front and there is a massive need to strategically analyze and scrutinize the possibilities. Indian ecopreneurs are coming up with a wide range of creative and innovative business ideas which have been exhibited as a notable support in sustainable business models. However, sufficient studies support the significance of mentoring social entrepreneurs, but more research may be carried out specifically for mentoring green entrepreneurs (Raman & Vijayalakshmi, 2015). The present paper contributes to the prevailing literature on the cases of

various Indian green entrepreneurs by categorizing their locations and potential possibilities at various sectors.

9. Limitations and future research

The present study is limited by its conceptual framework and the presentation of secondary data through various Indian eco-entrepreneurial cases. However, a significant contribution may be done by carrying out a qualitative research in this area to understand the gaps and ground reality challenges of ecopreneurs through in-depth and focused group interviews. This kind of substantial work shall offer key inputs to the policy makers to formulate a better support action plan to promote more green entrepreneurs in the country.

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32. Privatization of Higher Education in India-Its Issues and Concern

- **Kamalesh Karan**, Assistant Professor in Education, Kalyani Mahavidyalay, Kalyani, West Bengal, E-mail: kamaleshkaran27@gmail.com
- **Dr. Ajit Mondal**, Assistant Professor, Department of Education, West Bengal State University, Barasat, Kolkata, West Bengal, E-mail: mondalajit.edn@gmail.com

Abstract

India has the third-largest higher education system in the world. In India, higher education has experienced phenomenal growth since independence. The higher education system plays a pivotal role in the country's overall development. The mission of higher education is to achieve equality, justice, quality and create a knowledge society. Privatization is one of the most important universal trends in higher education in India. The government of India introduced new economic policies namely globalization, privatization and liberalization (LPG) to increase employment, decrease unemployment, output and income opportunities and achieve economic development at an international level. As a result, private educational institutions are growing day by day. As of 1950 after the independence of India number of universities was about 25. As of 2008, several private universities were about 11. But now, the UGC report on 1st February 2020, the number of universities had gone up to 935 universities where 409 state universities, 50 central universities, 127 deemed universities and 349 private universities. With privatization on education, the students will be able to receive higher education easily. On the whole, privatization on education not only increases the cost but also decreases the quality of education. Thus, privatization has both positive and negative impacts on education and society. This research paper is an attempt to focus on the present scenario of the Indian higher education. It also seeks to answer to why the private sector needs to step into the higher education sector and the impacts of privatization on higher education system in India.

Keywords: Privatization, Higher Education, India, UGC, education system, LPG.

Introduction

India is the second biggest populated country in the world. The higher education system in India is the third-largest and oldest in the world, next to China and the United States. So, there was a need for privatization of higher education in India. There are not that many colleges and universities run by Govt. bodies like UGC, NAAC, NCTE, AICTE either state or central which fulfill the requirement of such huge numbers of students. Higher education is a global

phenomenon. The higher education system plays a central role in the country's overall development including an increase to human resource, industrial, social, economic, political, cultural etc. The mission of higher education is to achieve equality, justice, quality, employability, inclusiveness (Chowdhury & Mete, 2018), reduce unemployment and create a knowledge society. Education is a human indicator for all to succeed in life and it requires for a nation making and nation-building and promotion of society. That is why; higher education is in great demand. Day by day, an increasing number of students are also a reason for the growing demand for higher education. I think already stated above that government can not absolve itself from the responsibility of providing quality higher education to its citizens. The central and state government is responsible not only for providing access to all its citizens but also for trying to improve the quality and standard of higher education. So, huge investment is required to cater to these growing demand needs. But, in the twenty-first century insufficient funds continues to be a major hurdle in India. Since, India is a developing country, there is very little money allocated to the education sector, most of the money is allocated to the defense sector. Therefore, it is not possible for the government to provide higher education in this background, so the path of the private initiative has been opened in the field of education. So, to tackle the problem of lack of funding, instead of setting up new educational institutions that require huge investment, the priority of the government is to expand the capacity of existing institutions and to open the new educational institutions in higher education in the private sector only (Rather, 2019).

The privatization of higher education institutes has three forms- Government self-financing, Government aided private self-financing and completely private institutes. It has brought about a rapid change in the present educational scenario of India. Privatization encourages the individual and society to establish schools, colleges, and private universities to meet the growing demand for education. As a result, private educational institutions are growing day by day throughout the country. Hence, this paper highlights some issues i.e. what are the present scenario of higher education in India? Why does the private sector need to step into the higher education sector? What are the impacts of the privatization of higher education? These issues have been attempted to discuss here.

Objectives of the Study: The following objectives of the present study emerged in the mind of the researchers:

- 1) To define the concept of privatization,
- 2) To highlight the present scenario of higher education in India,
- 3) To analyze why the private sector needs to step into the higher education sector,
- 4) To examine the impacts of the privatization of higher education.

Methodology of the Study:

To conduct the present study the researchers adopted the analytical method and its approach was qualitative for analyzing the existing literature to fulfill the above-cited objectives of the study. However, the study has been developed by exploring and analyzing comprehensively huge qualitative and quantitative data obtained from both primary and secondary sources.

Conceptualizing Privatization

Privatization is a well-known word. In the areas of business and industry, it has covered a wide area but in recent times it has entered into education and academic area. Today the programmers related to the private sector expanded too much that the word of revolution can be used for this. Generally, privatization means a shift in the ownership, management, and center of education institutes from the public to the private sector (Kumar, 2017). The control is in terms of decision making and responsibility of money and administration (Baweja, 2017). But in a broad sense, it implies the opening up of the private sector to areas, which were hitherto reserved for the public sector. The salient feature of privatization is a gradual transformation of public enterprise into private enterprise or organization. As a whole, it is a process that can be defined as the transfer of activities, control, decision making and responsibility of money, assets, management, and administration from public institutions or organizations to private enterprise or authority, individuals and religious organizations.

Privatization of higher education of India economic reforms was introduced in 1991 with the initiation of the Liberalization, Privatization, and Globalization (LPG) Policy. In the recent decade in India privatization of higher education has emerged in several forms. The first form is Privatization within government higher education institutions takes place in the form of introducing self-financing courses within government institutions. The second form is Converting

government-aided private institutions into the private self-financing institution and third form is allowing self-financing private institutions with recognition and also without recognition (Baweja, 2017). These institutions may be termed as commercial or profit-making or money-making private higher education institutions. Private Institutes are mainly allowed to set up state private universities, deemed university and academic institutions with foreign collaboration. As a result of this, the role of privatization of higher education in India is increasing day to day and the role of government in education is decreasing.

Present Scenario of Higher Education in India

In India, the higher education system includes both private and public (state, central & deemed) universities. Public universities are supported by the Government of India and the state governments, while private universities are mostly supported by various bodies and societies. Universities in India are recognized by the University Grants Commission (UGC). The University Grant Commission (UGC) was set up on 28th December 1953, became a statutory body of Government of India by an Act of Parliament in 1956, under Ministry of Human Resource Development (MHRD) for the coordination, determination and maintenance of norms and standards of teaching, examination and research in college and university education.

The growth of private institutions of higher education has brought about rapid change in the educational scenario of India. The higher education in India has witnessed many-fold increase in its institutional capacity since independence. During 1950 and 2008, the number of universities has increased from 20 to about 431, colleges from 500 to 20,677 and the teachers from 15,000 to nearly 5.05 lakhs. Accordingly, the enrolment of students has increased from a mere 1.00 lakh in 1950 to over 116.12 lakhs in 2008.

Table - 1: Institutional Capacity

Capacity Expansion in Higher Education		
Institutional Capacity Indicator	1950	2008
Number of University Level Institutions (Including 11 private universities)	20	431
Number of Colleges	500	20,677
Number of Teachers	15000	5.05 lakhs

Number of Students Enrolled

1 lakh

116.12 lakhs

Source: UGC, higher education in India Issues related to Expansion, Inclusiveness, Quality and Finance, 2008.

Table - 2: Type of Universities in India

Type	September, 2008
Central Universities	25
State Universities	230
Deemed Universities	113
National Importance (State)	05
National Importance (Center)	30
Private Universities	28
Total	431

Source: UGC, higher education in India Issues related to Expansion, Inclusiveness, Quality and Finance, 2008.

During 2008 and 2020, the number of universities has increased from 431 to about 935 where 409 state universities, 50 central universities, 127 deemed universities & 349 private universities. At the time of independence, there were only 20 universities but now in the higher education system 935 universities have increased. India has 935 universities which are situated twenty-nine states and three union territories. The state of Karnataka & Uttar Pradesh of India the most 31 state universities and Uttar Pradesh the most of 06 central universities are situated Tamil Nadu is the state which the most number of 28 deemed universities and Rajasthan has the most number of 51 private universities. Delhi has five central universities of the largest number of all union territories. Accordingly, the total enrolment of students in higher education has increased from near about 116.12 lakhs in 2008 to 37.4 million in 2019. At a glance, universities are depicted in the following figure.

Table - 3: State, Central, Deemed and Private Universities in India

Sr. No.	Name of States	State University	Central University	Deemed University	Private University	Total
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1	Andhra Pradesh	22	01	05	06	34
2	Arunachal Pradesh	-	01	01	08	10
3	Assam	15	02	01	06	24
4	Bihar	08	04	01	07	20
5	Chhattisgarh	14	01	-	12	27
6	Gujarat	30	01	03	38	72
7	Haryana	19	01	06	23	49
8	Himachal Pradesh	05	01	-	17	23
9	Jharkhand	11	01	01	15	28
10	Karnataka	31	01	14	19	65
11	Madhya Pradesh	23	02	01	35	61
12	Mizoram	-	01	-	01	02
13	Meghalaya	-	01	-	08	09
14	Manipur	03	03	-	02	08
15	Nagaland	-	01	-	03	04
16	Odisha	18	01	03	07	29
17	Punjab	10	01	02	15	28
18	Rajasthan	25	01	07	51	84
19	Sikkim	01	01	-	04	06
20	Tripura	01	01	-	01	03
21	Uttar Pradesh	31	06	09	29	75
22	Uttarakhand	11	01	03	17	32
23	West Bengal	26	01	02	10	39
24	Delhi	08	05	10	-	23
25	Chandigarh	01	-	01	-	02

26	Jammu and Kashmir	09	02	01	-	12
27	Maharashtra	24	01	21	16	62
28	Telangana	18	03	03	-	24
29	Tripura	01	01	-	-	02
30	Kerala	13	01	03	-	17
31	Tamilnadu	22	02	28	-	52
32	Puduchery	-	01	01	-	02
33	Goa	01	-	-	-	01
	Total	409	50	127	349	935

Source: www.ugc.ac.in

So, after independence, there has been a phenomenal growth in all these numbers. From the above discussion, it is evident that in every state of India, the public university as well as the private university has increased significantly.

Table - 4: Gross Enrolment Ratios (%)

Higher Education	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Total %	19.4	20.8	21.5	23.0	24.3	24.5	25.2	25.8	26.3
Female %	17.9	19.4	20.1	22.0	23.2	23.5	24.5	25.4	26.4
Male %	20.8	22.1	22.7	23.9	25.3	25.4	26.0	26.3	26.3
Schedule Caste %	13.5	14.9	16.0	17.1	19.1	19.9	21.1	21.8	23
Schedule Tribe %	11.2	11	11.1	23.0	13.7	14.2	15.4	15.9	17.2

Source: AISHE academic year wise, Govt. of India, MHRD, New Delhi.

The Ministry of Human Resource Development (MHRD) under Government of India, Press Information Bureau (2018) reported that the 12th Plan document has fixed targets of 25.2 % Gross Enrolment Ratio by 2017-18 and 30% GER by 2020-21. As per All India Survey on Higher

Education (AISHE), Gross Enrolment Ratio (GER) in Higher education in India has increased from 19.4% in 2010-11 to 26.3% in 2018-19 which is calculated for 18-23 years of age group.

Need for Privatization of Higher Education in India

Education is universally recognized as an important investment in building human capital. Providing education to one and all has been one of the primary duties of the government. In the present situation, the share of the government in total spending on higher education has reached a stage beyond which it is difficult, for the government to sustain the present level of funding. In this context, to assess the impact of privatization, many committees were appointed. Punneya Committee set up by UGC (1993) and Swaminathan Panel constituted by AICTE (1994) has a consensus that one of the major sources of income is the fee from students (Gautam, Parihar & Khare, 2015). Besides, the Government of India, through Prime Minister's council on Trade and Industry, appointed a committee headed by two noted private-sector industrialists Mr. Mukesh Ambani and Mr. Kumarmangalam Birla to suggest required reforms in education sector along with other sectors (Tilak, 2002). They stressed that government should focus on development of primary and elementary education only and the responsibility of higher education should be delegated to private sector alone. From this perspective, the need to privatize higher education in our developing country in India because of following reasons:

- 1) To ensure the rising demand of quality and standard higher education with rapid growth population in India.
- 2) To reduce financial burden on central and state government for decentralization of higher educational institutions.
- 3) To ensure the norms of quality education and training not quantity according to global needs.
- 4) To expose the students and teachers to international education standards thereby throwing better job opportunities for employment on a global phenomenon.
- 5) To fulfill the need for skilled manpower with liberalization, privatization and globalization (LPG) in India.
- 6) To increased demand for enlightened work force and entry in a foreign country universities.

- 7) To facilitate information technological developments and synergy for information based economic development.

Impact of Privatization of Higher Education in India

In India there are two types of impacts of privatization of higher education –

A. Positive Impacts of Privatization of Higher Education

- 1) **Easily access to higher education:** Higher education has become easier due to privatization. As a result, the number of educational institutions i.e. colleges and universities has increased day to day. Again different methods of communication are developed. So, the teaching and learning process can be done anywhere and anytime.
- 2) **Education that will be delivering to all:** India has a population of nearly one hundred and thirty five cores according to national census 2011. As a result, the proportion of students opting for higher education in India is increasing at a rapid rate day to day. By privatization of education, the students will be able to receive higher education easily.
- 3) **Job opportunity:** Privatization of higher education causes the generation of job opportunities in different fields like as graduates, post- graduates, researcher and trainees. Generation of employment and income opportunities to educated youth is positive impact of privatization of higher education in the Indian labour marketplace.
- 4) **Relief from financial burden:** Privatization of higher education diminishes the financial burden of the state and the central governments on higher education.
- 5) **Quality of education and training:** The quality higher education can also be provided by private sectors. As we know, government is facing acute lack of funds and grants given by government for higher education have been decreased on a drastic scale. On the other side, day by day demand of higher education in India is increasing and only private intuitions can be met increasing demand. As a result, only feasible way is privatization of education.
- 6) **Students' freedom to their choice:** As a result, privatization of higher education, students have the opportunity to enroll in various kinds of courses and subjects like professional course of their different choice. Moreover, students are simply becoming job-oriented and getting jobs.

- 7) **Competition:** Privatization of higher education brings about radical structural changes providing momentum in the competitive sectors.

B. Negative Impacts of Privatization of Higher Education

- 1) **Education cannot be commercialization:** We are not supposed to do business in the name of imparting knowledge. Because according to the constitution of India, education is a fundamental right for every child in India. According to Aristotle, knowledge is one of the most important virtues that define the character of a person.
- 2) **High cost of education:** Privatization increases the cost of higher education. The authority collects different fees to increase its income. This situation it is beyond the fixed capacity of poor and middle income groups.
- 3) **Poor teaching faculty:** Mushroom growth of private educational institution demands qualified and experienced faculties to provide quality education and earn good name in the public. But their staff is not properly qualified and failure to ensure quality teaching in private education due to the hiring of under-qualified teachers and by failing to ensure domestically competitive salaries .
- 4) **Lack of quality education but restless work:** Privatization has made education poor quality but a restless service. Students are made busy with memorization, assignments, projects and test writing where freedom is not possible in the educational competitive world. So, this quality education compromise in private educational institution is violating right to education. Qualitative and standard of education is not fulfilled in privatization because its only purpose is more profit and business.
- 5) **Lack of transparency:** There is lack of transparency in private sector and stakeholders do not get the complete information about the functionality of the enterprise.
- 6) **Partiality:** The teachers and authorities of institutions show partiality towards the students in the name, caste, sex, relatives, religion, language, dress sense, economic condition and region. It does not yield healthy environment in the educational institutions.
- 7) **Exploitation of teachers and students:** The impact of privatization on education, the private institutions for the commercial benefit they pressure on the teachers and give over burden of work for the whole day. They don't get sufficient amount of money based on their hard working. As a result teachers are exploited. But on the other hand, the students

have to pay a large capitation fee which is a burden to them. So it can be said that privatization is a profit-making business.

- 8) To create a discrimination society:** It is often argued that merit must not be compromised at any cost. But privatization making education a privilege to be enjoyed by the elite class. Though, the students of weaker sections of society don't have chance admission to private institutions because these institutions are high capitation fees. So, it can be significantly said that privatization on education helps us to create a discrimination society.

Concluding Remarks

As a concluding remark, it must be stated that there is a definite trend towards privatization of higher education in India because of day by day the Government reduce in the investment in higher education sector. The entry of private enterprises would ease the burden of the government in providing higher education to its citizens. At the same time, the Government cannot absolve itself from the liability of providing education to its citizens because education is the fundamental right to every child according to Indian constitution. It must be ensured to us that the entry of private enterprises into the scene does not lead to commercialization of education. There has been a lot of criticism against privatization in education. The huge privatization of education would deprive a large section of students in society of Indian from the ambit of higher education. Others believe that privatization in education is essential. On the whole, they believe that with the entry of the private sector in the field of education in India, an improvement in the quality and standard of education could be achieved through a balanced relationship between both government and private institutions. Mr. Ahluwalia has agreed this statement. Now a day, higher education is accessible to all, even to the rural and remote area students. In fact the effect of privatization has increases the quantity of degree holders and unemployment not only in India but throughout worldwide. In the 21st century, private enterprises should keep in remember that pupil is more important than education and money. So, private enterprises or authority, individuals and religious organizations should run the educational institutions for the welfare of the man and society at minimum cost.

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33. Pre-Primary schools are the Stepping Stone for Sustainable School Education: an Investigation

- Happy Saikia, Research Scholar, Department of Education, Tezpur University, Assam
- Prof. Nil Ratan Roy, Professor, Department of Education, Tezpur University, Assam, Email: happysaikia4ed@gmail.com

Abstract

Sustainability refers to a socio-ecological process characterized by the pursuit of a common ideal and a collection of methods to create and sustainable development and also requires expending both the breath of factors involved in creating and implementing policy and the depth of their involvement which seeks to relieve poverty, create equitable standards of living. A sustainable school implies a "whole-school" approach; that extends beyond the curriculum and addresses the entire planning, operation and management of the school facility. School sustainability policies can reinforce what is taught about sustainability in the classroom, improve the school's own carbon footprint and strengthen public relations with the surrounding community. The importance of life-long learning to the development of sustainable societies is widely recognized, and pre-primary school education relates to the first and most influential stage of the learning life course. It is during the early childhood or pre-primary school period that the bases of later development are laid; specialist in the field of child care and development are acknowledging education of children below the age of six years is of great importance when viewed from various angles. Pre-school education for sustainability encompasses the unfolding needs of children to make them a mature citizen. The present study has been designed to explore in what extent the pre-primary education is aligned with goal of sustainable education, to curricular and co-curricular activities of Pre-Primary schools responsible for sustainable schools responsible for sustainable education and the challenges that are faced by the schools in adoption of sustainable practices among the Pre-school children. The present study has been carried out with 30 pre-school teachers and 10 head of the pre-school institutions in 10 pre-primary schools of Sivasagar district of Assam.

Key words: School sustainability, Pre-primary education, stepping stone.

Backdrop of the study:

Education India Journal: A Quarterly Refereed Journal of Dialogues on Education, A UGC- CARE List Journal, ISSN 2278-2435, Vol. 10, Issue-2 May-2021. Page 436

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has”

-Margaret Mead

Sustainability is a socio-ecological process characterized by the pursuit of a common ideal and a collection of methods to create and sustain development and also require expending both the breath of factors involved in creating and implementing policy and the depth of their involvement which seeks to relieve poverty, create equitable standards of living. Education was recognized as an essential element to generate awareness and cultivate understanding(Wals,2009).

A sustainable school implies a "whole-school" approach; one that extends beyond the curriculum and addresses the entire planning, operation and management of the school facility. School sustainability policies can reinforce what is taught about sustainability in the classroom, improve the school's own carbon footprint and strengthen public relations with the surrounding community.School is the place where children spend most of their time and the future of human life written with the learnings that are taken place in the school. The early childhood years of human life are very crucial, research proves that the children who receives proper care and nourishment during this period likely to have good social skills, fewer behavioural problems (chuangho,2005). Parents are the children first teachers but where both parents are working and with growing number of neutral families and single parent requires early childhood education for holistic development of a human being (Noddahl,2008).

Educational organizations can be seen as a reflection of society and societal evils can be seen in our schools or regional institutions that is not a surprising thing. Thus, the schools or educational organizations are the right place to instil value education for sustainable development. Sustainable education is a dynamic concept that encompasses a new educational vision that shape the human being to live in a better world. An education that tries to establish balance between human well-being, cultural traditions and respect for the mother earth should be main focus of an educational institutions to achieve a sustainable society(Pearson&Degotardi, 2009).

UNESCO has outlined a number of dimensions related to sustainable development to have a sustainable future related to environmental, economic growth, socio-cultural perspectives, human rights, peace, gender equality, human security, disaster prevention etc. The United Nations

declared 2005-15 decade as UN decade for sustainability development (DSED) mainly emphasized on education as crucial element for achieving sustainability(UNESCO,2019).

National Educational Policy, 2020 has given importance on early childhood education. It is clearly mentioned that school education should start from Pre-primary education. It has been found that 85% cumulative brain development occurs during the early ages of human being i.e., prior to the age of 6 years; Special care and education provided during the periods helps to shape a good life. Pre-school education for sustainability encompasses the unfolding needs of children to make them a mature citizen(NEP, 2020).

The real ideas of sustainable education addressed in the Gothenburg Workshop addressing the role of pre-primary education for sustainable society, the workshop formulated the ideas to help teachers, caregivers, parents to create a new way of assisting young children to learn and think faster that are known as ‘minds on’ and ‘hands on’. To make sure the children receive the best possible education sharing a common goal in-spite of having diversified background(Blatchford, Smith, Samuelsson, 2010).

The early years of human life begins to form a strong self-images and both positive and negative attitudes towards society; there is already a growing literature evidence the value of pre-primary school education to transform the existing systems and educate the young child to live a life with positivity, research proves that children from 2-5 years start becoming aware about the ongoing social behaviours and if the children during these period train to acquire skills to respect all the elements of society and remove heatedness and turn negativity into positive; there will have a society with responsible citizen (Hagser&Sandbberg,2011).

Sustainable school is need of the hour

Every citizen should ponder own small contribution towards sustainable society. The notion of sustainable development should bring new ideas and behaviours to pre-school education as well, the preschool education fosters ideas to children that assists children through its pedagogical activities to contribute small-scale sustainable development and form an attitude to protect environment and save society from all kinds of negativities (Qemuge, Mongolia&China, 2008).

Pre-school education should play an important role in fostering sustainable lifestyle since this period of human life is the most decisive period thus, educating children during this period to form habits of respecting others, remove any kinds of biases, prejudices and developing a nonethnocentric approach is an essence of the hour(Ohri,2020).

As Hopkins, (2007) suggests; since early childhood years are crucial in the development of human life; in order to begin a new life style and introduce new ways of living it must start from the pre-schools itself; the key to the future would be providing quality education from the early years of human life and making the child aware about all the societal activities and about preventions. Indeed, education is the main solution to all the problems be it social, environmental, economical; social equality, protection of environment, economic growth; these three are the main pillars of sustainable development. Creating a balance among these factors' sustainability can be achieved (Fuentes,2008).

The above discussion has revealed that pre-primary education plays a very vital role in primary education, i.e.,it gives the strong foundation for the better and sustainable school education. Government of India has also realised it rightly and emphasised utmost importance in their level of education through NEP, 2020. Now, this is the right time to validate the mission of NEP, 2020 and justify the importance of pre-primary education in the context of MDG (Millennium Development Goal). Keeping in the mind the above-mentioned facts the researcher has made an attempt to justify the objectives of pre-primary education in the context of sustainable school education in Assam. The researcher has done an intensive review of literatures on this area, however, hardly any study found on pre-primary education in Assam. Hence, the researcher has designed the present study with the following objectives.

Objectives of The Study:

- i. To explore in what extent the objectives of Pre-primary education are aligned with sustainable school education.
- ii. To explore the curricular and co-curricular activities of Pre-Primary schools responsible for sustainable school education.
- iii. To study the challenges faced in adoption of sustainable practices among the Pre-school children in Sivasagar, Assam

- iv. To suggest some possible remedies for sustainable development among the young children.

Delimitation of the study:

- The present study is delimited to the Pre-primary schools of Sivasagar, Assam.

Research Methodology:**Study Area:**

The present study has been conducted in Sivasagar district of Assam.

Method of the study:

The present study has been carried out using exploratory research method and it is qualitative in nature.

Population& Sample

The total number of pre-primary schools are unknown in the Sivasagardistrict of Assam. Therefore, the researcher considered all the pre-primary schools situated in the Sivasagar district as the population of the present study.

It has been observed that majority of the schools are running almost in same style and same standard. Therefore, the researcher has chosen10 pre-primary schools of Sivasagar district through simple random sampling as well as convenient sampling technique as the sample schools. Again, out of which the researcher has collected necessary data and information from 10 head master/mistress and 30 teachers of those selected school.

Tools:

For the present study two self-developed tools has been used; the tools are:

- i) One semi structured interview schedule has been prepared for the head of the institutions; the present tool includes 28 items based on the following dimensions:
 - a) Curricular&Co-curricular Process
 - b) School Environment

- c) Challenges in pre-primary schools
- ii) The second tool is an open-ended questionnaire which has been developed for the pre-primary school teachers. The present tool has 27 items based on
 - a) Curricular&co-curricular process,
 - b) School Environment,
 - c) Teacher-Parent's relationship
 - d) Teacher- Child relationship

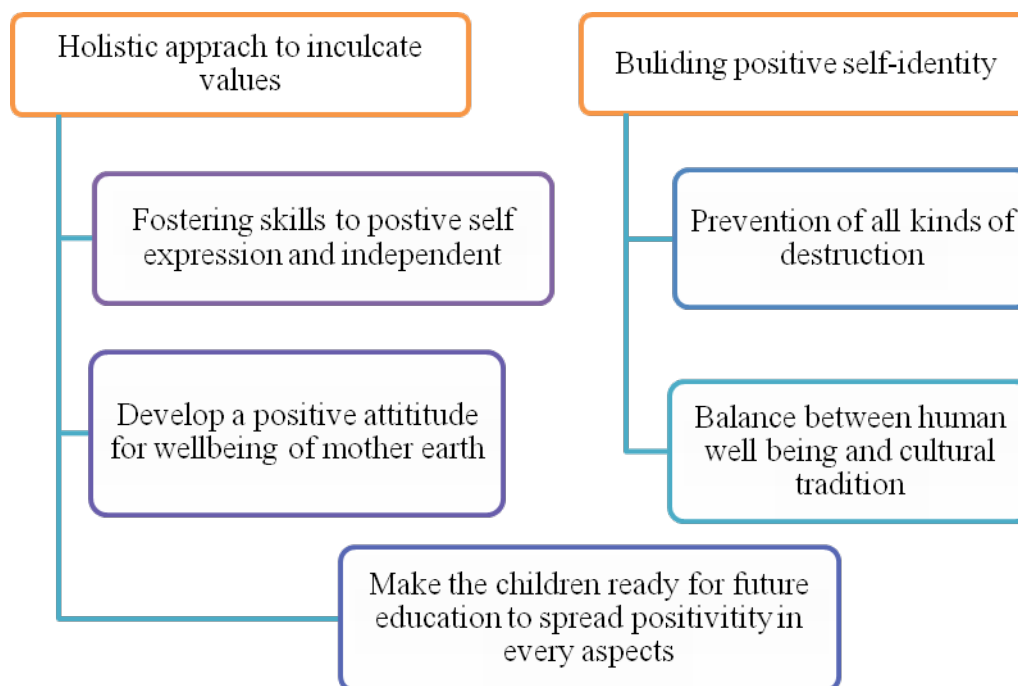
Procedures of data collection:

The researcher has personally visited the schools and established a rapport with the head of the institutions and conducted semi structured interviews; initially the researcher asked the questions to the head of the institutions and the data provided by the head of the institutions were recorded accordingly in the recorder as well as in notebook. Secondly, the researcher has distributed the questionnaires among the teachers by providing requisite directions and instructions and data were gathered from them.

Results and discussion:

Section-1

- **Objectives of Pre-primary education aligned with sustainable school education**



Pre-primary education cultivates core values in children's such; awareness, values, knowledge and habits to shape an influential life that can help to build a sustainable society. And it is found that it has greater contribution to transform ideal sustainability into reality.

However, in Sivasagar the pre-primary schools support the young children to achieve sustainable school education by learning to take relevant actions through adopting some behavioural practices such as being sensitive towards the society and its every element.

It is crucial to assist the young children to make them understand and the relationships with the wider nature and society and its diversity; but these learning concepts are quite difficult for making the young children understand. Thus, many of the pre-schools in Sivasagar provides an integrated curriculum content which reflects the young children needs, abilities to perform tasks and experiences and development of potentialities in order to sustain values, respect towards all the generations and for every resources of its surroundings to build a sustainable society.

It has been observed that the pre-school curriculum contents of 'understanding oneself' 'what are my friends; "who I am" understanding others, gender equality, diverse culture, etc by

introducing such contents trying to establish equality among the people with diversity; so that people realise about the importance of knowledge to understanding life and its relationships with the society and ecology, it has been helping to making people realize specially from the remote areas that their children are enjoying the same quality education with the urban children; and which is cultivating a sustainable mind in the children; thus, the interest towards the Pre-primary education or early childhood education is increasing in recent years.

It is found that pre-schools are trying to create an environment of 1990s where the children learn values and different activities from their family members since during that period families used to stay together with all the extended members; children were surrounded by their grand-parents and other members; they could learn different stories, fairy tales which assist to cultivate values, and a positive self-image and becomes more responsible for their activities. Therefore, the schools create an environment where children can learn those fairy tales of value education to becoming aware and responsible for the environment where they live and practicing activities through celebrating events like: grandparents' day, parent's day, national events, folk festivals, environment day, Earth day etc. through which they can learn to resist all kinds of biases, prejudices, violations etc to build a harmonious society.

Section-2

- **Activities of pre-primary education responsible for sustainable school education**

Activities	Extract Values
Role play	Establishing equality and Removing stereotype believes
Character realisation	Building positive self-Identity

Projective technique approach	Problem Solving
Celebration of Folk festivals	Building Unity among Diversity
Field visit	Building an understanding and respect towards one's heritage.
Play-way	Development of potentialities

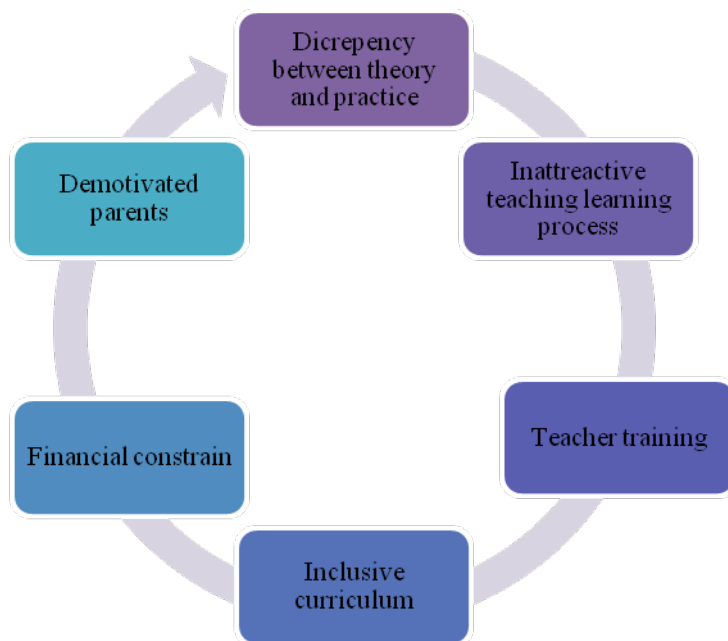
It is seen that the pre-primary schools provide a platform not to form any stereotypes believe through the activities such: equal roles for boys and girls, allowing to play with dolls, cars, wall paintings, using colours irrespective of gender and trying to make an inclusive classroom by assisting children with diversified culture doing familiar activities along with training the young minds to talk positively and feel proud of one's cultural heritage, and respect a person's appearance without keeping any biases.

It is observed that schools are assisting the children to build a positive self-identity by realising about the things they see in television, comics, books and in their surroundings. Since the children 3-5 years age group live in real world, they face many real-life problems related to sustainable development; taking these problems as starting point schools are organizing some activities to provide an opportunity to express themselves and involve with community through participating in different events, visiting special places and find solution to the problems in their own way.

Mainly, it is found that the curriculum of the schools includes a methodology of problem-solving approach through projective techniques and contents are related to environmental issues, promoting values, human rights, children right etc., and the children, parents and teachers interacts related with these issues.

Section-3

Challenges in pre-primary education in the context of sustainable school education



The study reveals that in some of the Pre-primary schools of Sivasagar; the curricular activities which are practicing in the schools clearly show a contradictory picture reflecting a wide discrepancy between theory and practice.Emphasises on teaching 3r's to the children rather than carrying out above mentioned activities.

It is also found that some parents are not interested in the activities which are carrying out by the schools rather they prefer traditional education system of memorizing, writing, calculating, recognizing; they believe that these basic knowledges are more essential to enter in primary schools, however this attitude is not going to help for children self-sustainable development; rather it is creating a boredom towards future teaching learning process.

Another major challenge towards children sustainable development is the financial constrain, since the pre-primary education system in Assam totally under private sector; most of the rural schools and standalone schools face difficulties to carry out activities and organize events for children holistic development.

Early childhood period is the most decisive period of human life the learning taken place during these period lasts throughout the life. Early childhood teachers have the major role towards shaping children future. But it is observed that due to lake of training or skill in some of the school's teachers are unable to equip the young children to live a sustainable life.

Section-4

Possible measures to reduce the challenges in pre-primary education

The Pre-primary schools can find out effective teaching strategy to make the children understand deeply about the sustainable development. We often say that school activities are preaching sustainability of the children but parents and even teachers sometimes get confused regarding their children's understandings. The children what they see in the television and other media is like a fairy tale to them; every parent be it developed or undeveloped areas try to give their best for holistic development of their children. Here are some measures which can be practiced for sustainable school education:

- i) Making the young children understand through teaching-learning process is not enough or not very effective; while taking the children to visit the places in and around the town teachers can help them to develop their understanding through some unaware activities such: asking children to talk with the people they see around, helping one another, sharing their foods with friends and seniors without any biases.
- ii) In present days the children get everything what they want from the families and the pre-school institutions thus, they believe that there is nothing that they can't have; and in such case it gets difficult to make the young child understand about the things that threatens in their around. The schools can take initiative to make the child realise by showing the destroying nature just like destroying their favourite dolls.
- iii) Since the present study area is a historical place and many ancient monuments are there; taking the children to such places and realising about the manmade dirtiness just like making their favourite clothes or toys dirt. This kind of activities can help to achieve sustainable education.

Figure 1.0 Pillars of Sustainable School Education



Educational Implications:

The findings of the present study reveal that an appropriate teaching learning strategy, an inclusive approach can foster skills in the young children to spread positivity in every aspects of life. Therefore, it is a prime duty for the stakeholders to implement the appropriate strategies and methods for wellbeing of the society. Here, probable implications of the present study given below:

- i) The present study would be a great assistance for the policy makers of the pre-primary education to implement an inclusive policy for adopting appropriate curricular and co-curricular activities to establish a sustainable school.
- ii) The present study would be beneficial for the head of the pre-primary school to take some remedial measures to overcome challenges that faced in adoption of sustainable school education.
- iii) The findings of the present study would also assist the teachers to inculcate values in young aspirants for holistic development.
- iv) The parents would also be benefited from the present study to assist their children in building a positive self-identity by fostering skills to positive self-expression and to be independent.

Concluding Remark

Early childhood education for sustainability involves meeting the present and the unfolding needs of children, in order to bring them to self-fulfilment and maturity. It is known from the past researches that education for pre-school children can't be taken into granted; pre-school children are the most important part of educational context where many challenges occur; (Wals, 2009) it is a noble responsibility for the pre-schools to address the challenges and cultivate meaningful learning. All children have the right, as well as a responsibility, to be educated for sustainable development, and overwhelming research evidence shows that it is in the early years that children have the greatest capacity to learn. It is also in early childhood that the foundations of many of our fundamental attitudes and values are first put into place.

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34. Gender Wise Variation and Disparity of Literacy in Hooghly District, West Bengal – An Analysis

- Dr. Atreya Paul , Assistant Professor, Post Graduate Department of Geography, Chandernagore College, email: paulatreya@gmail.com,
- Arup Bhandary, M.Sc, NET, SET
- Bappa Bhounick, M.Sc, NET, SET

Abstract

Education is clearly recognized as one of the key components of policies aimed at solving issues of paramount importance. Policies aimed at improving poverty, public health, reducing infant mortality protecting the environment, strengthening the human rights, alleviating international relations and seeking to gain (UNESCO, 2010). Illiteracy, on the other hand, takes away from man his dignity, perpetuates ignorance, poverty and mental isolation, deters peaceful and friendly international relations and hampers social advancement, economic growth and political maturity (Sawant and Athawale, 1994). Literacy has been considered as one of the prime indicators for socio-economic development of the people of a region. It plays an important role to determine the level of the society not only the economic point of view but also a good sign for healthy environment (Coulombe et al., 2004). Indian education system is presently facing several challenges economically where the development of literacy can make a solution on these problems. Literacy rate is one of the key indicators of development which enhance the human resource of a country. It provides all sorts of required demands and prosperity among weaker section of people. According to census 2011, literacy rate of West Bengal is 77.08% where male literacy rate is 81.69% and female literacy rate is only 70.54% respectively. The literacy rate of Hooghly District is 82.55% and the individual male female literacy rate is higher than state individual literacy. It has also observed that the female literacy rate is lower than the male literacy rate in West Bengal as well as in Hooghly district in both Rural and Urban areas. The research endeavor is to find out the zonal variation and the nature of gender wise disparity in literacy as well as indicates decadal trend in Hooghly district by suitable cartographic and statistical techniques and methods.

Keywords: Social Development, Gender equality, Disparity, Gender Disparity Index, Literacy.

Introduction

Literacy is an important indicator in a society which plays a vital role in human development that impacts socio-economic development of a nation. It reduces ethnic division as well as poverty. Literacy is the most important need for human resource development. Literacy arouses hopes not only in society as a whole but also in the individual who is striving for fulfillment, happiness and personal benefit by learning

how to read and write. (Saha, & G.C Debnath, 2016). Literacy means far more than learning how to read and write. The aim is to transmit knowledge and promote social participation (UNESCO Institute for Education, Hamburg, Germany). Higher level of literacy leads to better attainment of health and nutritional status, economic growth, population control, empowerment of the weaker section and community as a whole. Literacy is a fundamental human right and the foundation for lifelong learning. It is fully essential to social and human development in its ability to transform lives (UNESCO). Strong literacy rate can be seen in urban areas rather than rural areas. Gender inequality or disparity is the main cause behind the low literacy rate in rural areas. The modern period witnessed the increased gender disparity reflected in sex-ratio, literacy and education, employment and wage-rates and several other socio cultural and behavioral indicators of empowerment.(Nangia, 2005). Gender equality is more than a goal in itself. It is a precondition for meeting the challenges of reducing poverty, promoting sustainable development and building good governance -Kofi Annan(Personal, Archive, Mahanta, & Nayak, 2013).Gender inequality in literacy refers to unequal scope in education. Gender disparity or Gender gap in literacy has a negative impact in development. It is now considered as an essential concept for analysis and alleviation of poverty in poor countries like India because of its adverse impacts on a number of valuable developmental goals. Strong gender disparity found in rural areas among SC, ST category peoples. In Urban areas, gender disparity or gender gap in literacy is comparatively lower. Stephan Klasen and Francesca Lamanna (2009) emphasized on Gender Inequality in Education and its adverse impact on Employment and Economic Growth. Gender equality is the key point of social development, a study reveals that female capability of reading and writing power is gradually increase than male one in recent time so reduce of gender disparity not much more a difficulty at present(Reilly.D,L.NeumannandGlenda,2019). They suggested that Gender Equality in Education is needed for overall development of a nation.

Objectives

The main objectives of this study are as follows:

- To analysis the trend and progress of literacy in Rural and Urban areas from 2001-2011.
- To expose the Male-Female Disparity in literacy.
- To compare the trend of Gender gap of Rural and Urban areas between 2001 & 2011.
- To demarcates gender wise and zonal variations of literacy in Rural-Urban areas.

Study Area

Hooghly district is one of the resourceful districts of West Bengal. This district lies near the capital of West Bengal, Kolkata. It is around 200 mt. above sea level. Hooghly district located between 23°01'20" N to 22°39'32" N and 88°30'15" E to 87°30'20" E. The boundary of Hooghly district is covered by the Hooghly river (sharing with Nadia in the East and North 24 Parganas in the South-West) in the East, Bardhaman in the North, Howrah in the South, Paschim Medinipur in the West and Bankura in the North-West. The great river Ganga flows through this district and enhances its importance. The district has a Tropical Savanna climate. The mean annual temperature is 26° C and average annual rainfall is 1500mm, maximum rainfall occurs during monsoon in August. According to Census 2011, total population of this district is 5519145, male population is 2814653 and female population is 2704492, Rural population is 3390646 and Urban population is 2128499. Population density of this district is 1753 per sq km. and Sex ratio is 961 (per 1000 males). There are 1866 villages, 12 Municipalities and 1 Municipality Corporation in this district. The literacy rate of this district is 82.55%.

Data Base and Methodology

The research endeavor is to find out the variation and gender wise disparity as well as trend of gender gap of literacy in Rural and Urban areas of Hooghly district based on secondary data taken from District Census Handbook, District Statistical Handbook of Hooghly district and various other articles published on National or International Journals.

1. MFDI = (MLR-FLR) / TLR Where, MFDI=Male-female differential index. Where, MLR=Male literacy rate. FLR= Female literacy rate. TLR= Total literacy rate. (Chattoraj.and Chand. 2015)
2. Coefficient of Equality (CE) = X_1/X_2 Where $X_2 > X_1$ and X_1 and X_2 are the observed values of two group of population.
3. Sopher's Disparity Index (Sopher DI_s, 1974) is a well-accepted measurement technique to identify the disparity between rural-urban literacy group by using the following formula (Kundu & Rao, 1986; Mulimani & Pujar, 2015; Biswas, 2016).

$$DI = \text{Log} (X_2 / X_1) + \text{Log} (100 - X_1) / (100 - X_2) \text{ Where, DI = Disparity Index}$$

$$X_2 = \text{Percentage of Urban Literates. } X_1 = \text{Percentage of Rural Literates. i.e. } X_2 \geq X_1$$

Disparity Index technique is useful in measuring relative disparity between two variables. The value of DI is zero in case of perfect equality. Greater the value of DI, the higher the extent of disparity and lower the value of DI, the disparity level also low (Raju, 1991; Biswas, 2016).

4. Co-relation between Decadal population growth and literacy growth by Product moment co relation (K.Pearson) and Anova, T test and F Test.

Disparities of literacy and gender variation maps and diagrams have been prepared by using QGIS software. Various other Mapping and Cartographic Techniques has also been used to show Block and Municipality wise Disparity of literacy in Hooghly district.

Results and Analysis-I

According to 2001 Census, overall literacy rate of Hooghly district is 75.10% which is well above the state level, among them male and female literacy rate is 82.60% and 67.20% respectively. Rural Literacy rate is 71.00%, where Urban Literacy Rate is 82.90%. In Rural areas literacy rate is highest in Serampur-Uttarpara (84.50%) and lowest in Dhaniakhali (57.20%) among all C.D Blocks and Hooghly-Chinsurah having highest literacy rate (87.40%) and Arambagh has the lowest literacy rate (74.20%) among all Municipalities & M.Cs. In 2011, overall literacy rate of Hooghly district has increased and reached to 81.80%, male and female literacy also increased and reached to 87.03% and 76.36% respectively, Rural and urban literacy rate rises to 78.53% and 86.91% respectively. Serampur-Uttarpara having highest literacy rate (87.33%) and Polba-Dadpur having lowest literacy rate (75.14%) among all C.D blocks. Statistics shows that highly developed rural areas are Serampur-Uttarpara, Chanditala-I and II, Singur, Chinsurah-Mogra. Where literacy rate low found in Goghat-I and II, Arambagh, Khanakul-I and II and Dhaniakhali, Moderate literacy rate found in Pursurah and Tarakeswar.

Trend of Literacy

Literacy rate of Hooghly district is greater than the state level literacy rate, but the variation in literacy are found among C.D Blocks and Municipalities. In 2001, High literacy rate found in Chinsurah-Mogra, Singur, Chanditala-I, Chanditala-II and Serampur-Uttarpara block. Low literacy rate found in Dhaniakhali and Polba-Dadpur block and rest of blocks have moderate literacy rate. Male and female literacy rate is maximum in Serampur-Uttarpara and minimum in Polba-Dadpur block. Urban areas having high literacy rate are Hooghly-Chinsurah (M), Chandannagar (M.C), and Uttarpara-Kotrung (M), Konnagar (M), Serampur (M) and Baidyabati (M). Low literacy rate found in Champdani (M) and Arambagh (M) and rest of the urban areas having Moderate literacy rate. In Urban areas, Male literacy is maximum in Hooghly-Chinsurah (M) and minimum in Arambagh (M). Female literacy is maximum in Konnagar (M) and minimum in Arambagh (M).

Table-1: Showing the gender gaps and social disparity of Hooghly district (2001 & 2011).

Sl. No.	C.D Blocks/ Municipalities/M.C	Literacy Rate (%)	
		2001	2011

		Male	Female	Gender Gaps (%)	Social Disparity Index	Male	Female	Gender Gaps (%)	Social Disparity Index
Rural Literacy									
1	Dhaniakhali	76.50	57.70	18.80	0.1398	82.51	68.79	13.72	0.0969
2	Pandua	75.70	58.60	17.10	0.1284	82.22	69.41	12.81	0.0914
3	Balagarh	76.40	61.00	15.40	0.1150	82.36	71.30	11.06	0.0805
4	Chinsurah-Mogra	84.10	69.10	15.00	0.1035	82.22	77.57	04.65	0.0429
5	Polba-Dadpur	74.20	57.30	16.90	0.1293	81.57	68.55	13.02	0.0933
6	Tarakeswar	83.20	64.40	18.80	0.1294	86.52	73.11	13.41	0.0916
7	Haripal	79.00	62.70	16.30	0.1179	84.41	72.66	11.75	0.0832
8	Singur	83.50	69.90	13.60	0.0953	88.77	79.24	09.53	0.0680
9	Jangipara	79.00	61.30	17.70	0.1278	85.47	73.63	11.84	0.0830
10	Chanditala-I	82.50	69.30	13.20	0.0937	88.24	79.29	08.95	0.0650
11	Chanditala-II	84.30	73.30	11.00	0.0788	88.40	81.13	02.22	0.0557
12	Serampur-Uttarpara	89.70	78.90	10.80	0.0745	91.21	83.28	07.93	0.0585
13	Goghat-I	80.70	59.00	21.70	0.1540	85.64	71.41	14.23	0.0973
14	Goghat-II	79.20	57.80	21.40	0.1545	84.15	70.02	14.13	0.0980
15	Arambagh	80.80	60.70	20.10	0.1421	85.51	72.19	13.32	0.0918
16	Khanakul-I	80.40	59.10	21.30	0.1515	84.41	70.66	13.75	0.0954
17	Khanakul-II	81.00	60.50	20.50	0.1447	86.12	71.96	14.16	0.0965
18	Pursurah	84.80	64.90	19.90	0.1345	88.63	75.28	13.35	0.0897
Urban Literacy									
1	Hooghly-Chinsurah	91.50	83.10	08.40	0.0608	93.81	88.39	05.42	0.0450
2	Bansberia	86.40	72.30	14.10	0.0958	89.78	79.97	09.81	0.0690
3	Tarakeswar	85.90	72.60	13.30	0.0914	87.50	80.00	07.50	0.0573
4	Bhadreswar	88.30	75.00	13.30	0.0895	91.17	81.33	09.84	0.0686
5	Champdani	83.20	66.10	17.10	0.1181	87.60	75.31	12.29	0.0842
6	Chandannagar(M.C)	88.50	80.40	08.10	0.0602	92.38	86.90	05.48	0.0455
7	Uttarpara-Kotrung	89.90	82.70	07.10	0.0549	92.93	88.28	04.65	0.0413
8	Konnagar	90.80	83.30	07.50	0.0563	93.59	88.01	05.58	0.0458
9	Serampur	87.90	78.80	09.10	0.0659	91.77	85.48	06.29	0.0498
10	Baidyabati	88.40	81.40	07.00	0.0543	90.15	86.23	03.92	0.0380
11	Rishra	87.30	75.90	11.40	0.0792	91.46	83.78	07.68	0.0570
12	Arambagh	82.50	65.50	17.00	0.1183	86.96	75.00	11.96	0.0827
13	Dankuni	-	-	-	-	87.21	80.82	06.39	0.0514

Source: Statistical Handbook 2010 & 2011 of Hooghly District

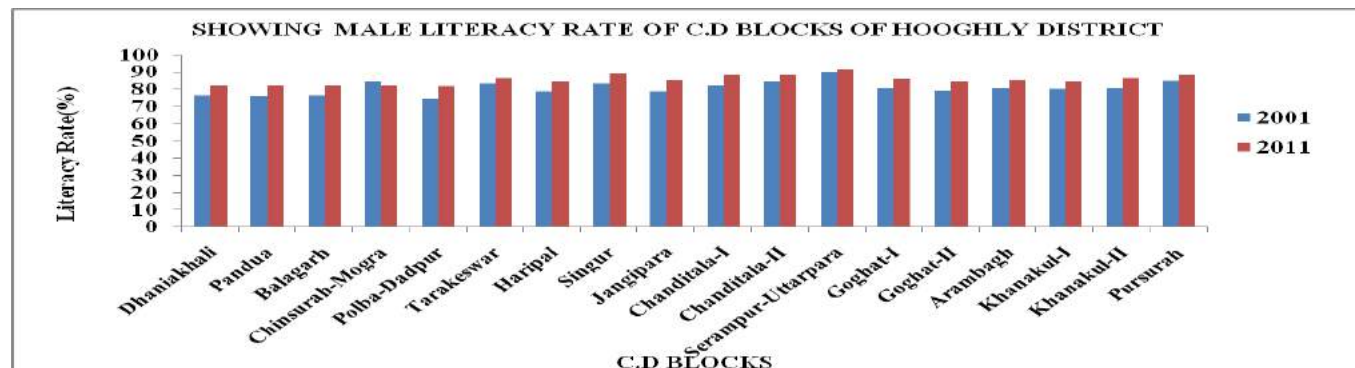


Fig.1: Showing the male literacy rate of Hooghly district with blocks wise variation (2001&2011). **Source:** Prepared by author on the basis of District Statistical Handbook.

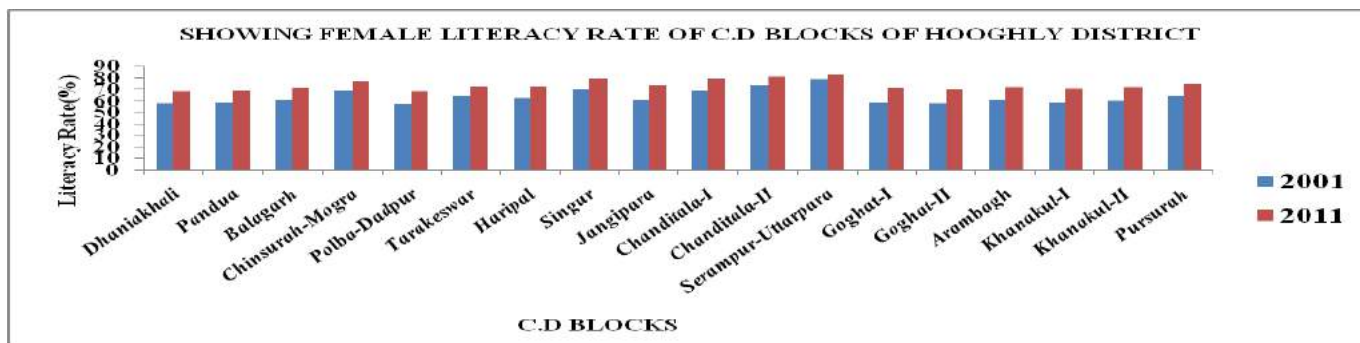


Fig.2: Showing the female literacy rate of Hooghly district with blocks wise variation (2001&2011). **Source:** Prepared by author on the basis of District Statistical Handbook.

In 2011, High literacy rate found in Singur, Chanditala-I, Chanditala-II and Serampur-Uttarpara. Chinsurah-Mogra, Tarakeswar, Jangipara and Chanditala-I blocks have moderate literacy rate and rest of the blocks having low literacy rate. Male and female literacy rate is maximum in Serampur-Uttarpara and minimum in Polba-Dadpur. In Urban areas literacy rate is high in Hooghly-Chinsurah (M), Chandannagar (M.C), Uttarpara-Kotrung(M), Konnagar(M), Serampur (M) and Baidyabati(M) and Rishra(M). Moderate literacy rate found in Bansberia (M) and Bhadreswar (M) and rest of the urban areas have low literacy rate. Male and female literacy is maximum in Hooghly-Chinsurah (M) and minimum in Arambagh (M). Male and female literacy rate is higher in urban areas rather than rural areas.

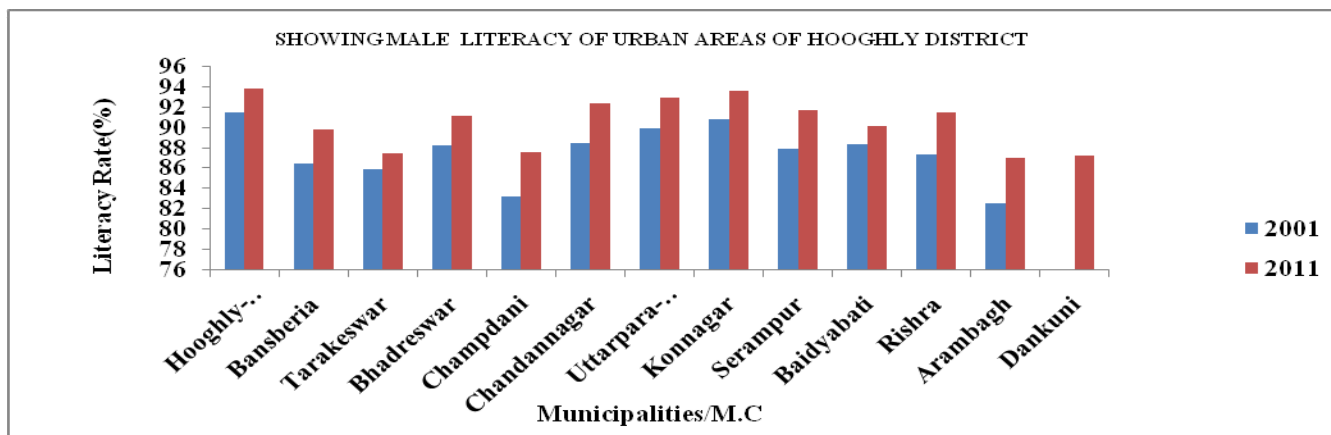


Fig 3: Showing the male literacy rate of urban areas in Hooghly district (2001&2011). **Source:** Prepared by author on the basis of District Statistical Handbook.

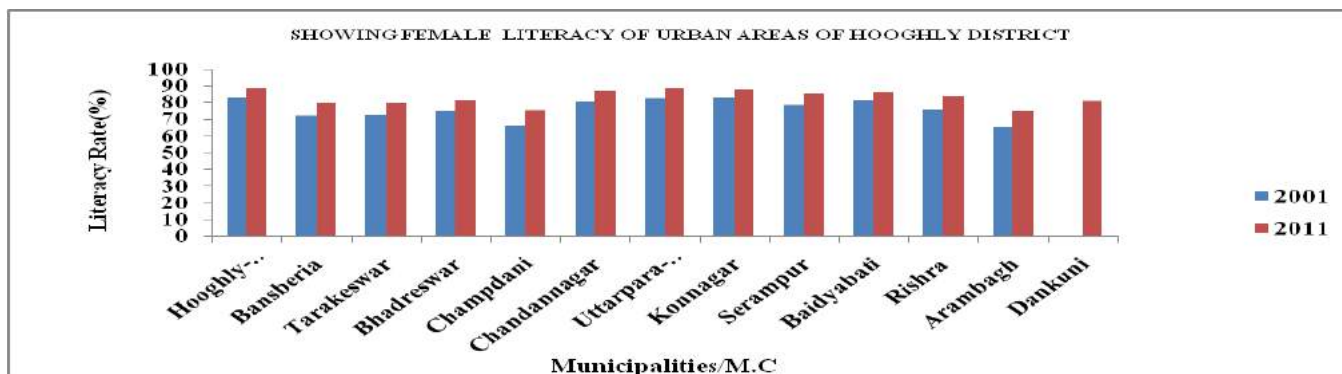


Fig.4:Showing the female literacy rate of urban areas in Hooghly district(2001&2011). **Source:** Prepared by author on the basis of District Statistical Handbook

Trend of Male-Female Disparity in Literacy

Trend of literacy can be analyzed in different ways. From the above calculations and diagrams it will easily be understood that the variation of literacy (Gender wise) and disparity persists in Hooghly district. In 2001, rural-urban disparity of literacy in Hooghly district is 11.90% and male rural-urban disparity of literacy is 8.10% and Female Rural-Urban Disparity is 15.40%. Whereas in 2011, male-female disparity of this district came down to 8.38% and male and female rural-urban disparity came down to 5.73% and 11.03% respectively.

Table-2.1 Showing the literacy rate of Hooghly district (2001&2011)

	Literacy Rate (%) (2001)			Literacy Rate (%) (2011)		
	Rural	Urban	Rural-Urban Disparity	Rural	Urban	Rural-Urban Disparity
Male	79.70	87.80	8.10	84.78	90.51	5.73
Female	62.10	77.50	15.40	72.09	83.12	11.03
Total	71.00	82.90	11.90	78.53	86.91	8.38

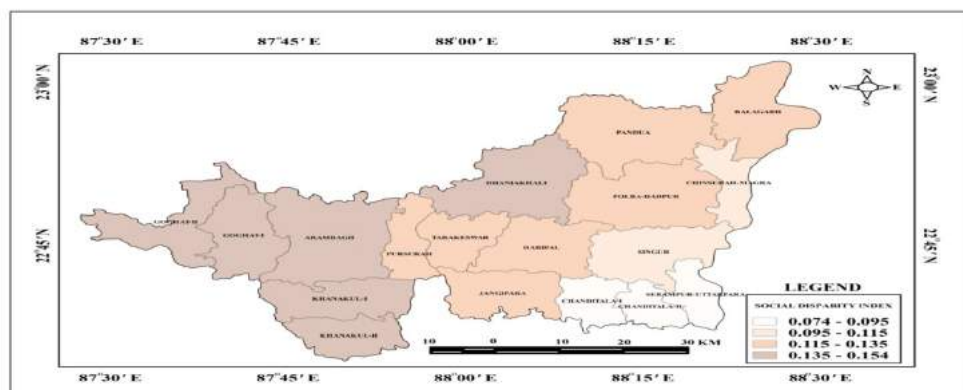
Source: District Census Handbook 2001 & 2011, Hooghly district ,

Table-2.2 Showing the male and female disparity of Hooghly district with block wise variation (2001&2011)

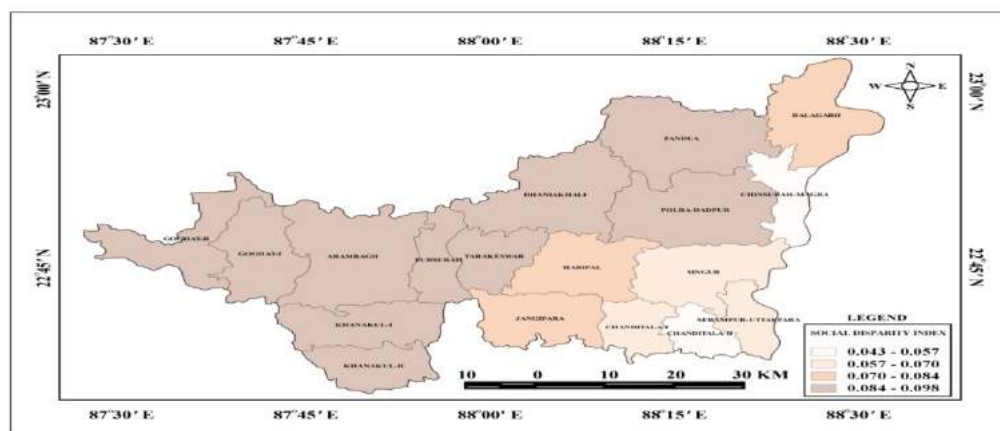
Male-Female Disparity (2001)			Male-Female Disparity (2011)	
	Rural	Urban	Rural	Urban
Very Low	Serampur-Uttarpara, Chanditala-I, Chanditala-II	Hooghly-Chinsurah(M), Chandannagar (M.C), Uttarpara-Kotrung(M), Konnagar(M), Serampur(M), Baidyabati(M)	Chanditala-II, Chinsurah-Mogra	Hooghly-Chinsurah(M), Chandannagar(M.C), Uttarpara-Kotrung(M), Konnagar(M), Baidyabati(M)
Low	Singur, Chinsurah-Mogra	Rishra(M)	Singur, Chanditala-I, Serampur-Uttarpara	Tarakeswar(M), Serampur(M), Dankuni(M), Rishra(M)

Moderate	Pursurah, Tarakeswar, Haripal, Jangipara, Polba-Dadpur, Pandua, Balagarh	Bansberia(M), Tarakeswar(M), Bhadreswar(M)	Haripal, Jangipara, Balagarh	Bansberia(M), Bhadreswar(M)
High	Goghat-I, Goghat-II, Arambagh, Khanakul-I, Khanakul-II, Dhaniakhali	Champdani(M), Arambagh(M)	Goghat-I, Goghat-II, Arambagh, Khanakul-I, Khanakul-II, Dhaniakhali, Pursurah, Tarakeswar, Polba-Dadpur, Pandua	Champdani(M), Arambagh(M)

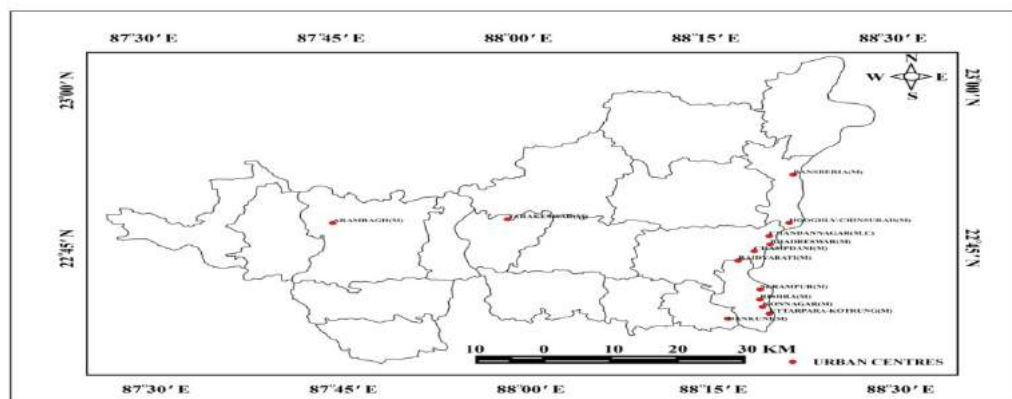
Source: prepared by author on the basis of District Statistical Handbook, 2011



Map 2: Showing the male and female disparity of Hooghly district (2001). Source: Prepared by author on the basis of District Statistical Handbook.



Map 3: Showing the male and female disparity of Hooghly district (2011). Source: Prepared by author on the basis of District Statistical Handbook



Map 4: Showing the different location of urban center in Hooghly District.

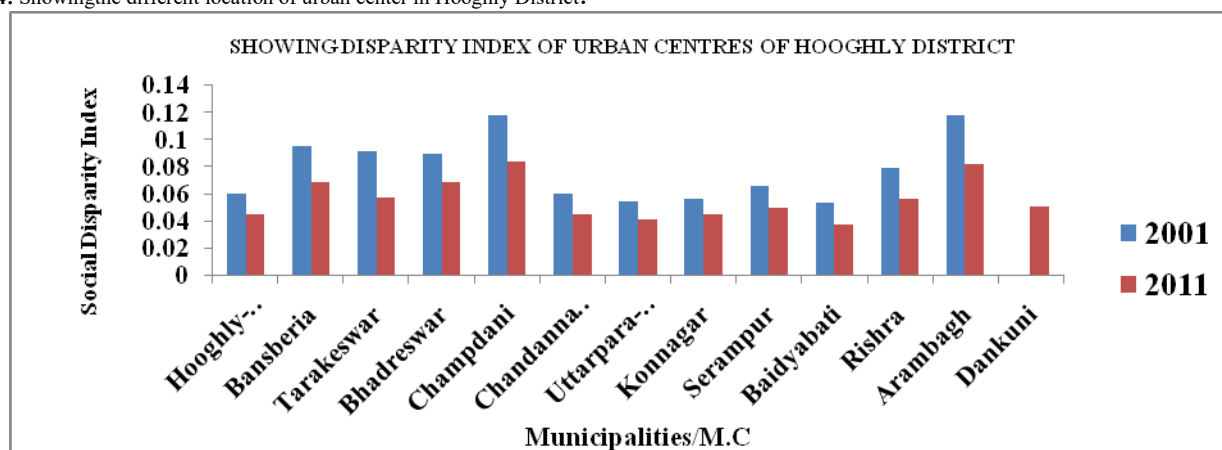


Fig 5 : Showing the disparity index (As per Sopher method) of Hooghly district in different urban center. (2001 & 2011), **Source:** Prepared and calculated by author on the basis of District Statistical Handbook, 2011.

Male-Female Disparity in literacy is higher in rural areas of Hooghly district. In 2001, lowest Male-Female Disparity found in Serampur-Uttarpara (0.0745) and highest in Goghat-II (0.1545). Rural male-female disparity is very low in Serampur-Uttarpara, Chanditala-I and Chanditala-II; low in Singur and Chinsurah-Mogra; moderate in Pursurah, Tarakeswar, Haripal, Jangipara, Polba-Dadpur, Pandua and Balagarh and high in Goghat-I, Goghat-II, Arambagh, Khanakul-I, Khanakul-II and Dhaniakhali. In 2011, Rural male-female disparity in literacy has been changed. Disparity is very low in Chanditala-II, Chinsurah-Mogra; low in Singur, Chanditala-I and Serampur-Uttarpara, moderate in Haripal, Jangipara and Balagarh and high in Goghat-I, Goghat-II, Arambagh, Khanakul-I, Khanakul-II and Dhaniakhali, Pursurah, Tarakeswar, Polba-Dadpur and Pandua. From Table No. 1.2, it is observed that disparity is growing in increasing trend in last ten years (2001-2011). In 2001 high disparity persists in seven blocks, but in 2011 high disparity found in ten blocks. It simply indicates that disparity of literacy is rising up in these blocks in increasing trend. In case of urban areas, disparity in literacy is lower than

rural areas. In 2001, disparity is very low in Hooghly-Chinsurah (M), Chandannagar (M.C), Uttarpara-Kotrung (M), Konnagar (M), Serampur (M), Baidyabati (M); low in Rishra (M); Moderate in Bansberia (M), Tarakeswar (M), Bhadreswar (M) and high in Champdani (M), Arambagh (M). But in 2011, trend of disparity in urban areas has been changed. Very low disparity found in five urban centre i.e. Hooghly-Chinsurah (M), Chandannagar (M.C), Uttarpara-Kotrung (M), Konnagar (M), Baidyabati (M) which is lower than 2001 and Low disparity persists in four blocks i.e. Tarakeswar (M), Serampur (M), Dankuni (M), Rishra (M). From the above discussion it is quite clear that gender disparity persists in urban areas but at a lower rate. Trend of disparity in literacy in rural areas is increasing trend and in urban areas it is decreasing trend.

Results and Analysis-II

Gender and regional differential in Literacy: As per MFDI (male female differential index values) the total block and Municipalities of Hooghly district are divided into three categories of both 2001 and 2011. By this index we can estimate the gender wise and regional variation of literacy in Hooghly district in the 2001-2011.

Table: 3

Sl. No.	C.D Blocks/ Municipalities/M.C	Literacy Rate (%)							
		2001				2011			
		Male	Female	Gender Gaps (%)	MFDI	Male	Female	Gender Gaps (%)	MFDI
Rural Literacy									
1	Dhaniakhali	76.50	57.70	18.80	0.282	82.51	68.79	13.72	0.181
2	Pandua	75.70	58.60	17.10	0.251	82.22	69.41	12.81	0.168
3	Balagarh	76.40	61.00	15.40	0.224	82.36	71.30	11.06	0.144
4	Chinsurah-Mogra	84.10	69.10	15.00	0.195	82.22	77.57	04.65	0.057
5	Polba-Dadpur	74.20	57.30	16.90	0.250	81.57	68.55	13.02	0.173
6	Tarakeswar	83.20	64.40	18.80	0.262	86.52	73.11	13.41	0.168
7	Haripal	79.00	62.70	16.30	0.233	84.41	72.66	11.75	0.149
8	Singur	83.50	69.90	13.60	0.177	88.77	79.24	09.53	0.110
9	Jangipara	79.00	61.30	17.70	0.252	85.47	73.63	11.84	0.140
10	Chanditala-I	82.50	69.30	13.20	0.173	88.24	79.29	08.95	0.106
11	Chanditala-II	84.30	73.30	11.00	0.139	88.40	81.13	02.22	0.026
12	Serampur-Uttarpara	89.70	78.90	10.80	0.121	91.21	83.28	07.93	0.098
13	Goghat-I	80.70	59.00	21.70	0.314	85.64	71.41	14.23	0.191
14	Goghat-II	79.20	57.80	21.40	0.312	84.15	70.02	14.13	0.1833
15	Arambagh	80.80	60.70	20.10	0.284	85.51	72.19	13.32	0.1689
16	Khanakul-I	80.40	59.10	21.30	0.305	84.41	70.66	13.75	0.1774
17	Khanakul-II	81.00	60.50	20.50	0.286	86.12	71.96	14.16	0.1791
18	Pursurah	84.80	64.90	19.90	0.265	88.63	75.28	13.35	0.1631
Urban Literacy									
1	Hooghly-Chinsurah	91.50	83.10	08.40	0.096	93.81	88.39	05.42	0.0595
2	Bansberia	86.40	72.30	14.10	0.17	89.78	79.97	09.81	0.1155
3	Tarakeswar	85.90	72.60	13.30	0.1678	87.50	80.00	07.50	0.0573
4	Bhadreswar	88.30	75.00	13.30	0.160	91.17	81.33	09.84	0.1140
5	Champdani	83.20	66.10	17.10	0.229	87.60	75.31	12.29	0.1500
6	Chandannagar(M.C)	88.50	80.40	08.10	0.095	92.38	86.90	05.48	0.0612
7	Uttarpara-Kotrung	89.90	82.70	07.10	0.082	92.93	88.28	04.65	0.0783
8	Konnagar	90.80	83.30	07.50	0.086	93.59	88.01	05.58	0.0614
9	Serampur	87.90	78.80	09.10	0.109	91.77	85.48	06.29	0.070

10	Baidyabati	88.40	81.40	07.00	0.082	90.15	86.23	03.92	0.044
11	Rishra	87.30	75.90	11.40	0.139	91.46	83.78	07.68	0.087
12	Arambagh	82.50	65.50	17.00	0.210	86.96	75.00	11.96	0.136
13	Dankuni	-	-	-	-	87.21	80.82	06.39	0.071

Source: Statistical Handbook 2010 & 2011 of Hooghly District, computed by author

Range	Value	C.D Blocks/Municipalities/M.C	No	
High	>0.2	Dhaniakhali, Pandya, Balagarh, Palba-Dadpur, Tarakeswar-R, Haripal, Jangipara, Goghat-I, Goghat-II, Khanakul-I, Khanakul-II, Arambag-R, Pursura, Champadeni, Arambag-U.	14	2001
Moderate	0.1-0.2	Chinsura-mogra, Singur, Chanditola-I, Chanditola-II, Serampur-uttarpata, Bansberia, Bhadreswar, Tarakeswar-U, Rishta. Serampur-U	11	
Low	<0.1	Hooghly-Chinsurah, Chandannagar, Uttarpara-Kotrung, Konnagar, Baidyabati	5	
Range	Value	C.D Blocks/Municipalities/M.C	No	
High	>0.2		00	2011
Moderate	0.1-0.2	Chinsura-mogra, Singur, Chanditola-I, Bansberia, Bhadreswar, Dhanakhali, Pandya, Balagarh, Palba-Dadpur, Haripal, Jangipara, Goghat-I, Goghat-II, Khanakul-I, Khanakul-II, Arambag-U, Pursura, Champadeni, Tarakeswar-R,	19	
Low	<0.1	Chanditola-II, Serampur-uttarpata, Hooghly-chinsura, Chandannagar, Tarakeswar-U, Uttarpara-Kotrung, konnagar, serampur, Baidyabati, Rishta, Dankuni	11	

Table: 4&5 showing the range and Number of CD block/Municipalities as per MFDI values

Source: Computed By author

MFDI shows the sex wise gender variation in literacy. By this technique sex wise literacy dispersion of calculated (Kuntal Kanti Chatteraj. and Susanta Chand. *IOSR-JHS Sep. 2015*) in the basis to total literacy rate in a region for a particular year. Here research encompasses the MFDI value of 2001 and 2011 to find out the positional change of different block and municipalities of Hooghly district in sex wise literacy development. By this technique it is easy to find out the sex wise nature of development in educational issues.

As per MFDI calculation we have found a remarkable development in sex wise educational development among the blocks and municipalities in Hooghly district from 2001 to 2011. 14 blocks which has high MFDI values (>0.2) in 2001 reduced to “0” in 2011. On the contrary 5 blocks having

low MFDI values in 2001 (<0.1) increases 11 in 2011. The blocks having moderate values also shows a positive change. It increases 11 to 19 (2001-2011).

So lastly it can be summarized by this MFDI and CE index that all the blocks/Municipalities are well developed in sex wise education from 2001 to 2011. Although two block have low CE values but it is due to presence of extensive rural land cover.

Results and Analysis-III

As per Co efficient of Equality (CE) values the district is also categorized into three categories: high, moderate and low. The Value of CE will always range between 0 and 1. In case of no disparity (i.e perfect equality) CE will be 1. It may be interpreted as smaller the value of CE higher the extent of disparity and higher the value of CE lesser the disparity.(S.M.I.A.Zaidi)

In this research CE is calculated on the basis of gender gaps in literacy between n2001-2011. It analyze the position of every block/municipalities of Hooghly district in respect of CE values. As we know CE values nearer to 1 show the perfect equality. So by this technique one can have an idea of gender disparity among the block and Municipalities. On the basis of CE values three groups are formed

Table: 6 Showing he Distribution of CD block/Municipalities as per CE values

Nature of values	Range	Name of the CD Blocks/Municipalities/Municipal Corporation	Total number of district
LOW	Less than 0.50	Chinsura Mogra.,Chanditala -LI,	2
Moderate	0.50 to 0.70	Hooghly-Chinsurah, Bansberia(M),Tarakeswar(M), ,Chandannagar(M.C),Uttarpara- Kotrung(M), Serampur(M),, Baidyabati(M), Rishra(M),Dankuni , Pursurah, Khanakul-I, Goghat-I, Goghat-Ii, Arambagh, Jangipara, Chanditala-I, Singur	17
High	Greater than 0.70	Konnagar(M), Champadani(M), Bhadreswar(M),Khanakul-Ii, Serampur-Uttarpara, Dhanakhali, Pandua, Balagarh, Haripal Tarakeswar, Polba-Dadpur, Arambagh(M),	12

It has been observed that only Chinsura Mogra and Chanditala II falls under the medium range of dispersion. 8Blocks and 4 Municipalities are almost nearer to perfect quality. So it can be summarized by this index values that the literacy condition is in good position and gender disparity in literacy is very nominal in nature.

Results and Analysis-IV

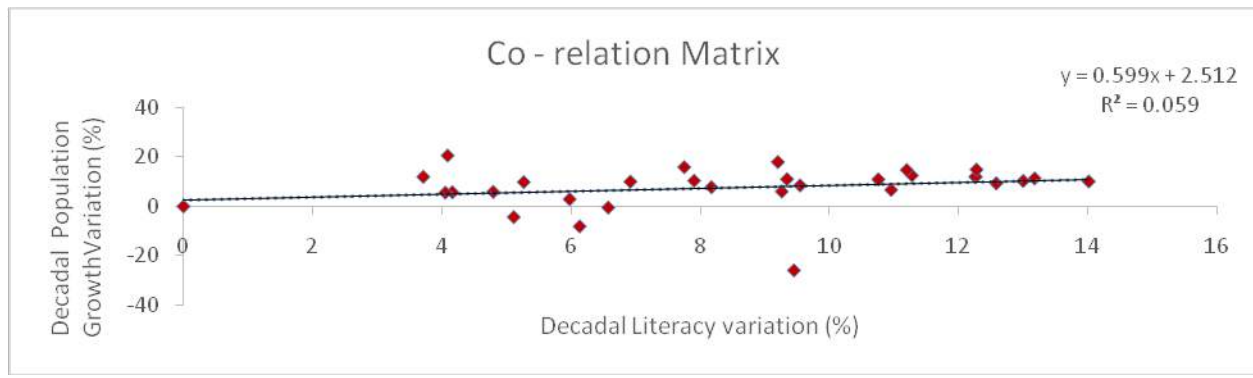


Fig-6 Co relation between decadal population growth and literacy variation 92001-2011)

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.242967							
R Square	0.059033							
Adjusted R Square	0.026586							
Standard Error	3.464373							
Observations	31							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	21.83574	21.83574	1.819360114	0.187828683			
Residual	29	348.0544	12.00188					
Total	30	369.8902						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	7.684548	0.831961	9.236664	3.87357E-10	5.982995601	9.3861	5.982996	9.3861
percentage decadal population growth variation 2001 - 2011(Y)	0.098451	0.072989	1.348837	0.187828683	-0.050829266	0.247731	-0.05083	0.247731

Table: 7 output chart of statistical co relation

Source: Computed by authors

Correlation between Decadal population growth and Decadal Literacy Variation (%) (2001-2011) shows population growth creates a huge pressure on literacy because at this time basic needs are more prioritized by the planner to handle the overpopulation issues. As a result this excess population makes a huge pressure not only our economic parameters but also related with our social issues. A correlation matrix are drawn on the basis of population growth and literacy growth from 2001-2011. It is evident from analysis that urban decadal growth rate (26.11 per cent) of the district is much higher than that of total (9.46 per cent) and rural (1.09 per cent). Among the 18 C.D. Blocks of the district, Serampur Uttarpara C.D. Block has recorded the highest decadal growth rate with 20.48 per cent and Chanditala-II C.D. Block has the lowest with (-)25.80 per cent due to creation of new Statutory Town viz. Dankuni Municipality from this C.D. Block. Going by the district rural frame, the Khanakul-II C.D. Block has the highest decadal growth rate with 14.82 per cent whereas Chanditala-II C.D. Block has the lowest with (-)60.26 per cent due to creation of one new Statutory Town of Dankuni Municipality and seven new Census Town. Among the 18 C.D. Blocks of the district, 6 C.D. Blocks have urban population, of which Balagarh C.D. Block has the highest growth rate (497.33 per cent) while Chanditala-II C.D. Block has the lowest with 21.08 per cent. There are 13 Statutory Town in the district of which Arambag Municipality has the growth rate of 17.87 per cent and the decadal growth rate of Serampore Municipality with (-)8.09 per cent is the lowest. The Bansberia Municipality, Bhadreswar and Serampore Municipality has also facing negative Decadal Population growth due to out migration and creation new CT in 2011 but in overall in Hooghly district the Percentage of urban population has been increased from 33.47 in 2001 Census to 38.57 in 2011 Census. The Value of the $R^2 = 0.059$ and significance is also positive.

Major findings

From the all above analysis it's clear that male-female disparity is higher in rural areas than the Urban. It also includes that rural-urban disparity is lower in 2011 than 2001. Decreasing rate of gender disparity is more effective in urban areas rather than rural areas. But the disparity of gender in rural areas decreases gradually year by year. So it is a positive sign for society as well as development. Literacy rate of Hooghly district is increasing especially female literacy which is a good indicator of development, as gender equality is so important for overall development of a nation.

Conclusion with Suggestions

The present analysis reveals that the overall literacy rate of Hooghly district is very good among the states of West Bengal but some rural areas are still having low literacy rate. Most importantly the male-female

disparity is very high in some C.D Blocks which are needed to reduce for bringing gender equality. There is a change in the disparity in 2011. Male-female disparity as well as rural-urban disparity has been decreased as well as female literacy rate has been increased both in rural and urban areas from 2001-2011. Urban areas are in leading position in terms of low disparity and high literacy rate. Whereas, rural areas are laager in terms of achieving low disparity and high literacy rate which direct or indirectly impacts the overall development process in rural areas. Some serious and effective steps need to take for bringing down the gender inequality and to increase the literacy rate. We need to reduce disparities in literacy by sex and financial assistance should be granted to the weaker sections of the society in order to raise their socio-economic conditions especially in the rural sides as this two issues are very much inter related. To encourage the education of women in rural sectors in all levels Govt. should implement a proper approach and encourage them to attend schools. West Bengal government has already started some packages to attract student to attend the school like concessions in the form of providing free books, uniform, bi-cycles, boarding and lodging, mid day meals, scholarships, and so on. 'Kannyashree' project is highly successful to reduce drop out of females from the schools. But all the section of society and organization extend their kind co operation an help to reduce the gender variation and disparity in all over the district.

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35. Determinants of Private Expenditure on Education in India: A Quantile Regression Analysis

- S. Vishnuhadevi , Ph.D. Scholar, Department of Economics, University of Madras, Chennai, Email: vishnuhadevi.s@gmail.com
- R. Srinivasan, Professor, Department of Econometrics, University of Madras, Chennai, Email: seenu242@gmail.com

Abstract

Using the 71st round of National Sample Survey Office's (NSSO) data on Key Indicators of Social consumption in India Education (January – June 2014), this paper examines the determinants of household expenditure on education using the socio-economic characteristics of the students currently attending educational institution in India. Quantile regression is used to capture the differential impacts across the distribution of the private expenditure on education. The results of the study reveal that the lower-income group spends a considerable amount on education despite receiving subsidizing education through government schools. This is probably because; there is a lower limit of expenditure that everyone should spend though the education sector is highly subsidized, and they choose to spend more on education as they probably consider that education is the only mobility through life.

Keywords: Education Expenditures, Education Fee, Quantile Regression, India

1. Introduction

Expenditure on education is incurred under two domains: private and public. Private expenditure refers to the expenditure made by the students and/or by their parents on education. So, it is referred to as household or family expenditure on education and public expenditure is the government expenditure on education. Both public and household expenditure on education are of high importance. While public expenditure can provide educational facilities, only household expenditure will enable its utilization. For a long time, it had been argued that it was adequate for the government to be familiar with only about the public expenditure on education for the planning purposes. Of late, this trend has changed, and the academicians and the policymakers realized that it is equally important to understand the information of household expenditure on education and ignoring the household expenditure on education is too expensive for planning in the long run (Tilak 1985, 2000). Hence, the knowledge of household expenditure on education is important to the formulation of efficient policies on fee, scholarships, and subsidies and for the allocation of public expenditure on education.

The private spending on education can be categorized into direct costs and indirect costs. The direct costs include the expenditure incurred by the households such as course fee (including tuition fee, examination fee, etc.), purchase of books, stationery and uniforms, expenses on conveyance, private coaching are referred to as household expenditure on education or private expenditure on education, and the indirect cost is the opportunity cost of education. The present study focuses only on the direct expenditure of education by the households, and what determines the amount of education expenditure spend by the households.

The household expenditure on education is determined by wide variety of factors. Tilak (2000, 2002) had done exhaustive studies on determinants of household expenditure on education in rural India and found that there was no free education in India, and household expenditure on education was sizeable; even households from lower socio – economic background, low-income groups spent considerable amount on acquiring education; this scenario was not limited only to India. Psacharopoulos and Papakonstantinou (2005) studied the private spending for preparation of competitive higher education entry examinations and the expenses incurred by the students while attending universities in Greece, and they found that households spend more than the state in a constitutionally “free for all” higher education country.

Among the determinants of the household expenditure on education; the income of the household has significant effect on education expenditure. Tilak (2000) found that the elasticity of household expenditure on education to total consumption expenditure (proxy for income) of the household was positive and greater than 1. Further, he found that the elasticity is higher in per-capita terms (i.e.,) if the per-capita expenditure of the household increases by 1 percent, then the per capita expenditure on education increases by 2.1 percent. Chandrasekar et. al (2016) analyze data from two recent NSSO surveys, from NSSO’s 2011-12 survey of consumption expenditure they found that on an average the share of education expenditure on total monthly consumption expenditure is 3.1 percent and 5.7 percent in rural and urban India, respectively. In addition, the proportion of income spent on the education increases as the income increases is greater at the lower- and middle-income households and lesser at the higher income households (Tilak 2002; Psacharopoulos and Papakonstantinou 2005).

Another important factor that plays a role in schooling decision is the gender. Ota and Moffatt (2007) attempted to identify the key explanatory factors in the decision on schooling and observed that of child’s age and gender are the most important determinants of schooling

decision. They focused on the effects of sibling competition within the household and found that the boys compete within the same sex, while the girls face double competition. On a national level household spend 9.5 percent less on the higher education of females compared to the males (Sarkar 2017). Bhatkal (2012) studied on gender bias in the allocation of education expenditure in Andhra Pradesh in India and found that gender bias exists in school children aged ten and above. The study also revealed that the gender bias exists within the households in allocation of education expenditure and the probability of enrolling in private school is higher for boys than for girls. Further, subsidies provided by the government also determine the household expenditure on education. Though the household expenditure on education is significant, subsidies provided by the state such as free education, fee exemptions/concessions, textbooks, stationery, and noon meals are found to be progressive and are certainly beneficial for the poorer households (Tilak 2002; Chandrasekar et. al 2016)

In addition, there are various socio-economic factors that are crucial determinants of private expenditure on education, such as number of children in the family, gender, age of the individual attending educational institution, type of the institution (Tilak, 2002; Vu Quang, 2012)

At lower levels of education considering its publicness, the government expenditure ought to be higher than the household expenditure; this pattern gets reversed at the higher level of education. So, either in the absence of adequate government expenditure in school education and/or ability of the household to pay to school education creates a situation of substitutability between these two sources of expenditure. In addition to this, a host of socio-economic factor determines the quantum of household expenditure. Therefore, exploring the nature of relationship between household expenditure on education and its determinants are the central research issue of the study.

The objective of this study is to identify and estimate determinants of household expenditure on education in India. By using quantile regression, the study analyses the pattern of household expenditure in detail by gender, type of institution, type of courses and household characteristics. The 71st round of NSSO data on Key Indicators of Social consumption in India Education (January – June 2014) which is a cross sectional and unit level data for the academic session of 2013-14, has been used in this study. The NSSO is an agency by the Government of India to collect data and statistical indicators on diverse socio-economic aspects by using large scale sample surveys and employing scientific sampling methods. There are limited number studies that

particularly focus on the household expenditure on education in India. So, using the latest data available on the household expenditure on education; this study would be a new addition to the literature on household expenditure in India. The quantile regression approach of the study makes it a more rigorous one in capturing the determinants of the education expenditure along with the distribution pattern of the private expenditure on education.

The quantile regression allows the researcher to understand the relationship between the dependent and independent variable at all locations of the distribution of the dependent variable; unlike the classical linear regression or ordinary least square (OLS) which gives only the conditional mean function. Another rationale of using quantile regression is to study segmented data. As, the household expenditure on education varies widely across the household and having only the average estimates will not give a complete picture. Further, dividing the data based on the household expenditure on education into sub-samples such as low, middle, and high spending will lead to serious sample selection issues.

The paper is organized as follows; the data and the methodology of the study are explained in section II. The section III provides the econometric analysis of the determinants of education expenditure and the section IV provides the summary and conclusion of the study.

2. Participation in Education

The total number of households covered in the 71st round of NSSO's survey on education is 36,479 households from 4,577 villages in rural India and 29,447 households from 3,720 urban blocks in India. From the sample households the data has been collected for about 93,446 students aged 5-29 years in those households, attending formal education at primary level or above. The household expenditure incurred by the students such as, course fees (including tuition fee, examination fees etc.), purchase of books, stationery and uniforms, expenses on conveyance, private coaching, etc, are referred to as private expenditure on education.

2.1 Average Annual Private Expenditure on Education in India

The expenditure incurred by the households on education is referred as private expenditure on education. The average expenditure on education incurred by the household on general education and technical/professional education and the components education expenditure is summarized here.

Table 1: Average expenditure (Rs) per student for general education by level of attendance and type of institution

Level of attendance	Type of Institution					
	Rural			Urban		
	Govt.	Private aided	Private Unaided	Govt.	Private aided	Private unaided
Primary	965	6452	7907	2149	11881	14242
Upper primary	1605	6013	9514	3356	12074	18553
Secondary	3328	5896	11222	5540	14096	21565
Higher secondary	6056	10803	13988	9668	20066	30810
Graduate	8753	11730	17093	11560	16993	26380
Post graduate and above	11403	14224	25372	13580	20978	29661
Diploma	10603	14935	20976	12184	19059	46445

Source: NSS KI (71/25.2): Key indicators of Social Consumption in India: Education

One of the major factors that drive the expenditure on education is the type of educational institute that the individual is attending and the level of attendance. There exists a significant difference in the expenditure incurred by the students attending government institutions and the private institutions. The students attending private institutions at primary level spend 6-7 times higher than their counterpart from the government institutions (Table 1). And the difference in spending between the urban and rural sector is also notable.

Table 2: Average expenditure (Rs) per student for technical/profession education for different courses and type of institution

Different courses	Type of Institution					
	Rural			Urban		
	Govt.	Private	Private	Govt.	Private	Private

		aided	Unaided		aided	unaided
Medicine	57292	76383	91391	72636	99468	148510
Engineering	40828	61516	69439	43418	74291	83443
Management	39511	60548	69473	46050	62778	121150
IT/Computer courses	27094	36401	43453	29718	54976	59626
Courses from ITI/recognized vocational institutes	13675	30872	30598	14508	33567	39166

Source: NSS KI (71/25.2): Key indicators of Social Consumption in India: Education

It is clear from the above table that average expenditure spent by students attending private unaided over those in government institutions varied by 1.5 to 2 times. Unlike in general education the difference in expenditure between rural and urban sector is not significant except for medicine. Students attending medicine and management courses in urban sector on an average spend more than a lakh per year.

Table 3: Major Components of expenditure and their share (%) in total expenditure

Component of expenditure	General education	Technical/professional education (including vocational education)
Course fee	46	73
Books, stationery etc.	22	10
Transport	11	6
Private coaching	15	3
Other expenditure	5	8
Total	100	100

Source: NSS KI (71/25.2): Key indicators of Social Consumption in India: Education

From the above table it can be identified that the major share of household expenditure on education goes to the course fee for both general and technical education and it is followed by the books and stationery.

2.2 Methodology

Quantile regression is used to estimate the determinants of private expenditure on education. Classical regression focuses on the expectation of the dependent variable Y conditional on the values of a set of independent variables X , that is $E(Y/X)$. It restricts exclusively on a specific location of the Y conditional distribution. Quantile regression extends this approach by allowing one to study the conditional distribution of Y on X at different locations. Quantile regression is a statistical procedure which is used to estimate the conditional quantile functions. In comparison with the classical linear regression which is used to estimate the conditional mean functions by minimizing the sum of squared residuals, quantile regression estimates the conditional median functions and a full range of other conditional quantile functions by minimizing the asymmetrically weighted absolute residuals. The rationale for using quantile regression in this study is to capture the determinants of private education expenditure along its distribution – at different quantiles and it is more robust to outliers.

In statistics quantile are cut points where a sample is divided into equal sized, two or more subgroups. Here the dependent variable private expenditure on education is divided into five quantiles. It is to be noted that the 50th quantile is also the median value.

Ordinary least square is one of the methods used in the analysis to compare the OLS and QR results. Let OLS specification be

$$Y_i = \beta_0 + \beta_1 X_i + u_i \quad (1)$$

The estimated value of $\beta_0 + \beta_1 X_i$, which is a conditional mean value, is the same across the distribution of the dependent variable. The OLS estimate shows only the mean value for all levels of private expenditure on education, which does not capture the differential impact of determinants across different levels of private expenditure on education. In such a case, it is important to examine that relationship at different points of the conditional distribution function.

Quantile regression warrants such analysis. The quantile regression classic model was introduced by Koenker and Bassett (1978).

Quantile regression model is specified as



(2)

The quantile regression coefficient which is to be interpreted as the partial derivative of the conditional quantile of 'y' with respect to one the of the regressors, say the j-th one, is to be read as the marginal change in the θ -th quantile due to the marginal change in the j-th element of 'x'. The model specification for estimating determinants of private education expenditure is given below.

$$\begin{aligned} \text{Ln(Pvt Exp Edu)} = & \beta_1 + \beta_2 \text{Ln(PCE)} + \beta_3(\text{Age}) + \beta_4(\text{HH Edu}) + \beta_5(\text{Gender}) + \\ & \beta_6(\text{Rural}) + \beta_7(\text{Social grp}) + \beta_8(\text{Religion}) + \beta_9(\text{HHType}) + \beta_{10}(\text{Type of institution}) + \\ & \beta_{11}(\text{Medium of instruction}) + \beta_{12}(\text{Change of institution}) + \beta_{13}(\text{Scholarship}) + \\ & \beta_{14}(\text{Books\&stat}) + \beta_{15}(\text{upto class X}) + u \end{aligned}$$

3. Empirical Results

Estimation of the results of determinants of private education expenditure using quantile regression is shown in the Table 5. The quantile plot of natural log private education expenditure is shown in figure 1. The graph shows the distribution of the private expenditure on education across the quantiles, which vary at the tails of the distribution – at the 0.1 quantile and the 0.9 quantile, where the expenditure is at the extreme. This is the one of the main reasons to use quantile regression to study the determinants of private expenditure on education across the entire distribution for a given set of regressors.

Figure 1:Quantile plot of private expenditure on education

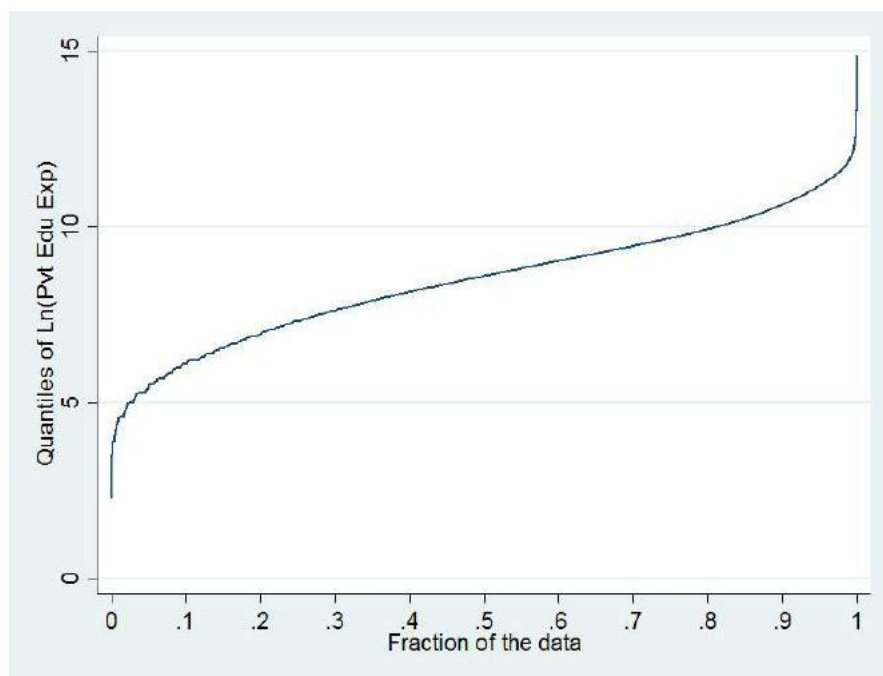


Table 4: Descriptive statistics of all variables used in this study.

Variable	Description	Mean	SD
Dependent Variable Ln(Pvt Exp Edu)	Natural log of Private expenditure on education	8.476	1.713
Independent Variables Ln(PCE)	Natural log of Percapita consumption expenditure	9.8601	0.6145
Age	Continuous variable (in years)	13.8	5.065
Household Head (HH) Education	Continuous variable (measured in years of schooling)	7.091	5.083
Gender	Gender of the students 1 if Male 0 otherwise	0.559	0.4965

Rural	Area of residence	0.567	0.495
	1 if Rural		
	0 otherwise		
Social group	Social group of the students	0.297	0.457
	1 if SC/ST (Schedule Caste/Schedule Tribe)		
	0 otherwise		
Religion	Religion of the students	0.796	0.402
	1 if Hindu		
	0 otherwise		
HH Type	Household type	0.519	0.499
	1 if self-emp		
	0 otherwise		
Type of Institution	Type of institution attended by the student.	0.526	0.499
	1 if Govt.		
	0 otherwise		
Medium of Instruction	Medium of instruction of the institution attended by the student.	0.405	0.49
	1 if English 0 otherwise		
Change of Institution	Changed education institution during last one year.	0.169	0.375
	1 if Yes		

	0 otherwise		
Scholarship	Received scholarship.	0.18	0.384
	1 if Yes		
	0 otherwise		
Books and Stat	Received textbooks and stationery.	0.032	0.177
	1 if Yes, 0 otherwise		
Up to class X	Students currently attending up to class X.	0.655	0.475
	1 if Yes, 0 otherwise		
N	No of observations	93446	

Table 5: OLS and Quantile regression estimates for determinants of private expenditure on education.

Variable	OLS	Q10	Q25	Q50	Q75	Q90
	Ln(PvtExp pEdu)	Ln(PvtExp Edu)	Ln(PvtExp Edu)	Ln(PvtExp Edu)	Ln(PvtExp Edu)	Ln(PvtExp Edu)
Ln(PCE)	0.621*** (0.0064)	0.651*** (0.0124)	0.661*** (0.0091)	0.647*** (0.0077)	0.602*** (0.0079)	0.564*** (0.0091)
Age	0.089*** (0.0010)	0.0866*** (0.0019)	0.085*** (0.0014)	0.083*** (0.0012)	0.0818*** (0.0012)	0.081*** (0.0014)
HH Edu	0.023*** (0.0007)	0.020*** (0.0013)	0.023*** (0.0009)	0.022*** (0.00084)	0.0219*** (0.0008)	0.0241*** (0.00098)

Gender	0.097*** (0.0061)	0.108** (0.0118)	0.106*** (0.0086)	0.093*** (0.0073)	0.0922*** (0.0075)	0.0871*** (0.0087)
Rural	- 0.141*** (0.0068)	-0.151*** (0.0132)	-0.134*** (0.009)	-0.133*** (0.0082)	-0.126*** (0.0084)	-0.119*** (0.0097)
Social group	- 0.145*** (0.0070)	-0.182** (0.0135)	-0.160*** (0.009)	-0.140*** (0.0084)	-0.112*** (0.0094)	-0.110*** (0.0099)
Religion	0.106*** (0.0076)	0.133** (0.0148)	0.127*** (0.0108)	0.116*** (0.0092)	0.112*** (0.0094)	0.119*** (0.0108)
HH Type	0.032*** (0.0062)	0.030** (0.0120)	0.035*** (0.0088)	0.0360*** (0.0074)	0.035*** (0.0076)	0.033*** (0.0088)
Type of Institution	- 0.992*** (0.0072)	-1.291** (0.0139)	-1.167*** (0.0101)	-0.989*** (0.0086)	-0.833*** (0.0088)	-0.737*** (0.0101)
Medium of Instruction	0.763*** (0.0072)	0.856** (0.0147)	0.807*** (0.0107)	0.772*** (0.0091)	0.745*** (0.0094)	0.714*** (0.0107)
Change of Institution	0.049*** (0.0083)	0.0535** (0.0161)	0.0421** (0.0118)	0.046*** (0.01004)	0.044*** (0.0103)	0.044** (0.0118)
Scholarshi p	- 0.164*** (0.0083)	-0.190** (0.0160)	-0.176** (0.0117)	-0.172*** (0.010)	-0.152*** (0.0102)	-0.123** (0.0117)

Books and Stat	- 0.720*** (0.0173)	-0.958** (0.0334)	-0.909** (0.0245)	-0.757** (0.0208)	-0.552** (0.0214)	-0.377** (0.0245)
Up to class X	- 0.402*** (0.0108)	-0.280** (0.020)	-0.334** (0.0153)	-0.406** (0.0130)	-0.462** (0.0134)	-0.528** (0.0153)
Constant	1.435** (.0659)	0.0425 (0.127)	0.530* (0.093)	1.312* (0.079)	2.322* (0.0813)	3.148* (0.0932)
R-squared	0.7055					
F-value	15987.53					
Pseudo R- squared		0.4537	0.4757	0.4730	0.4659	0.4623

Note: Standard error in parentheses

*** p<0.01, **p<0.05, *p<0.1

From the above results it can be observed that the per-capita consumption expenditure (proxy for household income) has a positive and statistically significant effect on household education expenditure. For the lower quantiles at 10th and 25th, one percent increase in per capita consumption expenditure increases the household education expenditure by 0.65 percent and 0.66 percent, respectively. However, beyond the median quantile the proportionate expenditure on education is lower for everyone per cent increase in per capita consumption expenditure declines. At the 75th and 90th quantile one percent increases in the per capita expenditure increases the household education expenditure by 0.60 and 0.56 percent. It shows that the proportion of the income spent on the education expenditure is higher at the lower quantile and it is decreasing at the higher quantiles, though the absolute quantum of expenditure on education is higher for the rich households. Similar results were found by Bayar and Yanik Ilhan (2016) for Turkey for the year 2002.

The gender of the student (dummy taking the value of 1 if male and 0 otherwise, that is female), has positive and significant but decreasing effect across the quantiles. At the 10th and the 25th quantile the expenditure on education is 10 percent more if the gender of the student is male. And it starts to decrease at the higher quantiles. At the 75th and 90th quantile the expenditure on education is 9.2 and 8.7 per cent respectively if the gender of the student is male. This shows that at the higher quantiles the gender bias lesser than the lower quantiles.

Rural (dummy taking the value of 1 if rural and 0 otherwise), has a negative effect, that is the households in the rural area spend lesser on education than the households in the urban area. At the 10th quantile, the households in the rural region spent 15 percent lesser on education than the households in the urban region. At the 90th quantile, the households in the rural region spent 11 percent lesser on education than the households in the urban region. This shows that as the quantile increases the difference in spending on education by households between rural and urban declines.

Social group (dummy taking the value of 1 if SC/ST and 0 otherwise), has a negative effect but decreasing trend across the quantiles. Scheduled (caste/tribes) groups are found to be spending less than the non-scheduled group on education. But it has a declining trend across quantiles, i.e. difference in spending for education between the scheduled castes and non-scheduled castes is declining as we move to the higher quantiles from the lower quantiles. But if one considers only the OLS results, the SC/ST group spends 14 percent less than the non- SC/ST group which is same across the distribution of the household expenditure on education.

The type of institution the student attends, that is, whether the student goes to a government institution or a private institution matters. The expenditure will be higher if the student is enrolled in the private institution and less if enrolled in the government institution. The regression coefficients of the variable (dummy taking the value of 1 if enrolled in government institution and 0 otherwise) are negative and have a decreasing trend across the quantiles. This is found to be one of the most important variables. The lower quantile households of students attending government institution spent more than 100 percent lesser than households of students attending non-government institutions. At the 10th and 25th quantile the households spent 129 and 116 percent lesser than the students of non-government institutions. From the median quantiles the difference in expenditure spent between government and non-government institutions have reduced considerably. At the 90th quantile (rich households) the households of students attending

government institutions spent 74 percent lesser. This shows that richer households spent more on education even if the students are attending government institutions.

Scholarship (dummy taking the value of 1 if Yes and 0 otherwise), has a negative effect on the household expenditure on education indicating the wards of households who have scholarship spend less on education expenditure. It is decreasing across the quantiles. At the 10th and 25th quantiles the households spent 19 and 17 percent lesser than the households that are not receiving scholarship. Then again at the 90th quantile the households spent only 12 percent lesser than the households those are not receiving scholarship. So the scholarship has more effect on the lower quantile than on the higher quantile. And the higher quantile households probably spent more on education though they receive scholarship.

Provision of free books and stationery (dummy taking value 1 if students got free books and stationery and 0 otherwise), has negative effect on the household expenditure on education. Provision of books and stationery by the government reduces the need for more education expenditures; hence they push down the household education expenditures. The households receiving free books and stationery from the 10th and 25th quantiles spent 95 and 90 percent lesser than the households that do not receive. But this difference gets significantly reduced at the higher quantiles. At the 75th and 90th quantile the households receiving free books and stationery spent only 55 and 37 percent lesser than the households that are not receiving such transfers in kind. The households from the higher quantiles spent probably more on other educational items, though they receive free books and stationery. Hence, the households from the lower quantiles benefit significantly from the public provision of books and stationery.

Comparing the private educational expenditure for households for students in schools up to class X with those at higher level of education (dummy taking the value 1 for students currently attending up to class X and otherwise 0) shows that expenditure on higher education is significantly higher and it shows an increasing trend across the quantiles. Clearly the education expenditure for the students up to class X is lesser than higher level of education. There exists a significant difference in the proportion of education expenditure spent up to class X across the quantiles. Up to class X, the households at the 10th and the 25th quantiles spent 28 and 33 percent lesser than households with students in higher education. Beyond median quantile, proportion of education expenditure spent up to class X declines than those in higher education. At the 90th quantile the households spent 52 percent lesser up to class X than they spent on higher education.

4. Conclusion

From the results, the per-capita consumption expenditure has a significant effect on the household expenditure on education. As the per-capita consumption expenditure increases the household expenditure on education also increases. The proportion of spending on education as the consumption expenditure increases is greater in the lower quantiles than the higher quantiles. It implies that, lower quantile households are more sensitive to the changes in the consumption expenditure than the households in higher quantiles. Generally, gender is believed to be a significant determinant of the household education expenditure by the households, but this is not true in all the cases. From results, it is found the gender bias does exist only at the lower quantiles and is considerably less at the higher quantiles. From the social group perspective, the SC/ST group spends less than the non-SC/ST groups at the lower quantiles and the difference gets reduced at the higher quantiles. The type of institution a student attends is one of the important determinants of private education expenditure. The proportion of expenditure on students attending government institution is a lot lesser than the expenditure for those attending a private institution. It holds true across the quantiles, especially for the lower quantiles.

The results of the study reveal the lower-income group spends a considerable amount on education despite receiving subsidizing education through government schools. The proportion of income spent on education by the households in lower quantiles is higher, probably because, there is a lower limit of expenditure that everyone should spend. It might include expenses on transport, or if the parents of the children are not educated, they might also have to spend on private tuition. So, in this case, for some households, the lower limit of expenditure is itself a probably higher share of their income. On the other hand, the poorer households choose to spend more lot on education compared to the other consumption expenditure because they probably consider that education is the only mobility through life. Also, availing of the incentives such as scholarships, books and stationery considerably reduces the household education expenditure of the lower quantile households, and such incentives indeed benefit the targeted groups.

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36. Exploring Teaching Competency: A Study of Teachers at the Secondary School Level in Jaintia Hills District

- Sngewkmen Suja , Research Scholar, Department of Education, North Eastern Hill University, Shillong meetsngewkmen@gmail.com
- Ibadani Syiem , Professor, Department of Education, North Eastern Hill University, Shillong,

Abstract

In contemporary society, teachers need to be thorough professionals and fully equipped with high academic standard pedagogical and practical skills. In light of the above statement, the present study has been an endeavour to determine the teaching competency of school teachers at the secondary level in Jaintia Hills, Meghalaya. Taking into account the educational scenario in the District, it becomes imperative to study the Teaching competency as it is an attribute in the teaching-learning process. It may be added that the difference in teaching competency based on academic and socio-economic background was also found out. The study was conducted on 327 secondary school teachers using descriptive method. The result revealed average teaching competency of most teachers and there exist no significant difference based on academic background in teaching competency. However, a significant difference was observed between teachers having high and low socio-economic background.

Key Words- Teachers, teaching competency, academic background, socio-economic background

Introduction

Teaching is a very noble and challenging profession in which teachers are the kingpins of any educational system (Jayasree, 2017). According to the Education Commission 1964-66 (as cited in Aggarwal, 2010, p. 177) the future of India is being shaped in the classrooms. This, is no longer merely rhetoric. In a scientific and technologically advanced world, it is education which establishes the level of prosperity, welfare, and protection of the people. It is worth noting that in this education process, there are resources which are needed and one of the most important resources is human resource. Human resource in the form of teachers translates this education process into reality. Teachers are considered the key resources in the process of education. In light of this context, Jayasree, (2017) states that teachers need to be professionals in their roles and responsibilities to meet the changing need of society as teaching unfolds the world of

knowledge and provides variety of experiences to learners for their better growth and development. Teachers, therefore, are to be competent in their teaching as they dispense knowledge and prepare the future generation. Medley (as cited in Jayasree, 2017, p. 4) states that a teacher's teaching competency refers to the collection of skills, talents, and values that are employed in the classroom. It is the sum of all of a teacher's competencies that are used in a teaching scenario. Teaching competency, according to Passi and Lalitha (2011), is defined as an effective performance of all measurable teacher behaviour that results in desired pupil outcomes. It is clear from the definition that teachers' competency can play significant role in ensuring that desired learning outcome is achieved.

Rationale of the Study

The success of an educational system is primarily determined by the calibre of its teachers. However lofty the aim, however modern and abundant the equipment, however effective the administration, these have to be interpreted and implemented by teachers (Singh, 2006). Owing to the education scenario in the state of Meghalaya and in particular Jaintia Hills District where the drop-out rate is alarming and the literacy rate which is not satisfactory and far below the national average is a matter of serious concern when viewed in the context of Teaching Competency. It may also be added that teachers at the secondary level are in charge of the most crucial period of students' life which will unfold the doors for higher education and the world of work. Hence, the need for the study.

Objectives of the Study

The present study seeks to investigate the following objectives:

1. To find out the level of teaching competency of secondary school teachers of Jaintia Hills District of Meghalaya
2. To study the differences in secondary school teachers' teaching competency based on academic background.
3. To study the differences in secondary school teachers' teaching competency based on socio-economic background.

HYPOTHESES OF THE STUDY

The following hypotheses are stated in the null form which is an assertion that no difference exists between or among variables:

H₀ 1: There is no significant difference between graduates and post-graduate teachers in teaching competency.

H₀ 2: There is no significant difference between the teachers from high and low socio-economic background in teaching competency.

Methodology

For the present study, the descriptive method is employed to realise the objectives of the study.

Population

The study's population included all the teachers of Secondary Schools of Jaintia Hills District, Meghalaya:

Table 1: Population of the Study

Sl. No.	Type of Management	No. of Teachers		
		East Jaintia Hills District	West Jaintia Hills District	Total
1.	Government	5	81	86
2.	Government Aided	164	523	687
3.	Private	140	112	252
4.	Total	309	716	1025

Sources:

- District School Education Officer West Jaintia Hills District, Meghalaya 2015-2016
- District School Education Officer East Jaintia Hills District, Meghalaya 2015-2016

SAMPLE AND SAMPLING TECHNIQUE

Stratified random sampling was applied to select a representative sample of teachers. The table below presents a profile of the sample of the study

Table 2: Sample of the study

Sl. No.	Variable	Category	No. of Teachers	Total	Percentage
1.	Academic Background	Graduate	203	327	62.07
		Post graduate	124		37.93
2.	Socio-economic Background	Low	169		51.68
		High	158		48.32

Tool for the Study

For the present study, “Teaching Competency Scale (TCS)” constructed by the investigators was used. For standardization of the scale, the investigator estimated item discriminating index by using Alpha Cronbach and its reliability value was found to be .984 indicating relatively high consistency. After item analysis, the final form of the scale consists of 49 items to examine five parameters which include (i) Knowledge of Subject Matter (ii) Instructional Practice (iii) Communication Skills (iv) Professionalism (v) Evaluation.

Statistical Technique

The data were analyzed by using SPSS to find the percentages, mean, standard deviation, and t-test. Based on the results of the analysis of the data, hypotheses were tested and conclusions were drawn.

Findings and Discussion

OBJECTIVE 1: To find out the level of teaching competency of secondary school teachers of Jaintia District of Meghalaya

Table 3: Level of Teaching Competency of Secondary School Teachers

Sl. No.	Range of z-scores	Level of Teaching Competency	No. of Teachers	Percentage
1	+2.01 and above	Extremely Competent	4	1.2
2	+1.26 to +2.00	Highly Competent	29	8.9
3	+0.51 to +1.25	Competent	72	22.0

4	-0.50 to + 0.50	Average	127	38.8
5	-1.25 to -0.51	Incompetent	55	16.8
6	-2.00 to -1.26	Least Competent	31	9.5
7	-2.01 and below	Extremely Incompetent	9	2.8
Total			327	100

The result showed in Table 3 above depicts the present status of secondary school teachers concerning the level of teaching competency. It is clearly observed that the percentage of 1.2% extremely competent, 8.9% highly competent and 22% competent together projects a highly satisfactory position when compared to the incompetent, least-competent and extremely incompetent which show up 16.8%, 9.5% and 2.8% respectively. Again, it is revealed that among the secondary school teachers, 38.8 % are found to depict an average level of teaching competency. The finding brought to light that a high level of teachers teaching competency stands out at 32.1% (1.2% extremely competent, 8.9% highly competent and 22% competent) only, a figure not schools and the state Education Department would be pleased of. Thus, this finding contradicts the findings of Anbuthasan and Balakrishnan (2013); Khan (2015); and Rajeswari and Sree (2017) who observed that the level of teaching competency was at high to a very high level. Further, the finding confirms the earlier studies finding of average teaching competency of teachers as revealed in the studies conducted by Usha (2012); Copriady (2014); Soanes (2014); and Lapasam (2018). It may also be added that low teaching competency was reported by Surender (2015) who found that majority of the teachers were unable to perform effectively and Al-Qadri, et.al (2018) revealed that the levels of teaching competencies of 49% teachers fall under low and very low level.

OBJECTIVES 2: To study the differences in secondary school teachers' teaching competency based on academic background.

H₀ 1: There is no significant difference in teaching competency between graduates and post-graduate teachers.

Table 4: Difference in teaching competency between graduate and post-graduate teachers

Sl. No.	Variable	N	Mean	SD	MD	SE _D	df	t stat	t value	Inference
1	Graduate	203	163.71	33.827	3.245	3.857	325	1.97	0.842	Not Significant
2	Post graduate	124	166.96	33.841						

The result of the analysis in the above table shows that the mean score difference obtained by graduates and post-graduates teachers are (163.71– 166.96= 3.245) statistically not significant. The t- value being 0.842 is not significant at 0.05. Hence, the null hypothesis (H_0) is accepted. The finding, it may be said, revealed that academic background does not influence teaching competency which is found to correspond with the findings of Sabu (2005); Usha (2012); Soanes (2014); Ahmad and Khan (2016); and Al-Qadri, et.al (2018). On the contrary, the finding is in disagreement with the studies conducted by Pan (2014); and Shivani (2019) who inferred that teachers differ significantly in their teaching competency on the basis of qualification where the difference is in favour of the Post-graduate teachers.

OBJECTIVES 3: To study the differences in secondary school teachers' teaching competency based on socio-economic background.

H_0 2: There is no significant difference in teaching competency between the teachers from high and low socio-economic background.

Table 5: Difference in teaching competency between the teachers having low and high socio-economic background.

Sl. No	Variable	N	Mean	SD	MD	SE _D	df	t stat	t value	Inference
1	Low	169	161.31	33.797	7.516	3.724	325	1.97	2.018	Significant @.05
2	High	158	168.83	33.511						

It may be observed that in relation to socio-economic background, the result of the analysis shows that the difference in the mean score obtained by the teachers having low

and high socio-economic background are (161.31– 168.83= -7.245) statistically significant. The calculated 't' value of 2.018 is significant at 0.05. As a matter of fact, the null hypothesis (H_0) is rejected. The study is evincing that socio-economic background seemingly is a variable that determines and affects teaching competency; and is in consensus with the observations and findings revealed in Indian studies viz Nirmala (2013) and MohanKumar and Narayanaswamy (2018) which concludes that teachers having high level of socio-economic status had higher levels of teaching competency compared to teachers with moderate and low levels of socio-economic status.

Implications and Recommendations

In line with the findings of the study, implications and recommendations are provided keeping in mind the objectives of the study and in relation to stakeholders for enhancing teachers' teaching competency at the secondary school level.

An analysis of the overall assessment of teaching competency indicates that a substantial percentage of teachers are noted to be depicting an average and low level of teaching competency. This finding does not augur for bringing the desired learning outcome. It is certain that for many teachers there is not sufficient connection between the training they receive and the realities of the classroom. Therefore, scope should be provided for on job training experience. Further, Teacher Education programmes should make a paradigm shift from conventional curriculum to competency base curriculum with an emphasis on pedagogical skills and methods of teaching. It may also be added that the implementing agencies such as The Directorate of Educational Research and Training, Directorate of School Education and Literacy, and the office of the District School Education Officer must evolve a mechanism of inspection of classroom teaching from time to time to ensure that the skills of teaching are executed and implemented. It may be stated that strong machinery for classroom observation would be a catalyst towards the achievement of desired results which would have a consequential effect on learning and education as a whole.

Teachers cannot function in vacuum. They are to be supported in their teaching task by rendering good incentives. The study revealed that socio-economic background determines teaching competency where it is noted that teachers belonging to high socio-economic background depicts a high level of teaching competency. This, therefore, has an

implication on authorities to initiate measures to enhance the monetary benefits for teachers so as to facilitate better teaching performance. The government should view in right earnest and facilitates fixation of salary structure based on the principle of equity for all teachers. There's just one catch, in exchange for more incentives, teachers need to become more accountable for their performance.

Conclusion

In conclusion, it can be said that since secondary education prepares students to unfold their future, it is of utmost significance that teachers teaching competency needs to be improved and properly monitored. A decent remuneration for enhancing teaching competency is necessary for maintaining quality education which is the responsibility of the Government and stakeholders at large.

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37. A Study of Psycho-social Problems of Adolescents

- **Dr. Jagpreet Kaur**, Assistant Professor, Deptt. of Education & Community Service, Punjabi University, Patiala Email: mahal.jagpreet@gmail.com

Abstract

The main objective of the present study was to explore the differences in psycho-social problems of adolescents across gender and type of school. The data was collected from a random sample of 225 eleventh grade students with the help of Psycho-social Problems Scale by Benson (2000). The results of t-test revealed significant gender differences in psycho-social problems and its dimensions among adolescents except problems in dealing with others and financial problems. The female adolescents were found to possess significantly higher levels of psycho-social problems and its dimensions than their male counterparts. Further, significant differences in psycho-social problems and its dimensions among government and private schools students were found except problems of self-esteem, problems of recognition and approval, problems of love and affection, problems of security, problems of independence, problems in dealing with others, financial problems, problems in dealing with authorities and problems in relation with anxiety dimensions of psycho-social problems. Implications of these results are discussed.

Keywords: Psycho-social problems, gender, type of school, adolescents.

Introduction

The term psycho-social reflects both the under controlled, externalizing or behavioral problems such as conduct disorders, educational difficulties, substance abuse, hyperactivity etc and the over controlled, internalizing or emotional problems like anxiety, depression etc. The emotional problems have been relatively neglected compared with behavioral problems because these are not easy to be detected by the parents or teachers (Ahmad et al., 2007). During adolescence, the children suffer from various forms of dysfunctions and conflicts, which ultimately impair normal psychosocial development aggravating psychosocial problems (Bista et al., 2016). Understanding regarding psychosocial problems concludes that it is a state of emotional and behavior disorders synonymous with internalizing and externalizing conditions, respectively. Most common disorders include depression and anxiety (internalizing disorders), and delinquency, aggression, educational difficulties, and truancy (externalizing disorders) (Ahmad et al., 2007).

The term psycho-social refers to one's psychological development in and interaction with a social environment. Psycho-social problems, which can greatly affect one's life, one's work, family and one's domestic life; can be mild to most severe in terms of how pervasive and to what extent a person exhibits the features of a personality disorder (Algur, 2013). The adolescence or the second decade of life (10-19 years) is a crucial decade of life. It is the period demanding significant adjustment to the physical and social changes which distinguish childhood behavior from adult behavior. During this transition between childhood to adulthood rapid demand for new social roles takes place. The adolescents, due to these changes often face a number of crises and dilemmas. If adequate care and attention is not given adolescents are prone to develop various psychosocial problems with long standing impact (Sharma et al., 2014). Hence, it was thought worthwhile to study psycho-social problems among adolescents.

Objectives of the Study

1. To study gender differences in psycho-social problems among adolescents.
2. To study differences in psycho-social problems among adolescents in relation to type of school.

Delimitations of the Study

The study was delimited to adolescents studying in +1 class in government and private schools located in Sangrur district of Punjab.

Method & Procedure

The study was conducted through descriptive method of research.

Research Tool Used

Psycho- Social Problems Scale developed by Benson (2000) was used to study the various psycho-social problems being faced by the adolescents in their everyday life. It is a 225-items scale that contains fifteen items each for the fifteen dimensions of psycho-social problems. Each statement has five answers indicated by A-strongly agree, B-agree, C-undecided, D-disagree and E-strongly disagree.

Sample

A stratified random sample of 225 adolescents (99 females and 126 males) was selected for the conduct of the present study.

Results & Discussion

The use of t-test was made to study the gender and type of school differences in psycho-social problems of adolescents.

Gender Differences in Psycho-social Problems among Adolescents

The table I shows the means and SDs along with t-values testing the significance of gender differences in psycho-social problems among adolescents.

It may be observed from the table I that the t-values testing the significance of gender differences in problems of recognition and approval, problem of security, problem of creative expression, problem of achievement, problem of isolation, problem in dealing with opposite sex and problems in relation to emotional maturity dimensions of psycho-social problems for male and female students came out to be 2.91, 3.46, 3.46, 3.95, 3.40, 3.91 and 7.86 respectively which are significant at 0.01 level.

Table I

Gender Differences in Psycho-Social Problems among Adolescents (N=225)

S.No.	Dimension	Gender	N	Mean	S.D.	t-value
1.	Problems on Self-esteem	Female	97	44.09	7.01	2.29*
		Male	128	42.09	6.05	
2.	Problems on Recognition and Approval	Female	97	46.44	6.46	2.91**
		Male	128	43.77	7.07	
3.	Problems on Love and Affection	Female	97	47.56	7.47	2.08*
		Male	128	45.55	6.89	
4.	Problems on Security	Female	97	45.92	8.59	3.46**
		Male	128	41.77	9.15	
5.	Problems on Independence	Female	97	48.01	10.81	2.18*
		Male	128	45.20	8.61	
6.	Problems on Creative Expression	Female	97	54.78	7.44	3.46**
		Male	128	51.34	7.37	
7.	Problems on New Experience	Female	97	51.95	8.41	2.57*
		Male	128	49.02	8.47	
8.	Problems in Dealing with Others	Female	97	46.84	10.63	1.61
		Male	128	44.82	8.14	
9.	Problems on Achievement	Female	97	53.28	9.07	3.95**
		Male	128	48.76	8.04	
10.	Problems on Isolation	Female	97	52.47	9.17	3.40**
		Male	128	48.38	8.78	
11.	Financial Problems	Female	97	44.71	13.07	1.67
		Male	128	42.02	11.15	

12.	Problems in Dealing with Opposite Sex	Female	97	50.64	8.38	3.91**
		Male	128	46.33	8.05	
13.	Problems in Dealing with Authorities	Female	97	47.69	11.21	2.27*
		Male	128	44.78	8.05	
14.	Problems in Relation with Anxiety	Female	97	49.04	12.19	1.99*
		Male	128	46.03	10.50	
15.	Problems in Relation with Emotional Maturity	Female	97	56.77	8.28	7.86**
		Male	128	48.31	7.78	
16.	Total Psycho-Social Problems	Female	97	740.20	96.19	4.45**
		Male	128	688.16	79.00	

* $p \leq 0.05$; ** $p \leq 0.01$

The table I further, shows that the t-value testing the significance of gender differences in problems of self-esteem, problems of love and affection, problems of independence, problems of new experience, problems in dealing with authorities and problems in relation with anxiety dimensions of psycho- social problems came out to be 2.29, 2.08, 2.81, 2.57, 2.27 and 1.99 respectively which are significant at 0.05 level.

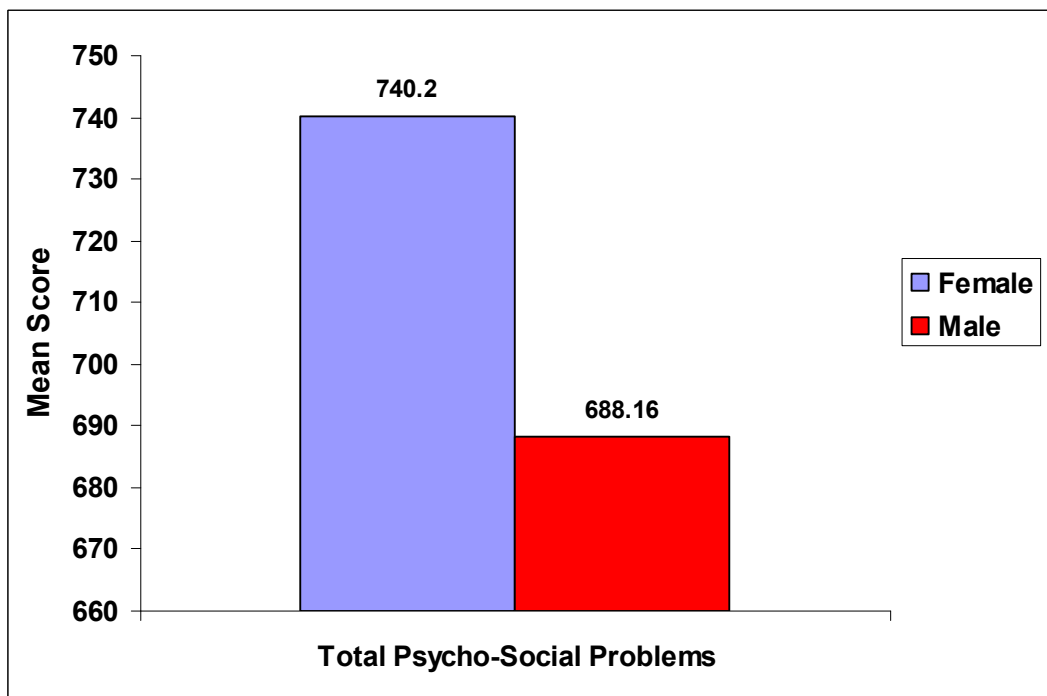


Fig. I: Gender Differences in total Psycho-social Problems among Adolescents

The perusal of the table I shows that t-value testing the significance of gender differences for problems in dealing with others and financial problems dimension of psycho-social problems came out to be 1.61 and 1.67 respectively which are not significant at any level. From these

results, it may be concluded that there are significant gender differences in psycho-social problems and its dimensions except problems in dealing with others and financial problems among adolescents. Further, female adolescents were found to possess significantly higher levels of total psycho-social problems and their dimensions than their male counterparts.

Differences in Psycho-social Problems among Adolescents in relation to Type of School

The table II shows the means and SDs along with t-values testing the significance of differences in psycho-social problems among adolescents in relation to type of school.

Table II
Differences in Psycho-Social Problems among Adolescents in relation to Type of School
(N=225)

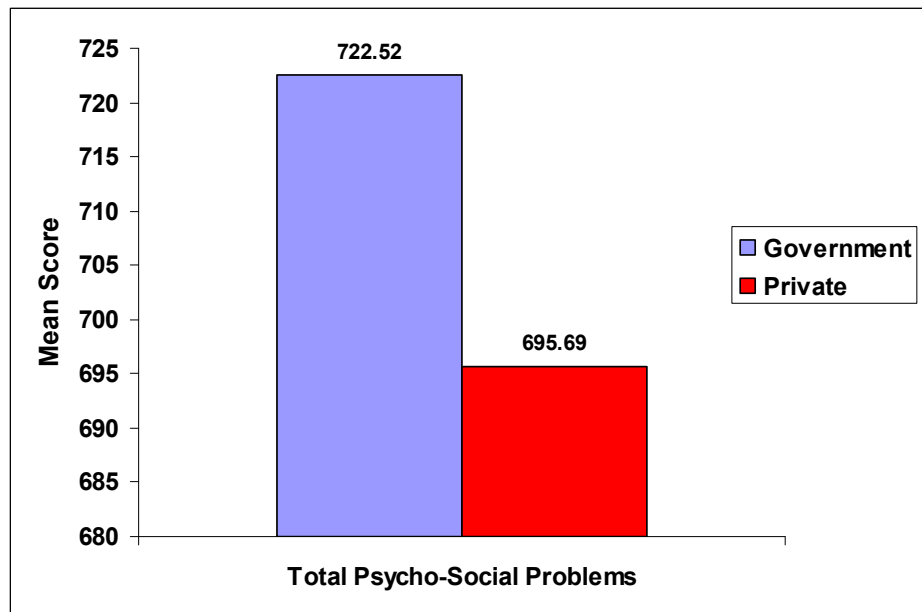
S.No.	Dimension	Type of School	N	Mean	S.D.	t-value
1.	Problems on Self-esteem	Government	125	43.20	6.49	0.63
		Private	100	42.65	6.62	
2.	Problems on Recognition and Approval	Government	125	45.46	6.35	1.31
		Private	100	44.25	7.57	
3.	Problems on Love and Affection	Government	125	46.55	6.85	0.31
		Private	100	46.25	7.64	
4.	Problems on Security	Government	125	43.97	9.29	0.76
		Private	100	43.04	8.95	
5.	Problems on Independence	Government	125	46.51	10.55	0.18
		Private	100	46.28	8.55	
6.	Problems on Creative Expression	Government	125	53.86	7.57	2.31*
		Private	100	51.53	7.42	
7.	Problems on New Experience	Government	125	51.59	8.65	2.60**
		Private	100	48.65	8.16	
8.	Problems in Dealing with Others	Government	125	45.49	10.39	0.36
		Private	100	45.94	7.84	
9.	Problems on Achievement	Government	125	52.19	9.38	2.89**
		Private	100	48.85	7.58	
10.	Problems on Isolation	Government	125	51.27	9.89	2.09*
		Private	100	48.73	7.97	

11.	Financial Problems	Government	125	44.10	12.90	1.29
		Private	100	42.02	10.88	
12.	Problems in Dealing with Opposite Sex	Government	125	49.85	8.48	3.37**
		Private	100	46.11	7.98	
13.	Problems in Dealing with Authorities	Government	125	46.62	11.26	1.03
		Private	100	45.30	7.05	
14.	Problems in Relation with Anxiety	Government	125	47.98	12.07	0.97
		Private	100	46.51	10.33	
15.	Problems in Relation with Emotional Maturity	Government	125	53.86	8.73	3.64**
		Private	100	49.58	8.85	
16.	Total Psycho-Social Problems	Government	125	722.52	94.46	2.23*
		Private	100	695.69	83.11	

* $p \leq 0.05$; ** $p \leq 0.01$

The perusal of the table II reveals that the t-value testing the significance of differences in problems of new experiences, problems of achievement, problems in dealing with opposite sex and problems in dealing with emotional maturity dimensions of psycho-social problems for government and private school students came out to be 2.60, 2.89, 3.37 and 3.64 respectively which are significant at 0.01 level. The perusal of the table II shows that t-values testing the significance of differences in problems with creative expression and problems of isolation dimension of psycho-social problems for government and private school students came out to be 2.31 and 2.09 respectively which are significant at 0.05 level.

The table II further shows that t-value testing the significance of differences in problems of self-esteem, problems of recognition and approval, problems of love and affection, problems of security, problems of independence, problems in dealing with others, financial problems, problems in dealing with authorities and problems in relation with anxiety dimensions of psycho-social problems among government and private school students came out to be 0.63, 1.31, 0.31, 0.76, 0.18, 0.36, 1.29, 1.03 and 0.97 respectively which are not significant even at 0.05 level.



FigII:Differences in total Psycho-social Problems amongAdolescents in Relation to Type of School

The results of the present study may be seen in line with some related research evidence. Significant gender differences in psycho-social problems among adolescents were found. Further, female adolescents were found to possess significantly higher levels of psycho-social problems than their male counterparts. The results are in line with Bista et al. (2016), Adhikari et al. (2017), Karki (2017) and Singh (2017). However, Ahmad et al. (2007), Bhosale et al. (2015), Kumar et al. (2014), Sharma et al. (2014), and Bista et al. (2016) observed non-significant gender differences in psycho-social problems among adolescents.

Hence, the results of the present study have both theoretical and empirical support to explain adolescent development perspective.

Implications

On the basis of the results of the present study, following educational implications may be laid down:

1. Although the sample of adolescents under study was found to possess below average level of psycho-social problems, care should be taken as to mitigate the psycho-social problems among adolescents as these problems can have a detrimental effect on the well-being of the adolescents in stressful situations.
2. The results of the study revealed significant gender differences in psycho-social problems

among adolescents. Furthermore, female adolescents were found to possess significantly higher levels of psycho-social problems than their male counterparts. Therefore, counseling sessions should be organized in the schools to address the psycho-social problems of the adolescents, with special focus on the female adolescents.

3. The results of the study revealed significant differences in psycho-social problems among adolescents studying in government and private schools of Punjab. Therefore, social support from teachers, peers and parents should be provided to the students studying in government schools undergoing various types of psycho-social problems in their everyday lives.
4. A supportive behavior leads to better physical and mental health outcomes (House et al., 1988), the teachers should always have a supportive attitude towards the students so as to enable them to cope with the psycho-social problems during the teaching-learning process.
5. Efforts to map or study social support and adolescent help-seeking behaviours should include the meaningful participation of adolescents (Barker, 2007).

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38. A Comparative Study on Impact of Online Education of Adolescent Learners' in Relation to India and Canada

- Dr. Nabin Thakur, Assistant Professor, Department of Education, St. Xavier's College (Autonomous), Kolkata, West Bengal, India, nabinthakur@gmail.com
- Atrayee Banerjee, Research Scholar, Mississauga, Ontario, Canada, atrayee.banerjee@hotmail.com

Abstract

Since from last few decades to coronavirus disease 2019 (COVID-19) situation, educational organisations were the witness of significant growth regarding online learning. In that circumstances, the study was conducted to know the transformation in learning ecosystem along with the impact of online learning on psychological and psychosocial health of adolescent learners belong to India and Canada. In descriptive survey method, Canadian students' data were inflated for compatibility with the Indian data, and finally 104 data arranged randomly from each country. Through online-offline mode data were collected for calculating and analysing by using Frequencies, Percentage, and t-test. The results revealed excellent and good level of transformation in learning ecosystem by adolescent learners of Canada compare to Indian adolescents, whereas no significant difference was found on the same phenomenon. Study also lighted significant level of difference among the Indian and Canadian learners on psychological and psychosocial health due to online education.

Keywords: Online Education, Adolescent Learners, Learning Ecosystem, Psychological Health, Psychosocial Health.

Introduction

Online education is the new paradigm shift of pedagogy for Teaching and Learning process. This mode of education is catalyzing a pedagogical shift in how we teach and learn. Through this shift, top-down lecturing is going away and passive students becoming more interactive as well as collaborative. Consequently, the Instructor's role is changing from the "sage on the stage" to "the guide on the side." In this age of knowledge explosion, online education has unbottled various facilities and opportunities for the knowledge society, including the option to gather knowledge at one's own pace, without the distance and time barriers. In the past years, there was emerging importance of online education or online teaching-learning for easy knowledge delivery for its convenient nature. Most recently, with the rise of the Covid-19

pandemic, the world continues to experience chaotic situations that are exceptional. This had affected all sectors and all aspects of life, and the educational sector is not exempted from the emerged sudden situational emergencies. The UNESCO in its Global Education Coalition, established that ‘more than 1.5 billion students and youth across the planet are or have been affected by school and university closures due to the COVID-19 pandemic’. This led to a mandatory situation to incorporate ICT, digital teaching-learning process, and the internet for uninterrupted educational delivery. In this regard, the term “Online education” is one of the most used terms by the educational society in the locked down and quarantined situations of the “new normal” phase.

The National Education Policy (2020) highlighted to use digital pedagogy for enriching teaching-learning process with online resources. According to Bates (2017) in Canada, many institutions developed online courses in the year of 2015-2016. He also included in his study that how online learning through blended approach was a very powerful method to progress the knowledge and skills among the students. Therefore, it was apparent that the online learning not only proving the insight about how the medium of teaching changes rather it was also showing significant transformation regarding the nature of class.

Rationale of the Study

Technology is incredible as it conferred huge benefits in every aspect of life. During the current Covid-19 crisis the digital platform has enabled the teachers and learners to connect with each other from their home. In this Covid-19 pandemic phase of school closure, online mode of learning became only the way out to continue the educational process. So far as online classes were concerned Reid (2009) reported in her study that online classes had positive aspects on changing the nature of class in which students could see the questions asked and comments made by other students to keep a permanent record. Similarly, Morahan-Martin, and Shumaker (2013) testified in their study about positive effects of technology and internet that increased academic achievement and feeling of social connectedness along with happiness among the learners. Subsequently, Ngampornchai and Adams (2016) found positive acceptance of online learning and it was quite easy to use thus, the class rooms interaction through online learning, the school environment transformed into learning environment (Thakare, Sarate, & Chacharkar, 2016). With this regard Tsai (2016) revealed in his study that online learning had significant effect on learners to increase positive emotion in terms of emotional intelligence, learners’ readiness, levels of their

relaxation and attention. The online learning was worldwide copious for millions of students, their internet self-efficacy towards online learning had not only created effect on online learning perceptions along with online discussion score but also course satisfaction. (Veletsianos, 2020; Wei, & Chou, 2020).

Technology had flourished the society, even if it had countless benefits, but there were also hazards, predominantly for Children, adolescent and youth. During COVID-19 pandemic and lockdown circumstances extreme use of technology not only affected on the physical, mental, emotional health but also had fetched about a sense of their social security. The spending and using computer >2 hours per day or excessive use of screen time was at increased risk of high levels of psychological difficulties in terms of isolation and depression among the learners (Martin & Schumaker, 2013; Misra & Stokols, 2011; Mitchell et al., 2011; Page et al., 2010). Barr (2014) found that the rising percentage of online class for students instead of traditional classroom setting increased students' mental health difficulties that affected their attendance, coursework, along with grades. Similarly, Park and Hyun (2014) reported in their study that those were engaged in excessive use of technology, they had not only decreased their sense of time, concentration and academic performance due to multi-tasking but also become more impulsive. Study also revealed that excessive used of online platform affected quality of sleep, body composition, mental well-being, including certain practices in terms of viewing pornography for influencing risky sexual behaviors (Bilgrami et al., 2017). Online learning was not only the source of stress for post-secondary students it also increased psychological difficulties along with difficulties in study skills (Barrable et al., 2018; Laffier, 2019). Alhumaid (2019) found in the study that use of iPad, internet connection, laptops and social media, had formed negative impacts on education by deteriorating students' abilities of reading and writing, degrading educational environments, isolating individuals along with scanty social interactions between teachers and students. Likewise, Forse (2019) revealed that eating habits, displaced physical activities, opportunities to interact with each other by the Canadian children significantly affected due to spending too much time on smartphones, video games, tablets, computers and televisions. Study also exposed that the excessive Screen Time also increased the incidence of mental health issues such as anxiety and depression. In addition to these Hasan and Bao (2020) found that "e-Learning crack-up" had a significant positive impact on student's psychological distress and that was influencing their mental health during COVID-19 lockdown. In the new decades digital

developments had not only increased adolescent learners' engagement with screen-based technologies (screen time), rather decreased their contact with nature (green time). This high screen time and low green time affected mental health and well-being (Kecojevic et al., 2020; Oswald et al., 2020). Whereas Paul and Jefferson (2019) did not find any significant difference between online and face to face classes with respect to gender and class rank.

Digital activities in terms of screen time for the adolescent learners had significant impact. In that connection study revealed that moderate engagement in digital activities had some positive impact for well-being of adolescents, study also revealed that the digital technologies, when used in moderation, afford measurable advantages to adolescents. These benefits included avenues for communication, creativity, and development (Granic, Lobel, & Engels, 2014). Similarly, Lenhart et al. (2015) found that online platform facilitated the adolescents to receive social support by connecting to their friends in tough or challenging times. Subsequently, Przybylski and Weinstein (2017) found in their study about reasonable engagement by adolescents in screen time that developed intrapersonal and social development which was promoting for their well-being. Whereas, research reported that through online education students faced difficulties to establish physical, mental, emotional and social stability that created hitches to interact with their instructor, to response properly along with traditional classroom socialization (Adnan & Anwar, 2020; Halupa, 2016). Prolonged detention at home due to online classes, children's increased use of internet which stimulated them to access offensive content and similarly increased their vulnerability for getting bullied or abused (Cooper, 2020; UNICEF, 2020b). In the same way Irawan et al. (2020) concluded that online learning narrowed the physical interaction which caused no social interaction and that learning conditions along with lack of social support made them emotionally poor.

From a broader perspective, the 'new normal' in education added to the one world feeling by tech-shy and tech-savvy approach. Indeed, this deschooling education eventually would transform into usual schooling education but its essence would not be thrown down. Since the dependency on online learning would increase day by day thus the understanding of learners' own experiences along with their psychological and psychosocial health in online learning settings would be the great concerned. However, the online learning problems in the field of education were anticipated affect on health of learners. Numerous studies had been conducted on transformation in learning ecosystem, psychological and psychosocial health effect throughout

COVID-19 epidemic on adolescent learners belonged to Canada and India. So far, there had been no detailed comparative research found on adolescent learners in connection to Canada and India about the impact of online learning on transformation in learning ecosystem, psychological and psychosocial health during COVID-19 epidemic. Therefore, it was necessary to examine the associated impact of online education on the mental as well as social health of learners, without turning a blind eye on it. Hence, the present study was an attempt to compare the impact of online education of adolescent learners' in relation to India and Canada.

Statement of the Problem

The present study was stated as

“A Comparative Study on Impact of Online Education of Adolescent Learners' in relation to India and Canada”.

Operational Definition

Learning Ecosystem: Like a living ecosystem, learning ecosystem is a system of people, content, technology, culture, and process within and outside of an educational organization for customizing online learning program that makes studying, engaging, efficient, and effective among the learners.

Psychological Health: This can be described as mental health of an individual, in which one can cope up with the stresses of life and function within the environment without developing any mental sickness. It also involves a normal emotional, behavioral, and social maturity to a person.

Psychosocial Health: Psychosocial health encompasses the mental, emotional, and social dimensions of an individual. It also involves positive functioning within society and social actualization, social contribution, social integration, and social coherence.

Objectives of the Study

The objectives of the present study were as follows:

1. To study the transformation in learning ecosystem of adolescent learners belong to India and Canada towards online education.
2. To compare the impact of online learning of adolescent learners belong to India and Canada in relation to psychological health.
3. To relate the impact of online learning on the psychosocial health of adolescent learners at school level with regard to India and Canada.

Hypotheses

The researcher had formulated following hypotheses:

1. There would have significant level of transformation in learning ecosystem of adolescent learners belong to India and Canada towards online education.
2. Significant level of difference on psychological health through online learning would not be pragmatic among the adolescent learners belong to India and Canada.
3. Impact of online learning would have no significant difference on psychosocial health among the Indian and Canadian adolescent learners.

Methodology of the Study

Design

In this study, descriptive survey method had been followed by the investigators.

Sample

So far as the sample was concerned, proportionate data of Canadian learners had been used to make parity for Indian learners. In order to achieve this study, small scale data had been collected from Canada. However, to figure out the Canadian students' data were inflated for making compatibility with the Indian data and finally 104 data had been arranged from each country. In this connection data of Ontario and West Bengal from Canada and India had been taken into consideration respectively through randomization to compose the sample size.

Tool

For collection of data, total 30 self-made online questionnaire was used related to the impact of online education. In this connection each component such as transformation in learning ecosystem, psychological health and psychosocial health comprised of 10 items. To figure out the scores from data, five point Likert Scales i.e. strongly agree, agree, undecided, disagree and strongly disagree had been used for each item of the questionnaire. In this connection, the responses of 13 positive items were strongly agree to strongly disagree in which the scores were ranging from five to one point. Similarly, in 17 negative items the scores were ranging from one (strongly agree) to five (strongly disagree) points. So far as transformation in learning ecosystem is concerned, the maximum and minimum scores of 10 items were projected as 30 and 10 respectively. In this regard five level of transformation in learning ecosystem had been stratified by possession 10 intervals in each level, these are as follows: 10 very poor, 11-20 poor, 21-30 average, 31-40 good, 41-50 excellent. However, total maximum and minimum scores for an

individual sample were 150 and 30. In order to standardize the items of the questionnaire, content validity and test-retest reliability co-efficient (0.78) along with split-half reliability co-efficient (0.81) were designed.

Procedure of Data Collection

The data were collected during COVID-19, a noxious pandemic situation. For administering the tool, it was sent randomly to the adolescent learners across the different districts of West Bengal in India and Ontario of Canada through their WhatsApp, Messenger along with scheduled. Prior to sending, few parents of adolescent learners were well informed by the researcher about the tool and possible time schedule for submission through online in terms of WhatsApp and Messenger.

Statistical Techniques

The collected responses of the adolescents were calculated and analysed by using statistical techniques such as Frequencies, Percentage, mean, standard deviation, and *t* test.

Delimitations of the study

The study was delimited among the adolescent learners of Ontario in Canada and West Bengal in India. Furthermore, small sample size was also the major limitation of this research study.

Analysis and Interpretation

Hypothesis 1

To analyze the formulated hypothesis, gain scores of participants with regard to the transformation in learning ecosystem were calculated.

Table 1: *Level and percentages of transformation in learning ecosystem by adolescent learners in Canada and India.*

Sl. No.	Level of Transformation in Learning Ecosystem	Percentages (%) of Transformation in Learning Ecosystem	
		Canada	India
1	Very Poor	0	0
2	Poor	0	6.73
3	Average	40.38	50.96
4	Good	55.77	39.42

The comparative data given in the table 1 does not show either very poor or poor level of transformation in learning ecosystem because of online education by adolescent learners from both the countries excluding 6.73% poor level from India. Whereas 40.38% and 50.96% average level of transformation in learning ecosystem are found among the Canadian and Indian adolescent learners respectively. Percentage of good level of transformation in learning ecosystem by adolescent learners in Canada is higher i.e. 55.77% than the India i.e. 39.42. Subsequently slightly deviated percentages i.e. 3.85 and 2.88 in terms of excellent level of transformation in learning ecosystem by adolescent learners in Canada and India respectively screening.

Table 2: Mean, Standard Deviation, Standard Error of the Mean, Number of adolescents, Standard Error of the Difference, Degrees of Freedom, t and p value of gain scores on transformation in learning ecosystem in relation to online education.

Adolescent Learners of India				Adolescent Learners of Canada				SE_D	df	t value	P value
M_1	SD_1	SE_{M1}	N_1	M_2	SD_2	SE_{M2}	N_2				
29.38	6.06	0.59	104	30.73	4.91	0.48	104	0.765	206	1.77	0.0778

As shown in Table 2, the transformation between mean gain scores of adolescent learners of India and Canada is not so much. Subsequently it is also detected that the computed t value 1.77 followed by p - value 0.0778 from the mean scores with 206 degrees of freedom is inferior than the critical table value 1.97 at 0.05 level ($1.77 < 1.97$), so the means are not significantly different.

Therefore, it is clear that the difference is insignificant at 95% level of confidence $p < .05$. Hence, it can be concluded that significant difference between adolescent learners of India and Canada on transformation in learning ecosystem through online learning is not there.

Hypothesis 2

So far as this hypothesis is concerned, gain scores of adolescent learners with regard to psychological health were calculated.

Table 3: Mean, Standard Deviation, Standard Error of the Mean, Number of adolescents, Standard Error of the Difference, Degrees of Freedom, t and p value of gain scores on psychological health in relation to online education.

Adolescent Learners of India				Adolescent Learners of Canada				SE_D	df	t value	P value
M_1	SD_1	SEM_1	N_1	M_2	SD_2	SEM_2	N_2				
28.26	7.57	0.74	104	25.85	4.72	0.46	104	0.875	206	2.76	0.0063

**significant at 0.01 level

Table 3 shows that the mean gain score of Indian adolescent learners is higher than the score of Canadian adolescent learners. The computed value of t with 206 degrees of freedom is 2.76 and the p -value is 0.0063 which is superior than that of table value of t 1.97 ($2.76 > 1.97$), and 2.60 ($2.76 > 2.60$), at 0.05 and 0.01 level respectively, so the means are significantly different. Therefore, it can be concluded that this transformation is statistically rather significant at $p < .05$ and $p < .01$, 95% and 99% level of confidence.

Hence, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it is concluded that there is a significant level of difference among the Indian and Canadian learners on psychological health due to online education.

Hypothesis 3

In order to analyse the psychosocial health among the Indian and Canadian adolescent learners with regard to online learning t test had been calculated.

Table 4: Mean, Standard Deviation, Standard Error of the Mean, Number of adolescents, Standard Error of the Difference, Degrees of Freedom, t and p value of gain scores on psychosocial health in relation to online education.

Adolescent Learners of India				Adolescent Learners of Canada				SE_D	df	t value	P value
M_1	SD_1	SE_{M1}	N_1	M_2	SD_2	SE_{M2}	N_2				
26.83	5.52	0.54	104	23.73	3.44	0.34	104	0.638	206	4.85	0.0001

**significant at 0.01 level

The results given in table 4 shows that the computed mean gain score of Indian adolescent learners is moderately higher than the score of Canadian adolescent learners. The computed value of t with 206 degrees of freedom is 4.85 which is superior than that of table value of t 1.97 ($4.85 > 1.97$), and 2.60 ($4.85 > 2.60$), at 0.05 and 0.01 level respectively, and the p -value is < 0.0001 so the

means are significantly different. Therefore, it can be concluded that this change on psychosocial health is statistically rather significant at $p < .05$ and $p < .01$, 95% and 99% level of confidence.

Hence, the null hypothesis is rejected and concludes that there is a significant level of difference among the Indian and Canadian learners on psychosocial health due to online education.

Discussion

The Covid-19 outbreak did not afford abundant time to plan the educational programme across the globe rather, it made us to act immediately. So far, in this discussion, the study revealed various levels of transformation in the learning ecosystem by adolescent learners in Canada and India but it did not show any significant difference in the compiled data among the adolescent learners of India and Canada in terms of transformation in learning ecosystem due to online learning. This was relatively surprising, which could be explained by pointing to the fact of the sudden shift in the learning platform i.e. from traditional in school learning to online learning, which was more or less a common phenomenon to most students across the globe, as a result of the mandatory school closure due to Covid-19. However, when it comes to the explanation regarding responses of students of Canada, they were already exposed to technologies in their day-to-day lifestyles. Thus, online learning, which involved changes in the learning environment like usages of gadgets, devices, and audio-visual platforms, was not a very new phenomenon to them in terms of infrastructural and technological point of view. In contrast, the Indian students had been getting exposure to these new experiences like virtual classes, online content sharing, etc. all of a sudden, which could have made them react and respond in an overall positive way and that was more or less similar to responses of students of Canada, although Canada is a developed nation. That new platform propagated and established transformation in the learning ecosystem among the Indian adolescents' through their enthusiastic approach Ngampornchai and Adams (2016). So, this could be the reason for no significant difference in compiled overall data between the two nations in terms of an overall transformation of the learning ecosystem of the adolescent learners of both countries. Subsequently, this study also exposed significant level of differences among the Indian and Canadian learners, in which, relatively higher level of transformation with regard to psychological and psychosocial health observed among the Indian adolescents compared to Canadian learners through online education. This might be due to the differences in the level of parental involvement and support. Since in India, in the majority of the households, both the

parents were not earning members or engaged in jobs, therefore, students could get more quality time with their family after study hours in comparison to Canada. In addition to this, in India, maximum households are in general consist of multi-generational family members thus, the opportunity to spend more time with parents as well as grandparents is enjoyable for students and this could have helped in filling the void created by limited outdoor social interactions, and as a result, the feeling of social isolation as a result of not meeting and interacting with people outside might be not so overpowering on the Indian students.

So, to conclude, it could be said that, even if online learning has a huge influence on promoting education through advanced technology but at the same time it can create an impact on students mental as well as social health thus, it cannot be considered as a perfect educational medium, similarly it cannot substitute face-to-face communication between teacher and students.

Major Findings

- Adolescent learners of Canada and India did not reveal very poor level of transformation in learning ecosystem. Poor level of transformation in learning ecosystem was not also observed in Canadian learners whereas 6.73% was available among the Indian adolescents. 40.38% and 50.96% average level of transformation in learning ecosystem were found among the Canadian and Indian adolescent learners respectively. Percentage of good level of transformation in learning ecosystem by adolescent learners in Canada was higher i.e. 55.77% than the India i.e. 39.42. Subsequently a little deviated percentages i.e. 3.85 and 2.88 in terms of excellent level of transformation in learning ecosystem by adolescent learners in Canada and India respectively calculated.
- A significant difference between adolescent learners of India and Canada on transformation in learning ecosystem through online learning was not found.
- A significant level of difference among the Indian and Canadian adolescents' learners on psychological health due to online education was revealed.
- Significant level of difference among the Indian and Canadian learners on psychosocial health due to online education was found out.

Educational Implications

- This study would stress on the direct, experiential data of students by empowering educators to perceive warning signs regarding mental health which could help the digital educators to implement proper technopedagogic strategies that adolescent students deserve.

- Through this study the researcher would be able to resolve problems with regard to the psychological as well as psychosocial that could affect the overall development of students during adolescence.
- The study would moreover encourage the researchers to conduct more and more studies towards the effect of online learning on mental, social as well as emotional health of learners at a global level.
- This study could be an insight slant to the educational policymakers to frame policies on transformation of learning ecosystem.

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39. Extent and types of bullying pattern among children with visual impairment studying in inclusive education setting

- **Dr. Vijay Shankar Sharma, Associate Professor & Head, Department of Visual Impairment, Faculty of Special Education, Dr. Shakuntala Misra National Rehabilitation University, Lucknow**

Abstract

Bullying is a problem that exists worldwide being faced by school children including children with visual impairment. It can cause several consequences for the inclusive education system and also for the educational rights of the child to study in safe environment. On the other hand bullying can also have lifelong consequences both for the students who bully and the ones who are victims. A tool was developed consisting different variables related to bullying and the same was administered on 400 children with visual impairment studying in Northern part of India. The sample includes boys and girls having complete loss of vision (blind) and low vision. The samples were studying in the schools designed for sighted counterparts. The present paper focuses on the extent and types of bullying in children with visual impairment studying in inclusive education setup.

Key Words: Bullying, visually impaired, inclusive education.

Introduction

However, various studies point out that students from lower socioeconomic backgrounds are more bullied than students from higher ones. Since not much has been reported on the bullying of visually impaired persons, the area of research was chosen by the researcher to find the bullying pattern among visually impaired students studying in inclusive education setting where visually impaired students get education with their other non-disabled counterparts.

Review of Literature

Various studies as well as reports have established that there are approximately 15% students who either bullied repeatedly or are initiators of such behavior (Olweus, 1993). Direct bullying seems to increase through the elementary years, peak in the middle school/junior high school years, and decline during the high school years. However, while direct physical assault seems to decrease with age and verbal bullying appears to remain constant. School size, racial composition, and school setting (rural, suburban, or urban) do not seem to be distinguishing factors in predicting the occurrence of bullying. Boys engage in bullying behavior and are victims of bullies more

frequently than that of girls (Olweus, 1993; Whitney & Smith, 1993; Batsche & Knoff, 1994; Nolin, Davies, & Chandler, 1995).

Students who engage in bullying behaviors appear to derive satisfaction from inflicting injury and suffering on others, seem to have little empathy for their victims, and often defend their actions by saying that their victims provoked them in some way. Studies indicate that bullies often come from homes where physical punishment is used, where the children are taught to strike back physically as a way to handle problems, and where parental involvement and warmth are frequently lacking. Students who regularly display bullying behaviors are generally defiant or oppositional toward adults, antisocial, and apt to break school rules. In contrast to prevailing myths, bullies appear to have little anxiety and to possess strong self-esteem. There is little evidence to support the contention that they victimize others because they feel bad about themselves (Batsche & Knoff, 1994; Olweus, 1993).

Students who are victims of bullying are typically anxious, insecure, cautious, and suffer from low self-esteem, rarely defending themselves or retaliating when confronted by students who bully them. They may lack social skills and friends, and they are often socially isolated. Victims tend to be close to their parents and may have parents who can be described as overprotective. The major defining physical characteristic of victims is that they tend to be physically weaker than their peers--other physical characteristics such as weight, dress, or wearing eyeglasses do not appear to be significant factors that can be correlated with victimization (Olweus, 1993; Batsche & Knoff, 1994). Chronic bullies seem to maintain their behaviors into adulthood, negatively influencing their ability to develop and maintain positive relationships (Oliver, Hoover, & Hazler, 1994).

Victims often fear school and consider school to be an unsafe and unhappy place. The act of being bullied tends to increase some students' isolation because their peers do not want to lose status by associating with them or because they do not want to increase the risks of being bullied themselves. Being bullied leads to depression and low self-esteem, problems that can carry into adulthood (Olweus, 1993; Batsche & Knoff, 1994).

Oliver, Hoover, and Hazler (1994) surveyed students in the Midwest and found that a clear majority felt that victims were at least partially responsible for bringing the bullying on

themselves. Charach, Pepler, and Ziegler (1995) found that students considered victims to be "weak," "nerds," and "afraid to fight back." Parents are often unaware of the bullying problem and talk about it with their children only to a limited extent (Olweus, 1993). Student surveys reveal that a low percentage of students seem to believe that adults will help. Students feel that adult intervention is infrequent and ineffective, and that telling adults will only bring more harassment from bullies. Students report that teachers seldom or never talk to their classes about bullying (Charach, Pepler, & Ziegler, 1995).

Sample

Visually impaired students studying in inclusive schools located in the Northern part of India were considered as population of the study. The well representative 400 sample was taken to gather data in the present study. Out of these 400 sample, 100 male and 100 female from rural area & 100 male and 100 female from urban area. The samples were studying in different classes from 1 to 10 standards.

Tools

The data was collected by the researcher through contacting sample using the tool, an interview schedule prepared by the researcher as at the time of reviewing the related literature, no appropriate tool was observed. The tool was standardized through content analysis technique with the help of eminent subject experts in the field of education and rehabilitation of persons with visual impairment.

Discussion

37% of the total respondents reported that they often or always feel unsafe at school, among these respondents percentage of male visually impaired was higher as compared to female visually impaired students. 19.25% of the total respondents reported that sometimes they feel unsafe at school and rest of the respondents reported that they never feel unsafe at school. 57.33% of male visually impaired reported that they feel unsafe at school, however, 42.66% female visually impaired reported that they do not feel safe at school. The finding supported the studies carried out by Batsche & Knoff, 1994; Nolin, Davies, & Chandler, 1995 who found that boys engage in bullying behavior and are victims of bullies more frequently than that of girls. Results of the present study reveal that visually impaired boys from the rural area feel safer than that of urban visually boys.

The 60.88% of the respondents who reported that they do not feel safe at school again reported that they feel safe among non-disabled students. Out of these 63.50% were from the urban background. 39.11% of the respondents who reported that they do not feel safe at school reiterated that they feel safe among visually impaired students out of these 59.09% were from the urban background.

44.45% of the respondents reported that they approach visually impaired students when they feel unsafe, 27.55% reported that they approach parents/guardians which also indicates that only 27.55% of the parents were aware that their children were being bullied. 13.77% reported that they approach teachers; rest 3.55%, 0.88%, 2.22% & 7.55% reported that they approach siblings, counselors, administration representatives & non-disabled counterparts respectively.

More than half i.e. 57.13% of the respondents who reported that they feel unsafe at school are socially bullying like excluded from the group made to look dumb, gossiped about, teasing and keeping names were the commonest forms; 35.11% reported that they were verbally bullied viz. called distorted names, teased hurtfully, insulted, humiliated, threatened etc. and rest 5.33%, 1.33% & 0.88% reported that they were physically, gender wise & racially bullied respectively.

Out of the respondents who reported that they experienced bullied, 51.11% reported that they were bullied at playground and out of these male were higher than that of female. In such category, urban visually impaired students faced more bullying as compared to rural visually impaired students. 18.67% of the respondents reported that they were bullied in their classroom and here also percentage of male was higher. Galleries/corridors and canteen were also among the places where visually impaired students experienced bullying behavior with 10.22% and 8.44%. Rest of the places in school i.e. entry and exit of the school, library, laboratories and resource room were also among the places where visually impaired students experienced bullying but the percentage of such students were quite low about 6%.

The most surprising finding of the present study is the result on the information about the person who helps them to reduce the effect of bully. 61.48% of the sample who reported that they were bullied again reported that their non-disabled counterparts help them the most in reducing the effect of being bullied using various methods like compromising and reprimand both. Approximately 19.11% reported that their visually impaired counterparts help them in getting out

of the situation created by bullying them. Division of rural and urban was almost equal in this category. This is a clear sign of inclusion in both rural and urban situation. Here also percentage of male was higher than female. Rest 18.22% approach trained/subject teachers, administration or senior students.

75.11% of the respondents, out of the bullied, reported that they feel the person who bully them is not aware of the abilities of visually impaired and also felt that they never provoked or instigate them to bully.

Conclusion

Bullying is a common phenomenon amongst school going children of non-disabled nature and also perceivable in students with disabilities enrolled in any school setup. Bullying is a serious problem that can severely affect the ability of students with disabilities in spite of their abilities to progress academically and socially and to integrate in the society. An all-inclusive action plan is required to ensure that all students with different disabilities can learn in a conducive and fear-free environment involving all non-disabled students, parents, and school staff.

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40. Strategies for the Enhancement of Emotional Intelligence in Teachers

- Monika Gautam, Research Scholar and Assistant Professor, Amity Institute of Education, Lucknow Campus, Amity University Uttar Pradesh, Noida, India. Email: mgautam@lko.amity.edu , ORCID ID <https://orcid.org/0000-0003-0649-8498>
- Prof. Dr. Mala Tandon, Professor, Guide, Deputy Director and Head of Institute, Amity Institute of Education, Lucknow Campus, Amity University Uttar Pradesh, Noida, Uttar Pradesh, India. ORCID ID <https://orcid.org/0000-0002-4507-3583>
- Prof. Dr. Amita Bajpai, Professor, Co- Guide, Former Dean and Head, Department of Education, University of Lucknow, Lucknow, Uttar Pradesh, India. ORCID ID <https://orcid.org/0000-0001-6686-2859>

Abstract

In 1944, David Wechsler said that Intelligence is “the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment”. Cognitive intelligence was considered to be very important for being a good teacher. But in the present times, teachers need to be emotionally intelligent. Peter Salovey and John Mayer defined Emotional Intelligence as, “the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions”. Teachers who are emotionally intelligent manage their emotions in a positive manner, have good interpersonal relationships and never display undesirable emotions. This casts a positive influence on the students who see teachers as their role models. Such teachers are able to nurture students into responsible human beings with high level of Emotional Intelligence. A close positive relationship between teachers and students plays a very significant role in ensuring that students share with the teachers even those feelings which, if left unexpressed, may lead to undesirable consequences. It is the need of the hour that all teachers should adopt different strategies to enhance their Emotional Intelligence so that they become capable guides and mentors for the students. These students will become efficient in the management of their own emotions and will know how to cultivate good interpersonal relationships in their lives. This will strengthen their happiness and well being in the modern globalized world.

Keywords: Emotional Intelligence, strategies for the enhancement of Emotional Intelligence, teachers.

Introduction

In 1944, David Wechsler (Wechsler, 2018) defined Intelligence as “the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his

environment". This was considered to be a very comprehensive definition of Intelligence. Cognitive intelligence was considered to be essential to become successful teachers. There are highly intelligent teachers who fail to prepare the students for facing the challenges of the real world. But the students of the present globalized world are witnessing an explosion of knowledge due to advancements in technology. It is now very relevant and important that both teachers and students, in addition to their cognitive abilities and skills, learn to manage their emotions. In the present globalized world, a person has to develop interpersonal relationships and also has to be efficient in the management of his own feelings. Besides this, due to heightened level of emotions and the failure to manage these, there may be conflicts that prove detrimental for the overall happiness and well being of the individuals. For the management of emotions it is necessary that Emotional Intelligence is present in people.

Emotional Intelligence

Peter Salovey and John Mayer (Cherry, 2018; Hanscome, 2019) in the year 1990 defined Emotional Intelligence as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". They developed an Emotional Intelligence model. This model includes perceiving emotions, reasoning with the help of emotions, comprehending the emotions of others and also the management of emotions. Salovey and Mayer (Cherry, 2018) believed that the branches in the model are "arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lowest level branch concerns the (relatively) simple abilities of perceiving and expressing emotion. In contrast, the highest-level branch concerns the conscious, reflective regulation of emotion".

In 1995, Goleman (Hanscome, 2019) published the book titled 'Emotional Intelligence'. This made the concept of Emotional Intelligence very popular. He believed that Emotional Intelligence was very important for success at workplace. Those who do not enhance their Emotional Intelligence will not be able to form good relationships at workplace. His model of Emotional Intelligence was based upon the model given by Salovey and Mayer. Goleman's model consists of knowing our emotions, management of emotions, self- motivation, recognition of the feelings of others and managing relationships with others. Daniel Goleman said that 'the ability to

identify, manage and express our emotions is the foundation for learning and making decisions” (Culver, 1998; Pandey, 2007; Woolfolk, 2004).

Qualities of Emotionally Intelligent People

People with high Emotional intelligence are poised, affectionate, outgoing, empathetic and willing to work for the welfare of others. They do not always behave in a perfect manner with others, but they are aware of their emotions and are able to manage them in a way that is not harmful for anybody. An emotionally intelligent person is able to manage his negative feelings and thus remains mentally healthy. Emotional Intelligence plays a significant role in the development of self- regard, assertiveness, self- actualization, flexibility, problem solving, stress- management and empathy. It makes a person socially more responsible and motivates a person to develop effective interpersonal relationships. A person with high emotional intelligence shows social responsibility and is empathetic. A person who has high Emotional Intelligence is patient, confident, self-motivated and good in communication. On the other hand, a person who fails to manage his emotions may prove detrimental for himself and also for others around him. They are more aggressive, self- centred and resistant to accepting change. An emotionally intelligent individual is able to deal successfully with himself and also with the people around him (Chowdhury, 2020; Rampton, 2016; Hein, 1996).

Neocortex and Amygdale

Researches show that when our sense organs receive an external stimulus, it is sent to the thalamus where it is translated into the form that can be understood by our brain. A large part of the message goes to neocortex which is responsible for rational thought. This **neocortex** is a ‘strategist’; and its development helps in the execution of higher order cognitive skills. The neocortex analyses the message and provides response. If the response is of emotional nature, a message is sent to the amygdala in the brain. **Amygdala** activates the emotional centres that are present in the brain. A small portion of the stimulus goes to the amygdala directly and helps in giving a quick but less accurate response. Amygdala is like a ‘sentry’ and plays a very significant role in giving warning signals about any coming danger. Amygdala gives a faster emotional response as compared to the neocortex and may prove to be very useful in conditions that demand fast but maybe not a perfect response. Both the amygdala and the neocortex play significant roles in the behaviour of individuals. The brain of human beings evolves over years so as to become

capable of facing the innumerable challenges of the world. The cells of the brain develop new connections when new skills are learnt (Culver, 1998).

Emotionally Intelligent Teachers

Teachers who are emotionally intelligent manage their emotions in a positive manner, have good interpersonal relationships and never display undesirable emotions. This casts a positive influence on the students who see teachers as their role models. Such teachers are able to nurture students into responsible human beings with high level of Emotional Intelligence. A close positive relationship between teachers and students is very significant in ensuring that students share with the teachers even those feelings which, if left unexpressed, may lead to undesirable consequences. It is the need of the hour that all teachers should adopt different strategies to enhance their Emotional Intelligence so that they become capable guides and mentors for the students. These students will become efficient in the management of their own emotions and will know how to cultivate good interpersonal relationships in their lives. This will strengthen their happiness and well being in the modern globalized world.

Strategies for the Enhancement of Emotional Intelligence

Emotional Intelligence can be innate and it can also be learnt by adopting suitable strategies. In order to be great teachers in the modern competitive and globalized world, it is important that teachers adopt strategies to nurture their Emotional Intelligence. These strategies are as follows:

- **Understanding the Importance of Emotional Intelligence-** First of all, it is important that teachers comprehend the importance of emotional intelligence in life. For ages, it is cognitive intelligence only which has been emphasized for progress. But in today's time achievement of marks alone cannot lead to success and happiness in the global world. Only when they understand the relevance of Emotional Intelligence, they will make efforts to nurture it and make it a part of their daily lives. In addition to this, strategies for the enhancement of Emotional Intelligence should be incorporated in the education system itself so that the students become aware of its significance.
- **Self-awareness-** Aristotle had said "*Knowing yourself is the beginning of all wisdom*". Self-awareness is considered to be the most significant part of emotional intelligence. Only when a teacher is aware of his/her own feelings, he/she can understand how to manage them. This requires 'looking inwards'. Teachers need to introspect and identify their own emotions. Emotions are not good or bad. They are appropriate or inappropriate in a particular situation.

It is important that teachers are efficient in their work and are also emotionally self-aware and connected with their emotions (Hanscome, 2019). Carl Jung (Purrington, 2020) has rightly said “*Who looks outside, dreams; who looks inside, awakes*”.

- **Cognitive Management of Emotions-** When a person becomes aware of his feeling, he can then make efforts to understand them and to manage them in a positive manner. The ability to know and monitor emotions, both cognitively and affectively, helps in the development of self- understanding. It is important that teachers evaluate how emotions are influencing their lives and also try to understand how their emotional behaviour is influencing their relationship with others especially their students. The ability to know one’s own emotions also helps in understanding of one’s own strengths and limitations. Those who wisely understand their feelings never allow the feelings to rule them. Teachers need to reflect upon their own emotions and their behaviour. Mayer believed that those individuals who are able to identify their emotions in a manner that is socially acceptable are more emotionally intelligent and are higher in social efficacy. It is important to develop positive self- regard also. One should accept one’s own good qualities as well as limitations. Teachers should nurture the good qualities and make efforts to control limitations in a manner that they stop acting as inhibitors. Efforts should constantly be made by teachers to improve their capabilities and skills of managing their emotions in a positive and healthy manner. This would prove very useful in the appropriate expression of one’s own emotions and the development of positive relationships with others (Hanscome, 2019).
- **Self Regulation** - Self-Regulation of emotions prevents a teacher from losing temper. He/she does not behave in an impulsive manner. Such teachers always think before doing anything. They are able to control their emotions and do not transfer the affect of the undesirable emotions on their students and colleagues. To be emotionally intelligent it is important that the emotions of a negative nature are controlled or redirected into positive behaviour. Self- regulation is very important for controlling stress and disappointments in life. Emotions especially negative ones should never be ignored. Suppression of feelings does not resolve any issue. It only aggravates the situation and increases stress. It is always wise to identify negative emotions, find out the causes for their existence and then try to remove them with purposeful and concerted efforts. The teachers should be attentive to the way that they think and behave in varied situations. This will make them alert to the

response that they give in a new situation. They should identify the situations that lead to emotional disturbances in them and then try to find a way for dealing with such situations.

- **Expression of Emotions-** Management of emotions does not imply that a person should curb all the emotions. In fact, it is important that teachers share their feelings with others. This makes others aware of how they are feeling, particularly about their feelings with reference to their actions and behaviour. This will provide opportunity for proper expression of feelings that may be positive or negative (Chowdhury, 2020). Expression of emotions is very important. Teachers should express their emotions in an assertive manner, but this should not be done in an aggressive or abusive manner (Golhar, 2018). One should be courageous enough to speak the truth but express words in a straightforward but polite manner. Sometimes a situation may come up in which a person may have a different opinion. It is important that a teacher puts forth his/her opinion assertively and gracefully without any aggressive display of emotions.
- **SWOT Analysis-** SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) helps in understanding one's own strengths and weaknesses. It also makes one aware of the opportunities present as well as the probable threats. SWOT analysis should be done by teachers. This would make them aware of their weaknesses after which they can make genuine efforts to overcome them. The strengths identified should be developed. Teachers should develop the habit of learning from unpleasant experiences and failure; and then moving ahead on the journey of life. Teachers should identify negative behaviour and make all efforts to improve it because this will be beneficial for others as well as for their own selves. Efforts should also be made to seize opportunities to excel and succeed. It is also important to remain alert to the threats that may be present in the environment.
- **Make efforts to find out what others think about you.** Teachers have a certain perception about themselves. But it is also important to become aware about what others especially students think about them. This will help them in becoming aware of those aspects of their personality which they themselves may not have observed (Bariso, 2016). When views are invited from others it is important to ensure that those views are accepted with an open mind and heart. The people should be assured that there will be no malice and ill-will towards them even if they bring to light anything that is seemingly negative or undesirable.

- **Experiential Learning-** It is important that teachers should reflect upon their experiences and learn from them. When attempt is made to do something, then the individual may succeed or may fail. In both the cases, the experience gained will provide some learning that can be useful in the planning and execution of tasks in the future. It sometimes happens that in spite of all meticulous planning and systematic execution, a teacher may not be able to achieve the set targets or the successful accomplishment of tasks. An emotionally intelligent person does not become frustrated on this failure but learns from the failure to move ahead with greater vigour. It is very important that a teacher learns from his/her mistakes and strives for success in future endeavours.
- **Facing Challenges-** Teachers may have to face adverse situations. An emotionally intelligent teacher remains calm and acts wisely even in adverse situations. This helps in successfully coming out of problems and moving on the right path to success. It is important that efforts are made to identify the causes of problems and difficult situations that come in life and deal with them effectively. Teaching will bring new challenges. A teacher who accepts challenges in a positive manner and strives to face them with concerted efforts is bound to motivate the students in facing the challenges of life.
- **Dealing with Criticisms-** Teachers may face criticism from others. This may be due to difference in viewpoints or perception of things. It is important that criticisms from others, is accepted in a very positive manner. Feedback should be accepted with the desire for improvement (Bariso, 2016). For this it is important that an individual has self- confidence and a strong feeling of self -worth. When teachers have confidence and faith in themselves, they will not be disheartened by the criticisms thrown at them. Instead they learn from the critical views of others and improve themselves. Failure to deal with criticisms from others may prove detrimental in the management of one's own emotions as well as the interpersonal relationships with students and colleagues. This may create a lot of negativity which may lead to lesser cooperation and difficulty in working in a team.
- **Observational Learning-** Nobody in this world is perfect. Thus, it is very important that teachers are willing to learn from others. If a teacher assumes that he/she knows everything then this thought in itself will harm his/her progress. One should always be willing and ready to learn from others- even from the students. A teacher, who has this quality, always learns and progresses in life. The sharing and learning of knowledge, skills and capabilities from

each other at workplace enhances the performance of teachers as well as the progress of the organization.

- **Social Skills-** In the words of Aristotle *“He who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god”*. Man is a social animal and wants to remain socially connected. Some people have the capability of getting along well with the other people while some individuals face a lot of difficulty in adjusting with others. Teachers should nurture their social skills and interact positively with others. These skills help to reduce tensions and manage conflicts at workplace. Consequently, the people work together cordially for the realization of goals of the organization.
- **Communication Skills** – Teachers must pay attention to both verbal and non- verbal communication. Gestures, facial expressions, paralanguage and body language communicate more than words (Arthur, 2015). What is said is important but how it is said is even more important. It is important to think and choose words wisely before speaking. Teachers should be careful about their non-verbal communication and also be alert to the message being communicated by the non- verbal cues of others. Similarly, before speaking or doing anything, try to visualize its impact on others especially the students. This will help in the selection of appropriate words, actions and the making of correct decisions. Communication acts as a bridge for connecting the thoughts, ideas, views and feelings of people. Thus, teachers should enhance their skills of verbal and non-verbal communication so that they are able to connect excellently with their students, colleagues and management.
- **Listening Skill-** Teachers should develop the habit of listening actively to the perspectives of others. They should interact with the students and develop rapport with them so that they are willing to speak openly. This makes one aware of the thinking and feelings of the students. It is important to understand the reasons for the way they are behaving (Cherry, 2018). One should never jump to conclusions regarding the behaviour of others. They may have their own reasons for thinking and behaving in the way they are doing. Different people may have very different perspectives, vision and ideas. The development of understanding between individuals requires that each person is an active and patient listener (Golhar, 2018).
- **Empathy-** Empathy helps in better understanding of the feelings of others. For this it is important that we imagine ourselves in the shoes of others. Many times, we are not able to

understand the perspectives of others because we fail to understand the circumstances of other people (Cherry, 2018). Teachers need to be empathetic and aware of the perspectives as well as the circumstances of the students. One should always be ready to help them. (Chowdhury, 2020).

- **Positive outlook in Life** - Each teacher should develop a positive outlook in life (Golhar, 2018). An optimist observes positive things in life while a pessimist fails to observe small successes and favourable results. Purposeful efforts have to be made to transform negative thoughts into positive ones. Teachers should not always focus only on negative thoughts. They should be determined and perseverant to keep progressing in life.
- **Intrinsic motivation** - Intrinsic motivation is an important aspect of motivation. Self-motivation helps teachers to remain energized and focussed on working hard for success and self-actualization. They should set challenging goals and then strive to achieve them. They should not wait for opportunities to come their way. Instead they need to remain alert and active in seizing the opportunities to showcase their capabilities and skills.
- **Retrospection** – Teachers should retrospect and analyse behaviour especially their behaviour in stressful conditions. This will make them aware about their reactions during stressful situations. Try to identify the reactions in different forms. Some people become very aggressive when they are stressed. They need to gradually develop the habit of controlling their loss of temper. For this they may start meditation when they feel stressed out. Some people may become extremely quiet when they are stressed. Such people need to develop the habit of motivating themselves to come out of seclusion and to share their feelings with others. Teachers should develop the habit of writing these observations and the learning from these experiences in a diary. This will help in the efforts to improve their behaviour in a positive way.
- **Stress Management** - Stress has a negative impact on behaviour. Attention should be paid to stress management (Chowdhury, 2020). When teachers are stressed, they fail to express and manage their behaviour in an appropriate manner. Stress inappropriately affects the cognitive faculties and their functioning. This may lead to undesirable consequences at workplace and also cause physical ailments. Thus, it is very important and necessary that teachers make purposeful efforts to adopt necessary strategies for stress-management. It is

also important that one identifies the physiological reactions to stress and then try to control them to avoid a negative impact on interpersonal relationships.

- **Conflict Resolution-** There may be differences in the ideas and style of working of teachers. Concerted efforts should be made for conflict resolution. The conflicts and differences of opinion should not be dragged unnecessarily as these may unnecessarily spoil interpersonal relationships. Teachers should not loose temper but stay calm and focused on conflict resolutions. They need to learn to respond and not react to people. Efforts should be made to resolve issues and forgive people. One must not unnecessarily carry the burden of malice and ill will towards others. When in a heated situation it is necessary that one does not react immediately, remains quiet and responds later (Cherry,2018; Golhar,2018).
- **Living in the Present-** Being able to concentrate on the present and not lamenting or worrying too much about the past is a good way to keep emotions well-managed. Those who keep pondering over their past only or those who only dream of the future fail to utilize the present time. As the word itself communicates, the present moment is a ‘present’ (gift) from God to utilize for progress. Teachers need to plan for the future, learn from the past and strive for progress in the present time and situation.
- **Intuition-** Albert Einstein (Oppong, 2018) has said “*The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.*” Intuition can be said to be “knowing without knowing why”, “thinking with your heart” or “gut feeling”. Nurturing of intuition also helps in the enhancement of Emotional intelligence and the management of emotions. Teachers should try to develop this consciously as intuition often helps to “read between the lines” and understand the true intentions of others. It is also significant in the understanding of a situation with the help of the sub-conscious and the unconscious level of thinking and reasoning.
- **Confidence-** Teachers who are confident about themselves are able to interact in a positive manner with others. They are more receptive to both praise and criticism from others. Such people have faith in their own skills and capabilities. They are not swayed away due to any type of pressure.
- **Values-** Teachers may be very qualified and proficient in their fields. But in addition to this, they need to be rich in values. They should always remain honest and trustworthy with high

integrity. It is important that they show accountability for what they do and how they behave with the students. Teachers should remain committed towards good deeds and display appropriate behaviour and compassion towards others.

- **Adaptability and Flexibility-** The situation and the environment in which teachers work will not always remain constant. Thus, it is significant that teachers remain adaptable and flexible in new situations that come up. They should be ready to accept change. Any person who is not willing to change in a positive manner according to need of time may be left behind on the road to progress.

Conclusion

The strategies mentioned above help to enhance Emotional Intelligence in teachers. The teachers who adopt these strategies will be able to manage good interpersonal relationships with the students, colleagues and others. Their positive and motivational attitude will develop a conducive learning environment in the class. In the modern globalized world, it is extremely important that teachers supplement their cognitive proficiency with Emotional Intelligence. Such teachers will be able to guide the students in a better manner and will make all efforts to ensure the holistic development of the students. The teachers have to develop the cognitive expertise of the students and also have to nurture their Emotional Intelligence so that they are able to successfully face the challenges of life. This can be done by a teacher who is academically as well as emotionally intelligent.

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41. The Role of Metacognition in Second Language Teaching and Learning

- S.Sunitha' Ph.D Scholar, Department of Education, Alagappa University, Karaikudi, India, yogucharu@gmail.com
- A .Catherin Jayanthi' Assistant Professor, Department of Education, Alagappa University, Karaikudi, India., acjenna2016@gmail.com
- G. Kalaiyaran' Head of the Department, Department of Education, Alagappa University, Karaikudi, India. gkauce@yahoo.com
- N.Annalakshmi, Ph.D Scholar , Department of Education, Alagappa University, Karaikudi, India, annalakshmin1985@gmail.com

Abstract

The tendency to be aware of one's own thought functions is known as metacognition. According to research, metacognitive learners are the most active learners because they take deliberate efforts to realize what they are doing as they read. Since proficient usage of metacognitive techniques is uncommon among students, further study on metacognitive awareness is needed to see if students can be trained to use cognitive tools to access their arsenal of metacognitive skills and strategies and improve their learning. This chapter presents the need and benefits of metacognitive knowledge ideas and methods.

Keywords: Metacognitive strategies, success in English learning

INTRODUCTION

A sixth grader discussed what she learned by playing the Stock Market Game, an experience intended to help children become acquainted with how the stock market works, on a National Public Radio show in the United States in March 1999. This observation indicates that this young learner was starting to grasp the true meaning of learning; she was engaging in metacognition.

Simply put, metacognition is the act of thinking about meaning. Learners who are metacognitively conscious know what to do when they don't know what to do; they have methods for determining or determining what they need to do. Metacognitive techniques spark one's thought and can lead to deeper learning and better success, particularly for struggling students. One of the most important abilities that classroom teachers can help second language learners acquire is the ability to comprehend and regulate cognitive processes. It is important that they teach metacognitive skills to their students in adolescence.

METACOGNITIVE STRATEGIES

Metacognitive techniques are tools for helping students understand how they learn; in other words, they are mechanisms that enable students to think about how they think.

Teachers who use metacognitive interventions may have a significant effect on students with learning difficulties by assisting them in developing an effective strategy for memorising and ultimately routinely learning content. Students will use these mechanisms to effectively absorb new ideas as they become more conscious of how they learn, and as a result, they will become more critical thinkers. Below is a list of some of the

Think Aloud

It is excellent for improving reading comprehension and problem-solving skills. Think-aloud encourage students to pay attention to and focus on what they're studying. When teachers read a story or dilemma aloud and pause to verbalize their feelings, this approach works well. This encourages students to observe the teacher's thought process, providing them with the foundation they need to develop their own strategy.

Checklist, Rubrics and Organizers

This is an excellent tool for solving word problems. Since they help in organizing and self-evaluation, these organizational methods aid students in their decision-making process. They usually inquire about what students know and need to know in order to arrive at an answer, emphasizing the importance of rereading the issue and double-checking answers.

Explicit Teacher Modeling

It's ideal for math classes. In a simple example/model of an ability or idea, explicit instructor modeling lets students understand what is required of them. When a teacher demonstrates an easy-to-follow procedure for solving a problem, students have a strategy to remember when they need to solve a problem on their own.

Reading Comprehension

Students must consciously engage with a text and correctly decipher the layers of language in order to truly comprehend reading. It is important for students to learn strong reading comprehension skills because research shows that people with poor reading comprehension abilities struggle in college, career, and personal endeavors.

Metacognitive knowledge and success in language learning

Many researchers have tried to figure out what role metacognitive memory plays in students' academic outcomes and success in various school subjects. Metacognitive awareness rising can increase students' learning, and optimal educational objectives can be met by incorporating metacognitive instruction into the educational process. One string of vocabulary is taught in the realm of language instruction. Many cognitive tasks related to language use, such as oral transmission of ideas, oral persuasion, oral comprehension, reading comprehension, and writing, as well as language learning and different forms of self-instruction, clearly benefit from metacognitive awareness. In terms of second language learning, research on metacognitive knowledge and language learning, especially learner strategies, has identified a shared effect and highlights the fact that metacognitive knowledge should be integrated into learner training programmes to make their learning more effective. As a result, scholars have attempted to define the features of strong language learning.

A Model of Metacognition

Metacognition is a term that refers to the combination of different attended reasoning and reflective systems. It is divided into five main components: (1) learning preparation and training, (2) learning strategy selection and use, (3) tracking strategy use, (4) orchestrating different strategies, and (5) learning evaluation. In all five regions, teachers should model methods for students to implement.

Preparing and Planning for Learning

Preparation and preparation are critical metacognitive abilities that can help students learn more effectively. Students think about what they need or wish to do and how they plan to do it as they engage in preparing and organizing in relation to a learning objective. Teachers will encourage students to think by being clear about the learning objectives they have set for the class and guiding them in setting their own goals. The learners would be able to track their success more easily if the target is explicitly stated. The instructor may set a target for the students to master vocabulary from a certain chapter in the textbook.

Selecting and Using Learning Strategies

According to research, showing readers how to use unique reading techniques should be a top priority in the reading classroom. The learner's metacognitive capacity to choose and use various techniques in a given context for a specific reason indicates that he or she can care about and make deliberate choices about the learning process.

Metacognitive teaching should specifically teach students a range of learning techniques as well as when to use them in order to be successful. When encountering words that they do not know but have decided they need to know to grasp the main point of a letter, for example, second language readers have a range of techniques from which to pick. Word analysis is one technique, for example, splitting a word into its prefix and stem. The use of background hints to help predict the meaning of a word is another choice. However, students must be taught how to use these techniques explicitly, and they must understand that no one technique can succeed in any situation. Teachers must demonstrate how to choose the best technique for them.

Monitoring Strategy Use

Students are more likely to stay on track to achieve their academic targets if they keep track on their use of learning techniques. Once they've chosen and started to follow new tactics, they can check in on themselves on a regular basis and see if they're still using them as planned. Students can be told, for example, that a successful writing approach includes considering the audience and the intent of the writing. Students should be told that in order to keep track of their use of this technique, they can take a break from writing every now and then and ask themselves questions about what they're doing, such as whether or not they're given enough context material.

Orchestrating Various Strategies

A valuable metacognitive capability is the ability to orchestrate the use of several strategies. A significant difference between strong and weak second language learners is their ability to coordinate, organize, and create comparisons among the different strategies available. Teachers will help students by educating them about the various methods available to them, such as training them how to decide the meaning of an unknown word using both word interpretation and context cues. The instructor can also demonstrate to students how to know when one technique isn't working and how to move to a different one. For example, a student might attempt to deduce the meaning of the word antimony using word analysis after learning that anti is a prefix that means "against." But in this case, the tactic isn't going to succeed. Antimony is a metallic chemical element that has nothing to do with being against or resistant to anything. When a student discovers that word analysis isn't assisting her in figuring out.

Evaluating Strategy Use and Learning

When second language learners attempt to determine whether what they are doing is successful, they engage in active metacognition. Teachers will assist students in evaluating their strategies by asking them to consider the following questions:

- (1) What am I attempting to achieve?
- (2) What techniques am I employing?
- (3) How effective am I at using them?
- (4) Is there anything else I should do?

Response of these four questions ties together all of the prior facts of metacognition, encouraging the second language learner to focus on their progress during the learning period.

Preparing and organizing are concerned with determining what needs to be done, while choosing and employing specific tactics is concerned with determining which strategies are employed.

For example, when teaching the fundamental reading abilities of core idea comprehension, the teacher would ask students to answer the following four questions to test their technique:

- (1) What am I attempting to achieve? The teacher needs students to be able to say that they are trying to figure out what the key idea is in the text that they are reading, and that they are doing it because learning the text is important.
- (2) What methods do I employ? The instructor wishes the students to be aware of the various methods available to them and to be able to understand which one(s) they are using to locate the key concept.
- (3) How effective am I at implementing the strategies? The instructor wishes the students to be able to assess how effectively they are following the tactics they have selected, that is, whether they are doing so correctly and whether they are achieving their objectives.
- (4) Is there anything else I should do? The instructor encourages students to be able to find and use alternate tactics if the strategies they're using aren't helping them achieve their goal (i.e., recognizing the key idea). Students must be made aware of the wide spectrum of techniques open to them by their teachers.

According to research, students with poor abilities or knowledge bases in one field appear to overestimate their ability in that area. In other words, they don't know enough to understand that they don't know enough to accurately judge themselves. Learners with good knowledge or skills, on the other hand, can underestimate their potential. These high-ability students were

able to practice in a variety of ways. The study of Kruger and Dunning also demonstrates that learners of all abilities can be taught to more reliably measure their own results. Furthermore, their findings revealed that better self-assessment correlated with improved performance on tasks involving reasoning and grammar.

The Interaction of Metacognitive Skills

The five metacognitive abilities discussed in this digest engage with one another. Metacognition is not a step-by-step method that goes from preparation to testing. During a second language learning task, more than one metacognitive process can be active at the same time. This emphasizes how the coordination of different techniques is a critical component of second language learning.

THE INTERACTION OF METACOGNITIVE SKILLS

Each of the five metacognitive skills discussed in this digest has a relationship with the others. Metacognition isn't a step-by-step process that starts with preparation and ends with evaluation. During a second language learning task, several metacognitive processes might be active at the same time. This emphasizes the importance of orchestrating several techniques in second language learning once more. Allowing students to consider how they mix different tactics makes it easier for them to develop their technique use.

Conclusion

A second language instructor can make good use of instructional time by teaching metacognitive skills. Learners are more able to make conscious choices on how to develop their learning as they rely on their learning methods. Second language learners benefit from strong metacognitive abilities.

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42. A review on achievements and challenges of National Educational Policy towards semester system followed in Indian universities

- Batipshisha Nongbri, Research Scholar, Department of Education, North-Eastern Hill University
- Professor S.M Sungoh, Department of Education, North-Eastern Hill University.

Abstract

In this globally competitive environment, education plays a vital role in the lives of the students to survive and thrive in the competition. For this purpose, it is essential to have viable educational policies and programs in place. This is because the accomplishments and the future of the students rely upon these programs and policies. The education policy in India was not changed for 28 years, from its last revision made in the year 1992. In 2020, a New Education Policy (NEP) was brought to revise and bring a wave of change in the prevailing situation. The policy focuses on providing sufficient leverage to students to opt for examinations in their preferred State or National languages. Additionally, the policy aims at integrating the tiresome divisions that exist in India about the type of educational institutions and boards. As this policy is ought to have a major impact on the students that are potential job seekers in the next 5 years, i.e. graduates and postgraduates, the current study strategically aims at reviewing achievements and challenges of National Educational Policy towards semester system followed in Indian universities. The study extracts pertinent information regarding the semester system at the (Under Graduation level) UG level of Northeast with special reference to Meghalaya.

Keywords: Higher education, National education policy 2020, NEP-2020, achievements, challenges, semester system, Indian universities, Meghalaya, Northeast.

Introduction

Education and academic achievement are essential for students and learners as it develops their foundation basis and provides them opportunities to excel in the commercial world. At present, the education system in India is highly fragmented with the presence of several small-sized higher education institutions (HIEs) affiliated with universities (Desai & Johnson, 2014). However, a major issue with the HEIs is that about 40% of them are running by focusing on a single program in place of the multidisciplinary program which is an essential requirement in the 21st century. A prevalence of enrolment imbalance is also found in the colleges with 20% of colleges having less

than 100 students enrolled and 4% of colleges having more than 3000 students enrolled. It creates issues related to improper career management, lack of autonomy to learners, and reduced learning opportunities in socio-economically disadvantaged areas. Considering the present condition of the Indian education system, liberal reforms have been brought in the educational sector in the form of National Education Policy 2020. The policy focuses on improving early childhood care and education, foundational literacy and numeracy, and universal access to education at all levels to all individuals. The present research explores information regarding the semester system at the (Under Graduation level) UG level of Northeast with special reference to Meghalaya. It also provides relevant information related to the semester system and its significance to the educational growth of the students as compared to a direct examination system at the end of the year.

Literature Review

1. Indian National Educational Policy 2020

According to Jha, Jha & Jha, (2020) the National Education Policy (NEP) 2020 focuses on creating an education system that proliferates the traditional Indian education system in terms of tradition, values, culture, and ethos. The educational life-cycle and features that have been included in the NEP are based on the inputs drawn from historical heritage and contributions made by scholars in different fields such as astronomy, science, yoga, architecture, mathematics, arts, and many more. The main purpose of the NEP 2020 is to provide liberal education covering interdisciplinary and multidisciplinary aspects of each learner. It will help in raising the current gross enrolment ratio (GER) percentage significantly by the year 2035.

Aithal & Aithal, (2020) examined that NEP 2020 includes eight educational stages each having a distinctive feature. The first stage is the foundation stage in which the initial five years of an aspirant are covered. Basic education is provided through activity, play, and discovery-based learning techniques. This stage is essential for the emotional and cognitive development of children. The second stage is Preparatory Stage in which activity and discovery-based learning are provided to aspirants for three years. Formal classroom learning concept with textbooks of different subjects is to be introduced to the children to develop deeper insights about different fields of knowledge.

Aithal, & Aithal, (2019) analyzed that in the third stage which is the Middle school education Stage, children are guided for three years through experimental learning. The students are provided abstract learning in different subjects such as humanities, science, social science, mathematics, languages. Two class level examinations and a semester assessment system are included in this phase to analyze the learning outcome of the students. This stage is followed by the fourth stage which is the Secondary education Stage. In the four years of learning, students are taught through prescribed curricular style and subject-oriented pedagogical methodology to make them critical thinkers and multidisciplinary learning. The students have to go through a semester exam system with Board exams at the end of the 10th and 12th grades.

According to Aithal & Shubhra Jyotsna Aithal, (June 2020) the fifth stage which is Under-graduation Education Stage is introduced for three to four years depending on the course duration. The students will be provided accreditation at each stage of learning such as a certificate after completing the first year, of course, diploma after completing the second year of course, and degree after completing the course. The study schedule will include major, minor, and research projects. In the sixth stage which is Post-graduation Education Stage, the competence of the learners will be strengthened in research and prepare them to acquire a research degree.

Saini, Singh, Kaur & Kaur, (2021) examined that the seventh stage is the Research Stage in which high-quality learning is acquired by aspirants through research for a duration of three to four years. The students acquire a Ph.D. degree in any multidisciplinary/ interdisciplinary/core subject through 8-credit coursework in pedagogy. The one-year MPhil program that was institutionalized before has been discontinued. The eighth stage is related to Lifelong learning in which learning is provided to all so that they do not become outdated in a community in terms of learning, competencies, and experiences. NEP 2020 believes that learning at any stage provides maturity to individuals that bring more satisfaction in their lives. the implementation of NEP 2020 in north-eastern states such as Meghalaya would be a challenging task, especially during the Covid-19 pandemic condition. The introduction of NEP 2020 in schools and universities in Meghalaya may be faced with challenges related to space, trained faculty, and resources. To overcome these challenges adequate steps are taken by the governing body along with spreading awareness about NEP2020 through nationwide awareness campaigns such as 'MyNEP Competition'. Awareness will be spread through the campaign by organizing different competitions such as handmade

painting, shirt film-making, speech-making, digital designing, and many more. It will increase the participation of individuals and spread awareness about NEP 2020 to large masses.

Dholabhai, (2020) analyzed that NEP would be implemented in Nagaland gradually starting from government schools. The state has to increase its strength of teachers to reach the NEP mark of 1:6 teacher-student ratio and strengthen its digital base to reach a large number of students. About 16 tribe communities with different languages reside in Nagaland. To provide education to diversified learning communities, English is to be used as a medium of instruction. It will standardize the learning process and help in shifting rote learning to an in-depth understanding of the subjects. The NEP 2020 is positively accredited by the governing body in Arunachal Pradesh as stated in the National Webinar held on 20th August 2020. The webinar highlighted that NEP would transform Indian education and increase the capability of each student by promoting their holistic development. NEP promotes multilingualism, develops knowledge skills, removes language barriers, and supports sustainable development, and ensures commitment to human rights.

2. Comparison of new NEP 2020 and existing NEP

According to Govinda, (2020) the major aim of the National Education policy in 1986 was to modernize the education sector with the help of information technology. Through NEP 1986, the major focus was given on restructuring of early childhood care, adult literacy, and women empowerment. It was inefficient in meeting the employability requirements that were required by the graduates to initiate start-ups or search for a job in the commercial sector. Therefore, reforms are brought in NEP 1986 in the form of NEP 2020 to develop a research-oriented education system that provides ample opportunities for learners to explore and invest in their ideas.

Pathak, R. NEP (2020) established a comparison between the national education policy and new NEP 2020 developed based on role and found that NEP 1986 focused on the all-round development of the learner while NEP 2020 provides interdisciplinary (joint planning, decision-making, and goal-setting) and multidisciplinary (body, mind, spirit, and emotions) education to the learners. Considering structure, NEP 1986 included common education structure in the format of (5+3+2) +2+3+2, while NEP 2020 focuses on integrated education structure with a format of 5+3+3+4+4+1.

Batra, (2020) analyzed that NEP 1986 provided the freedom to students to select their subjects of interest within the area of study, while NEP 2020 provides the freedom to students to select their subjects of study within as well as outside their area of study. In the segment of research, NEP 1986 did not provide any systematic or authentic funding to carry out research activities in college and university. However, in NEP 2020, National Research Foundation (NRF) has been established to support the research activities across all disciplines in colleges and universities.

Jha, (2020) analyzed that in NEP 1986, no emphasis was given on selectivity of the medium of compulsory education to the aspirants, however, in NEP 2020, compulsory education is to be provided to the children in their mother tongue along with the English language. The introduction of regional and mother tongue languages in the medium of instruction will help in developing a better understanding of the subject content to the children.

3. Semester system followed in Indian Universities

According to Pradeep, (2018), University Grants Commission (UGC) is the governing body in India that is responsible for providing guidelines related to the higher education system and academic reforms, and grading system in the universities and colleges. As per UGC guidelines, semester system policy is implemented in higher educational institutions to assess the academic efficacy of the students.

Rajan, (2011) examined that the semester system is included in colleges and universities as it provides opportunities to the students to acquire learning in different subjects. It is an assignment-based learning process through which in-depth learning about the subject is acquired by the learner. It provides flexibility to the students in terms of selecting the subjects as per their area of interest. Through semester system synchronization could be established between undergraduate and postgraduate courses. In this system, credit hours of the students are defined because of which the students have to schedule their studies as per the set guidelines and there is a decrease in absenteeism. The semester system increases teacher and student interaction because of which the teacher acquires better learning about the interests of the learners. It allows the teacher to make changes in the content of the course as per the interest areas of the learner.

NEOG, (2020) analyzed that the major issue with the semester system is that it provides less time to students to cover a large study portion. It also creates difficulty for the teacher to cover the

entire syllabus in a short duration. Due to the limited period, students do not get additional time to study. As a result, students acquire basic knowledge of the subject in place of in-depth subject knowledge. Limited time constraints do not allow the students to re-evaluate their assignments or paper which creates issues in maintaining their grades. It also deters students from carrying out research activities as researching and exploring consumes a lot of time.

Rajivlochan & Rajivlochan, (2018) analyzed that to eliminate the issues that are faced by the students and teachers, Choice Based Credit System (CBCS) must be introduced by universities and colleges. By introducing CBCS, the students avail themselves the opportunity to select the course of their choice. It also allows the student to acquire learning in the selected course as per the individual pace of learning. In this system, the student can enroll in a new course to earn more credits and transfer the credits to a new university in case of migration from one institute to another.

4. Achievements and Challenges of the semester system followed in India

According to Jaiswal, Pathak, Pawar, & Kharat, (2021) academic achievement is a major concern for students and educators in the present times owing to stiff competition. The semester system examination trend in Indian universities provides ample opportunities for the students to acquire high scores in undergraduate and postgraduate courses. However, a major limitation of the system is that it does not provide sufficient choice of questions to the students as available to students through the annual system of examination. (Diefes-Dux & Carberry, (2019) analyzed that the semester system provides more learning opportunities to the students as they develop better interaction with teachers and other students. However, this learning interaction gets restricted owing to the limited time.

Aithal, & Aithal, (2020) analyzed that introduction of NEP 2020 helps in eradicating the bureaucratic system from higher education institutions. NEP 2020 promotes merit-based appointments and provides opportunities to qualified role models to participate in the decision-making process. It also decreases corruption and lobbying in universities and colleges by introducing rigid bureaucratic norms. It also transforms the lone disciplinary unit of colleges into multi-disciplinary colleges. The other major benefit of NEP 2020 is that it highly focuses on research and innovation that enhances the capabilities of undergraduate and postgraduate students.

Hassan, (2020) analyzed that NEP 2020 is not efficient in covering the bottom-most individuals in the education system as no relief is provided to the religious minorities, poor, and women segments of the society. The milestones related to the finances and commitments are unclear in the NEP 2020 that increases public investment in the education sector. The three-language formula to provide education to the children is unclear as there is a diversity of languages in the entire country. The major reforms were introduced at the undergraduate level in the year 2015 by introducing the semester system and Choice Based Credit System (CBCS). The semester system was suitable for postgraduate courses but not significant for undergraduate courses. For example, the semester system created an issue for the students to appear in the fourth semester as they had to clear two or more semesters to obtain a 3-year course degree certificate. The semester system overburdened the learning experience of the students through examinations, assessments, assignments, compilations, and reviewing records.

Research Gap

Education is important for individuals as it provides them awareness about their rights, abilities, and livelihood opportunities. However, the learning requirements of the individuals were not fulfilled with traditional NEP 1986 as it was based on a graded accreditation model and a single discipline of learning and teaching. It led to the introduction of NEP 2020 that helped in overcoming the challenges that were faced because of NEP 1986. However, studies related to NEP 2020 have been limited as relevant information related to its influence in the northeastern regions could not be collected (Ifenthaler & Yau, 2020). The studies related to the pros and cons of the semester system and challenges of National Educational Policy towards semester system followed in Indian universities have been limited which increased the need of study in this direction. The facts related to the semester system at the (Under Graduation level) UG level of Northeast with special reference to Meghalaya were also limited and did not provide much information in this segment. The present research explores all these unexplored segments and fills the gap by providing relevant information through literature analysis of reports published in the government domain, newspapers, books, journals, and more.

Recommendations

- 1) Ph.D. should be made mandatory qualification for teaching in universities and colleges

The attainment of a Ph.D. degree must be made mandatory in every college and university in India just like B.Ed. has been made a compulsory requirement in elementary school functioning. Making a Ph.D. would help in conducting research activities within the university and making it an integral part of the course. The educators having Ph.D. degrees would be in a better position to guide the students and complete their courses as per NEP 2020 guidelines.

2) Compulsory Faculty Annual Publication leading to IPR

The faculty members in the colleges and universities must publish two scholarly papers in open access journals. The research papers must also have copyright certifications from the government of India so that the quality of the faculty standard is maintained within the university. It must be ensured that if the faculty members do not produce proofs of yearly patent submission, their annual increment should be terminated.

3) Use of services of retired professors to guide the students

The retired universities and college professors having good research experience must be approached by the universities to act as Research Guides to the students. It will help in reducing the scarcity of Ph.D. professionals and facilitate the implementation of NEP 2020 policies effectively in autonomous colleges.

4) Higher education leaders must be enrolled as Role models for research and innovation

The Higher Education organization members must be selected as role models to guide the young generation researchers. The selection of the Role model must be done by different committees such as the Indian Council of Agricultural Research (ICAR), National Council for Teacher Education (NCTE), National Higher Education Resource Centre (NHERC), and others so that qualified members are chosen for research and innovation purpose.

5) Each university must have its publication unit

It must be ensured that at the higher education level the motive of education is patenting or publication. The introduction of individual publications by each university will help in reducing the copyright issues faced by scholars while publishing their articles with international publishers.

6) Vocational training based earning opportunity encouragement

The students and learners must be provided learning and education in such a way that become self-dependent after the age of 18 years. Through training, students must develop their skills and confidence so that they start earning while learning process. The earning by the learners must be included in their Academic Bank of Credits (ABC) so that the learners feel encouraged to use academic learnings for research and enhance their skills.

7) Introduction of assessment based increments and promotion for faculty

As NEP 2020 majorly focuses on enhancing the capabilities of the learners through research, it becomes essential for the universities to maintain the quality of their faculty members. To ensure that the quality of faculty members is maintained, the colleges must introduce compulsory assessment procedures and provide an Annual Performance Indicator (API) score against the performance of the faculty members. Based on the assessment process, the faculty members must be provided increment so that they remained engaged with the researching activities around the year.

Conclusion

Education and achievement are interrelated terms that form the foundational basis of individual knowledge and career background. The educational institutions and academic assessments patterns play a major role in determining the progress of the children and direct them for a future career path. In most of the schools, higher secondary educational organizations, universities, and colleges, a semester system of examination and assessment has been included to assess the performance of the students. In the semester system, the entire academic year of the student is portioned into two parts in which the year section includes a tenure of 6 months. The education system in India was based on National Education Policy 1986 which was based on conventional means of learning and graded accreditation model. It did not support the present learning needs of the students that include an innovative and engaging environment to learn and acquire knowledge. Therefore, to meet the changing needs of the students, modifications were brought in the conventional Education policy in the year 2020 with the introduction of National Education Policy 2020. The NEP 2020 introduced a semester system within all the educational organizations that helped in enhancing the intellectual position of the country in the global education ladder. It was also examined that Meghalaya is the first state in India to implement NEP 2020 in its colleges, schools, and universities. However, the introduction of NEP 2020 would be a

challenging task in Meghalaya as there will be issues related to lack of space, trained faculty, and resources. Despite the challenges faced in the implementation of NEP 2020, it would be highly beneficial to the country, as it will help in developing a research-oriented education system.

Additionally, the introduction of the semester system provides benefits to the students in terms of acquiring learning in different subjects. The semester system includes an assignment-based learning process and systemized assessment procedures every six months that enhance the learning abilities of the students. It also provides more learning opportunities to the students by developing better interaction with educators, lecturers, teachers, and other students. It was examined that the major issue with the implementation of the semester system was that it did not provide sufficient time to the students to cover the entire syllabus. To reduce the issues that are faced by the students in the semester system Choice Based Credit System (CBCS) has been introduced. Through CBCS the learners can select the subject and language of instruction of their choice. The student can also enroll for a new course in the mid of the term and the credits earned in the previous course could be transferred to the new opted course. As a result, the learners are provided more opportunities to switch and make subject choices even during the course if they do not feel comfortable with the selected course. The study proposes certain recommendations that must be implemented by the universities and colleges to encourage research activities. It includes upgrading the faculty so that they assist the students in research and career activities accordingly. It includes assessment-based increments and promotion for faculty so that high quality of faculty is maintained within the university to help students in research activities. Based on the above facts, it can be said that NEP 2020 and the semester system are highly beneficial for the current educational practices as they help in meeting the skills and learning needs of the current age.

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43. Competencies of Teachers and Academic Achievement of Students-A Study of Adolescent Girls in KGBVs of Andhra Pradesh

- G. Varalakshmi , PhD Scholar, Department of Education and Education Technology, University of Hyderabad. varavenkat2001@gmail.com
- Dr. Madhusudan J. V., Associate Professor, Department of Education and Education Technology, University of Hyderabad. madhusudanvj@yahoo.co.in

Abstract

The concept of academic achievement is being applied and measured in the context of imparting of school or higher education. Academic achievement is an indicator to assess the standards of a students and future prospectus. Keeping in view the basic essence of academic achievement, it is tested, while taking three variables such as socio-economic profile of students, competencies of teachers and academic achievements of KGBVs in AP. In the process of empirical study, it is found that the adolescent girl children who are studying in KGBVs are, essentially, from never enrolled, dropouts and out of school children. Their parental background is from the lower caste, lower class, rural, illiterate, women headed family, risk, risk ridden and orphan background. The teachers in KGBVs are highly qualified in terms of educational background and teaching experience. Their capacities have been enhanced through the training programs. As a result of academic facilities and competent teachers, the adolescent girl children KGBVs are able to achieve academic requirements as per regular students of public or private schools.

Girl child education is more important because if women is educated it reflects on her family and children who would be the future generation. In education, academic achievement is an important dimension. Success in life to some extent is depends upon academic success. The multiple efforts by the teachers, students and institution will result in the form of academic outcomes, which are tangible evidences in achieving educational goals. Academic success reflects the personality of student in better-organized preparation, planning, time management, motivation. Academic success help in developing skills like analytical, critical and abstract thinking and decision- making. Academic success is linked to many outcomes we value like the self-esteem, confidence, self-efficacy, and empowerment. Academic achievement is important for successful development of young people. It is concluded that the adolescent girl children coming from marginalized and excluded social background proved that they can also excel in academic performance if minimum academic facilities in the form of infrastructure, competent teachers,

teaching-learning material and other basic facilities. From the sample KGBVs, it is evident that they are provided the basic required facilities, therefore, the adolescent girl children academic performance is on par with any regular students of government schools such as Jawahar Navodaya Vidyalayas, Model Schools and Residential Schools in terms of number of students who have passed and securing of the grades.

Key words: Social-profile, Adolescent girl children, competencies, academic achievement, facilities, enrollment, appointment, training, Teaching methodologies, assessment.

Introduction:

Academic achievement is an important aspect in the context of imparting education. There has been concern for the academic achievement of students since long time from the practical value point of view. Academic Achievement is the part and parcel of the educational policy of any country in designing of formal education. The educational institutions like schools focus on the indicators such as the achievement performance, aspiration and quality. It is the school that performs the function of selecting and differentiating among students on the basis of their track record of previous academic performance and other achievements, which provides opportunities for advancement, again, primarily in terms of achievement (Pandey, Bhriugu Nath, 2013).

The dictionary of education (Good 1945) defines the “Academic Achievement as the knowledge attained or skill developed in school subjects usually designated by test scores or by marks assigned by the teachers” (ibid, p.40).

Further, Pandey argues that academic achievement is related to the acquisition of principles and generalization and the capacity to perform efficiently certain manipulations, objectives, symbols and ideas (ibid, p.41). However, there is no consensus on the notion of the assessment of academic achievement which has been mostly confined to the evaluation in terms of information, knowledge and understanding (ibid, p.41). Universally accepted evidence for the acquisition of information is not an end in itself but a person who has obtained education must demonstrate that he/she has understood the basic essence. In most of the countries, the existing practice to test the understanding level is obviously the essay writing tests and periodic examinations are predominantly prevailing practices to measure the level of information, knowledge and concept acquired by a student in course of learning.

It is universally accepted that the academic achievement of students is the basis for facing the competitive world and success in the high-level competition is the index to measure the learning process. That means the learning process making a sense in the life of a student as achievement fetches the status to the family, his/her personal status is elevated, inevitably, as a direct impact of the achievement in a formally structured classroom setting. The word 'achievement' is used as a name for "ability to do" or "ability to respond in appropriate ways to stimuli and situation in a given field".

The process of achievement measurement consists, (1) securing an appropriate performance as an index of the pupil's achievement, and (2) describing the response in qualitative terms. In studying the measurement of achievement, the attention of teacher in terms of teaching learning, testing/examination, question paper pattern, evaluation process and determining the grade.

➤ The evidences in the studies on academic achievement revealing that the emerging trend in assessment includes focus on comprehensive and integrated rather than only one aspect like skill, but feedback from the students about the whole process of learning and making standards and criteria transparent to the public rather than confidential. However, the feed back from the teachers about the academic achievement of a student is a potential component in terms of enhancing the competency level of a student. With this basic understanding of the concept of academic achievement, the present paper is concentrating on the academic achievements of adolescent girl children in Kasturba Gandhi Balika Vidyalayas (KGBVs).

Review of the literature:

A study of academic achievement of girls studying in KGBV School (2015). For the study, the girls were administered Scholastic achievement test. The study found that KGBV girls on an average only few are good in their studies achieving A+ grade. Most of the girls were found to be average and low in their studies. Another interesting point that was noted during the study percentage of girls performing poorly was decreased as the class increased. It was encouraging to note that as the girls continue their education in KGBV their performance is improving. It was also surprising to note that the girls were doing well in Telugu, but in English it was found that many girls were performing poorly.

Life Adaptive Skills of KGBV Girls in Andhra Pradesh and Telangana (2015). The paper was written based on field experiences in two Telugu states of Andhra Pradesh and Telangana.

The important findings of the paper include that most of girls (70%) scored high on life skill evaluation checklist on the dimensions such as critical thinking, decision making, self-awareness, interpersonal relations, social skills like empathy, coping with emotions etc. The students of KGBV also scored high on problem solving skills and 20 percent of them had average scores and very less percentage (10%) was low scorers. The results of the study reveal that most of KGBV girls were having high level of adaptive skills.

A Study on Personality Traits of Girls Studying in KGBVs of Andhra Pradesh (2015). Majority (82%) of girls scored high on extroversion, indicating that KGBV girls were highly social. They also scored high in attributes like agreeableness, conscientiousness indicating that they were polite, like people and they are honest and hardworking. However, in dimensions like neuroticism and openness to experience 50 per cent of girls scored high and fifty per cent scored low.

School Infrastructure Facilities of KGBVs in Andhra Pradesh (2015). The major findings of the paper include 1). KGBVs are found mostly in the outskirts of village and they are being managed by Rajiv Vidya Mission, Social Welfare, Tribal welfare, and Residential Society have spacious buildings with greenery. 2). All the classrooms are well equipped with lighting and ventilation and well furnished with required chairs, tables, desks, cupboards etc. However, these facilities were not found in few (10%) KGBVs which were running in rented building. 3). It was very encouraging to note from the study that all KGBVs visited had good drinking and bore water supply. All the selected KGBVs have sufficient wash areas for their students, but the maintenance of them is not satisfactory.

Success Stories of KGBV Passed Out Girls in Andhra Pradesh (2015). After understanding the success stories of girls passed out from KGBVs, it can be concluded that KGBVs are success in empowering the girls specially the disadvantaged group by ensuring the continuity of their education. KGBVs are not only providing the basic need of food, clothing and shelter but also strengthening them through education so that they can confidently step into the world and succeed in their lives by completing higher education and reaching their goals.

Efficacy of Kasturba Gandhi Balika Vidyalaya (KGBV)(2015) The study has found that the KGBVs have converted the educational deprivation of girls in to an opportunity to liberate them. It is found that at the time of entry, some of the adolescent girls were unable to write alphabets in their mother tongue. The KGBV has provided bridge course to mainstream them, as

per their age, in the suitable class. Based on the exit point performance level, the researcher has classified the academic achievements in to A, B, C and D categories. The study has found that highest number of D categories and lowest number of A categories. The finding indicating that the quality of education in KGBVs is poor due to pedagogy, teaching methodology and environment.

Elementary Education through KGBVs – A case Study (2015). The important findings of the study include that 1). The Pradhan and members of the gram Panchayati played a significant role in the identification and mobilization of the child labor to study in KGBVs. 2). The extracurricular activities which have attracted the girl children for continuing in KGBVs and over a period of time they became part of academic curriculum. 3). The study also found that there were drop outs even from KGBVs due to sibling care, early marriages and seasonal agricultural work.

A study of Academic Achievement of Girls Studying in KGBVs, (2015). The study reveal that the girls were doing well in Telugu but in English it was found that many girls were performing poorly. It was also interesting to note that there was not any difference in the academic achievement of girls across the three region and between the KGBV managed by different societies

Objectives:

1. To examine the socio-economic profile of the students and teachers of the KGBVs.
2. To study the training and teaching methodologies of the Teachers of KGBVs.
3. To assess the academic achievement of the Adolescent girl children of KGBVs.

Methodology:

In writing of the paper both primary and secondary sources are used. The primary data was collected through structured questionnaire. The structured questionnaire was sent to the teachers of all subjects in eight sample KGBVs. Due to Covid-19 and subsequent lockdown could not allow the researcher personally, visit the sample schools and conduct face to face interviews. Therefore, the teachers were requested to fill the questionnaire and send back to the researcher either through mail or by post. The researcher was able to receive 48 questionnaires, which were filled by the teachers. The secondary source of information was gathered from State *SamagraSiksha Abhiyan* of AP, District offices and sample KGBVs. The secondary data,

basically, consisting pass percentage at the State level, grades achieved by the students and school records.

Sample Profile of the Study:

In order to provide field-based evidences to prove the co-relation between competencies of the teachers and academic achievement of the students, eight KGBVs are taken as samples from two districts of AP. These two districts include Kurnool and Krishna. Out of 53 KGBVs in Kurnool district 5 are taken as sample such as KGBV Alur, Dhone, Orvakal, Mantralayam and Yemmiganur. From Krishna district, all three KGBVs like A. Konduru, Gampalagudem and Reddigudem.

From 8 sample KGBVs about 48 teachers are interviewed through a structured questionnaire, which was sent by mail due to Covid-19 and filled questionnaire was sent back to the researcher. The structured questionnaire was, basically, containing the questions like social and educational profile, nature of recruitment, salary, trainings, infrastructure for teaching, teaching-learning material, teaching methods, testing of students etc. To measure the annual performance of students, the scholastic records are taken as the source.

KGBVs in AP at a Glance:

From the table-1, it is understood that there are 352 KGBVs in AP. These KGBVs have been started in three phases such as 131 type-2 KGBVs which were started initially from VI-X class. Under type-3, 171 KGBVs are started in the second phase from VI-XII class. In the phase-3, 50 more KGBVs have been started to function from class VI-XII. The table has been revealing that there are 131 KGBVs from VI-X class and 221 KGBVs have got VI-XII class. Among 352 KGBVs 18 are meant for the minorities. Present study is confining only VI-X class to establish the co-relation between the competencies of teachers and academic achievement of students.

Table-1 On Number of KGBVs in AP

S. No	Name of the District	No of KGBVs	Type II Previous (VI – X)	Type III Previous VI – XII)	Type III New (VI	Minority (already included in the total)
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					– XII)	
1	Srikakulam	32	11	21	0	0
2	Vizainagaram	33	0	19	14	0
3	Visakhapatnam	34	0	17	17	0
4	East Godavari	12	4	8	0	0
5	West Godavari	3	2	1	0	0
6	Krishna	3	1	2	0	0
7	Guntur	24	15	9	0	3
8	Prakasam	37	23	14	0	3
9	Nellore	10	4	6	0	0
10	Chittor	20	4	16	0	1
11	Kadapa	29	0	10	19	0
12	Anantapur	62	37	25	0	6
13	Kurnool	53	30	23	0	5
	TOTAL	352	131	171	50	18

(Source: Sarva Shiksha Abhiyan, Andhra Pradesh, Amaravathi up to February 2021)

Enrollment of Students:

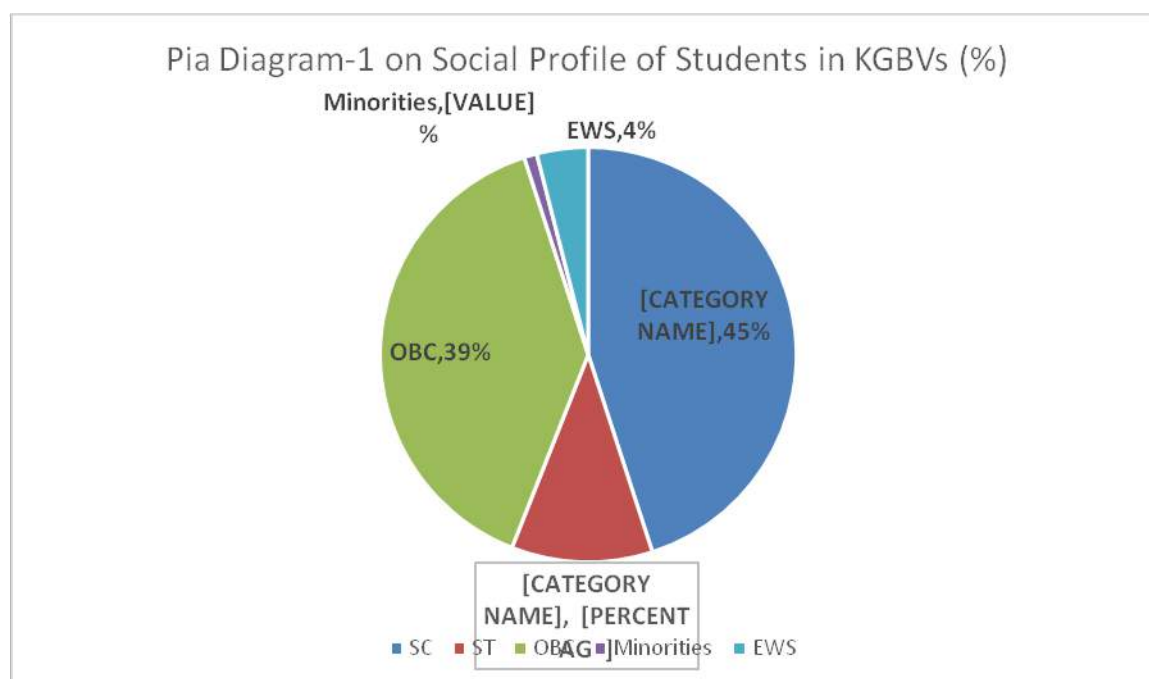
The strength particulars of 352 KGBVs are given in table-2. There are 13567 students in VI class, 13853 in VII class, 14121 in VIII class, 14281 in IX class and 13696 in X class in

Andhra Pradesh. The social category-wise break up is given in pie-diagram-1 from the sample KGBVs.

Table-2 on Enrollment of Students in KGBVs of AP

S. No	Class	Students Strength
1.	VI	13567
2	VII	13853
3	VIII	14121
4	IX	14281
5	X	13696

(Source: KGBV, SamagraSiksha, AP, up to February, 2021)



(Source: Generated by Researcher based on the field data)

Teachers Strength:

As per table-3 for all 252 KGBVs in AP 252 subject-wise teacher posts have been sanctioned. The subjects include Telugu, English, Hindi, science, mathematics, social, physical education-teacher, computer assistant and craft-teacher. Following the KGBV guidelines to have a one subject- one teacher ratio, Samagrasiksha of AP posts are sanctioned. For the recruitment of subject-wise teachers, SamagraSiksha of AP advertised in the offline and online media with required qualifications such as graduation and B.Ed. and for Computer assistant diploma in Computers and for Craft teacher technical teacher certificate. After short listing the applications, the eligible candidates are called for written test. The candidates who have qualified in written test were interviewed. While following rule of reservation, the appointment orders are issued to the selected candidates. The newly appointed teachers in KGBVs are designated as ‘Contract Resident Teacher’(CRT) and the Computer assistant and Craft teacher are appointed on Part-time and Out Sourcing. The nature of appointment of teaching and technical staff is on contract cum outsourcing basis, initially for a period of 11 months. However, their service is being renewed for every academic year. As on now the salary of a CRT 21,755 Rs, for computer and craft teacher the salary is RS14,203. Table

However, the data provided by SamagraSiksha AP, as on February 2021, out of 352 subject-wise teacher posts, 25 are vacant in Telugu, 35 in English, 20 in Hindi, 49 in science, 42 in mathematics, 42 in social 32 in physical education teachers, 81 computer assistants and 56 craft-teachers. The vacancies data indicating that considerable number of posts are vacant.

Table-3on Teachers Strength at State level

S. NO.	Subject	No. of sanctioned Teacher Posts	No. of Existing Teachers	No. of vacancies
1	Telugu	352	327	25
2	English	352	297	35
3	Hindi	352	332	20
4	Science	352	303	49
5	Mathematics	352	310	42

6	Social	352	310	42
7	PET	352	320	32
8	Computer. Asst	352	271	81
9	Craft Teacher	352	296	56

(Source: KGBV, SamagraSiksha, AP, up to February 2021.)

Analysis of the field-based findings:

1. Social profile of students in sample KGBVs:

Table-4 indicating that there are 1610 students from VI to X class. Among them 726 are from SC, 177 are STs, 626 are OBCs, 18 from Minorities, and 54 are EWS. Percentage of the social categories are given in the pia diagram-1 and it reveals that 45% are SCs, 11% are STs, 1% Minorities, 4% from EWS. The Social profile of the children includes Orphans, single parent, drunken parents, divorcee family, and multiple marriage family's children, rescued children human trafficking, migrant workers children, children under sibling care, domestic workers and marginalized sections of the society, children of BPL families etc.

Table- 4 on Students Strength in the sample KGBVs

S. No	Class	Social Category					
		SC	ST	OBC	Minorities	EWS	Total

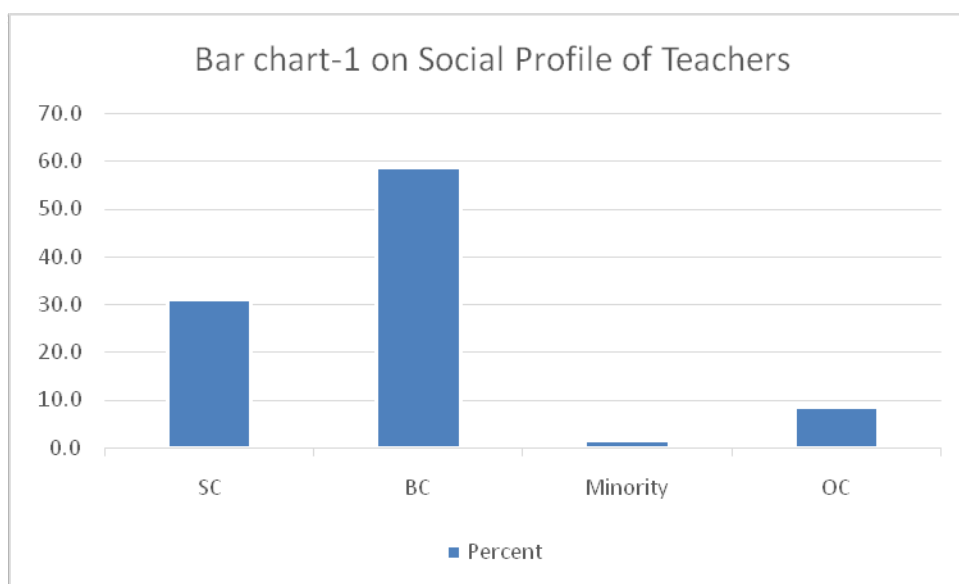
1	VI	143	24	133	6	9	315
2	VII	142	29	121	2	12	309
3	VIII	140	44	122	5	12	323
4	IX	149	36	119	2	14	316
5	X	152	44	131	3	7	347
	Total	7269(45%)	177(11%)	626(39%)	18(1%)	54(4%)	1,610(100%)

(Source: Generated by Researcher based on the field data)

2. Social -profile of Teachers:

The social-profile of teachers, who are working in 8 sample KGBVs is given in bar chart-

1. All the teachers in KGBVs are women and among them 31% are SCs, 59% are BCs, about 2% are from Minorities and about 9% are OCs.



(Source: Generated by Researcher based on the field data)

Table-5 Social Category * Academic and professional qualification

Social category	Academic and Professional qualification		
	B. A/ B. Com/B.Sc. B.Ed.	M.A/M.Sc. B.Ed./M.Ed.	M.Phil./Ph.D.
SC	22.2%	55.6%	
BC	14.7%	82.4%	
Minority	20.0%	60.0%	20.0%
OC	17.2%	70.7%	1.7%

(Source: Generated by Researcher based on the field data)

The social category and academic qualifications of teachers is given in table-5. 22% of teachers from SC category possessing Graduation(B.A., B.Com and B.Sc) and Bactchler of Education (B.Ed) and 56% of them are having Post- Graduation(M.A. and M.Sc) with B.Ed and M.Ed. Among the BCs, 15% are having the qualification of Graduation and B.Ed and 82% of them are having Post- Graduationn and B.Ed/M.Ed. From the minorities, 20% are Graduates with B.Ed, 60% with Post-Graduation and Education degree and 20% arealso having M.Phil/Ph.D qualifications. 17% of OCs have got Graduation with Education degree, 71% have Post-Graduation with Education degree and 2% have M.Phil/Ph.D.

3. Nature of Appointment:

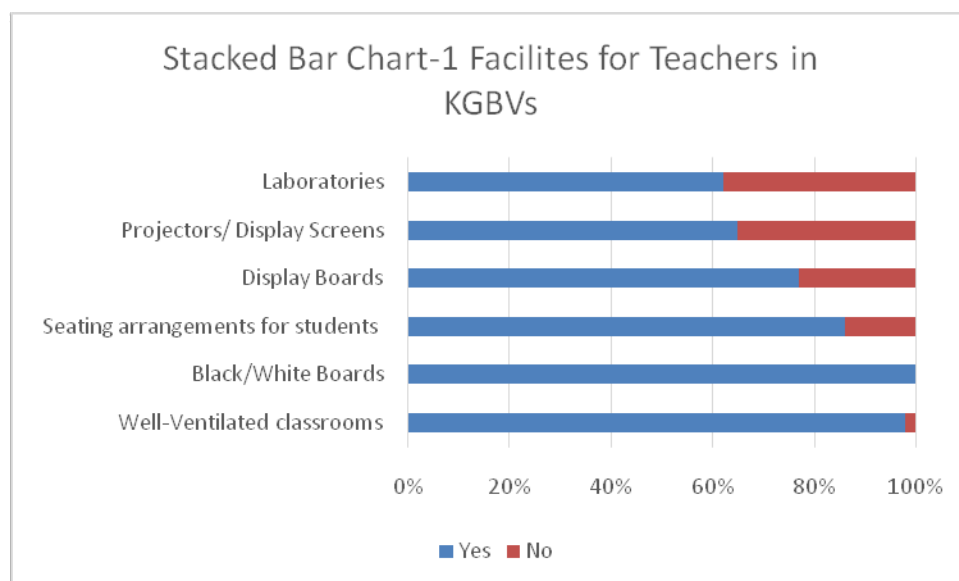
Right from the inception of KGBVs, all the teachers are being appointed on contract basis for a period of 11 months in an academic year, while following a public advertisement and rule of reservation. The contract-based appointments are two types, a) Contract Resident Teachers (Full Time Teacher) and b) Part-Time Teachers. Their salary is consolidated payment of Rs 21,755/- per month for CRTs and Rs 14,203/- per Part Time Teachers.

4. Trainings to Teachers:

After the appointment of subject-wise teachers/CRTs are trained in the district headquarters across the state. The basic content of the training program was about the teaching methodology cutting across the subjects. To update the subject-wise knowledge was trained at the sub-district level. The subject-wise teachers were also trained at the cluster level about the content of the subject, teaching methodology and skill development program in application of computers for teaching. As per data given by the teachers from the sample KGBVs conforming that they are all trained at least for three times after their appointment.

5. Facilities for Teaching:

The stacked bar chart-1 indicating the response of the teachers in sample KGBVs. 98% of them said that the KGBVs are having well-ventilated class rooms, 100% response is that all the class rooms are having black/white boards for writing and explaining. 86% of KGBVs have got sitting arrangement in the form of chair and desk. 77% of the teachers express that there is a common board for displaying the official information and achievements of the teachers and students. 65% opined that KGBVs have got projectors to display the Power-Point Presentations and screening of the films. 62% of the teachers said that the science laboratories are being provided for the experiments in physics, chemistry and biological sciences.



(Source: Generated by Researcher based on the field data)

6. Teaching Methodology:

The stacked bar chart-2 on teaching methodology indicating various methods of teaching such as chalk and talk, lecture cum demonstration, problem solving, discussion, power point presentation, structural functional approach and constructivist approach.

a. Chalk talk method

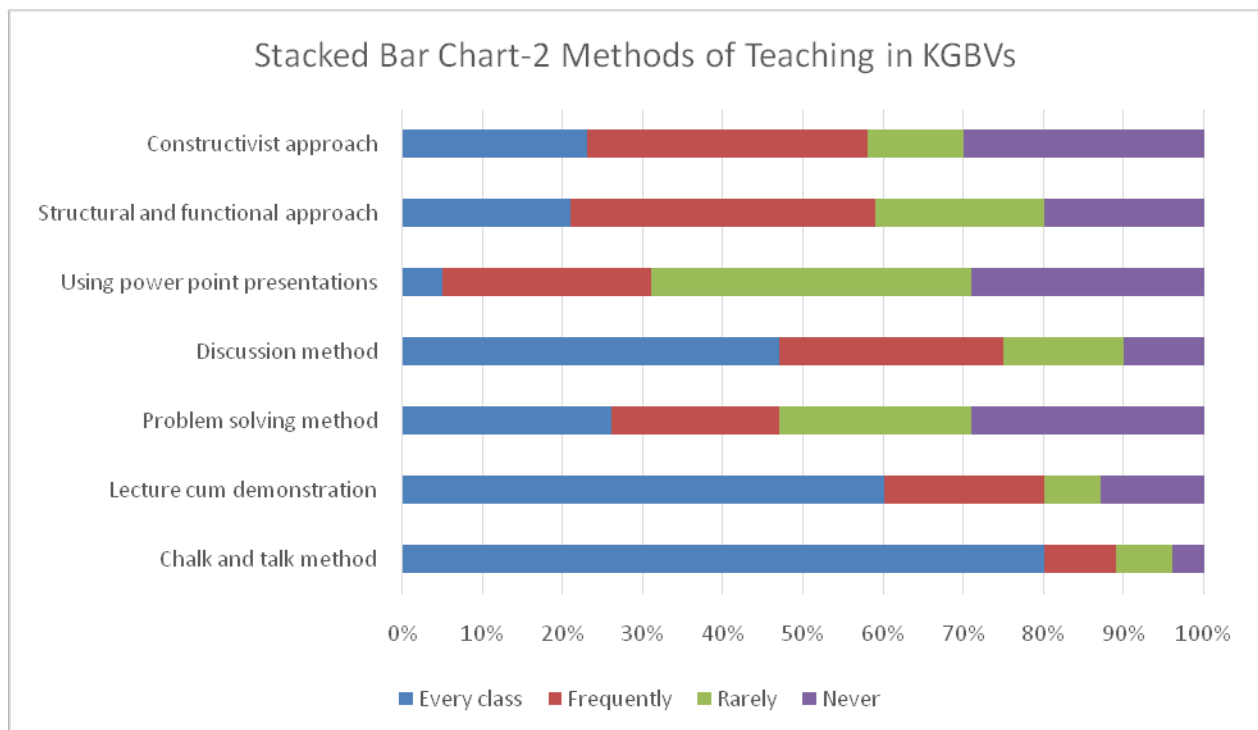
The *chalk talk* method of teaching focuses on the blackboard and the lecturer's voice and also the activities – to be precise, the physical activities. It is usually done with chalk, hard crayon, or pastel, or with dry-erase markers on a whiteboard. It is a technique that creates a conversation, mutual opinions and comments among learners through writing. Chalk Talk is a silent conversation in writing that allows students to have an equal opportunity to participate. It is a versatile protocol that can be used for many purposes. Students and teachers love it. The stacked bar chart-2 indicating that in the sample schools about 80% of the teachers use chalk and talk method in every class, 9% applied frequently, 7% rarely and 4% never use.

b. **Lecture-cum-demonstration:** In Lecture method teacher explain the concept and make it more meaningful, it is also demonstrated in the form of experiments, short films and field exposures. In the stacked bar chart-1, it is evidencing that 60% of the teachers use lecture- cum-demonstration method in every class, 20% frequently, 13% rarely and 7% never.

c. **Problem solving method:** Children learn by working on **problems**. This enables the students to learn new knowledge by facing the **problems** to be **solved**. The students are expected to observe, understand, analyze, interpret find solutions, and perform applications that lead to a holistic understanding of the concept. 26% of the teachers use the problem-solving method in every class, 21% frequently, 24% rarely and 29% never use this method.

d. **Discussion method:** It is a kind of forums for open-ended, collaborative exchange of ideas among a teacher and students or among students for the purpose of enhancing the student's capacity in thinking, learning, problem solving, understanding and literary appreciation. 47% of teachers apply discussion method in every class, 28% of the teachers frequently, 15% rarely and 10% never.

- e. **Structural and Functional approach:** As per the assumption of the method that the language teaching is being best taught through systematic selection and grading of structures or sentence patterns. However, the functional aspect allows a child to learn relevant skill. It is more a functional to teach a child the words like “computer” by playing a game on computer then it would be having them demonstration to a computer. 21% of teachers apply structural and functional approach in every class, 38% frequently, 21% rarely and 20% never use it.
- f. **Constructivist teaching:** It is based on the belief that learning occurs as learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information. Learners are the makers of meaning and knowledge. 23% of teachers use this method in every class, 35% frequently, 12% rarely and 30% never use this method.



(Source: Generated by Researcher based on the field data)

7. Academic Assessment Methods:

According to Hambleton, there are three trends in classroom assessment (Hambleton, 1996)

- a. **Using at least some performance-based assessment.** Historically, classroom assessment has emphasized the use of objective tests, such as multiple-choice, which have relatively clear, unambiguous scoring criteria. In contrast, performance assessments require students to create answers or products that demonstrate their knowledge or skill. Examples of performance assessment include writing an essay, conducting an experiment, carrying out a project, solving a real-world problem, and creating a portfolio. Thus, a teacher can use any number of these methods such as 1) a multiple-choice test, 2) an essay, 3) an interview, 4) a project, 5) a portfolio and 6) student evaluations of themselves.
- b. **Having high performance standards.** Another trend is the demand for high performance standards, even world-class performance standards, for interpreting educational results. Some experts say that world-class performance standard is driving contemporary classroom assessment by providing goals, or targets, to attain (Taylor, 1994).
- c. **Using computes as part of assessment.** Traditionally, computers have been used to score tests, analyze test results, and report scores. Today, computers increasingly are being used to construct and administer tests, as well as to present different assessment formats to students in a multimedia environment. With coming advances in technology, assessment practices are likely to be very different from traditional paper-and-pencil tests (Vander Linden, 1995).

The field-based data of KGBVs indicating that for the academic assessment of students, the teachers have been giving assignments, weekly tests and surprise tests are conducted to test the receptive level of knowledge on a particular subject as part of preparing them for formative and summative assessments. The summative-2 is being conducted at the end of every academic year to promote a student to the next higher class.

8. **Academic Achievements of the Adolescent Girl Children in KGBVs:**

The socio-economic profile of KGBV students revealing that they are never enrolled, dropouts, out of school children from the poorest of the poor, marginalized, risk-ridden, single-parent, orphan, child labor and labor family background. One of the biggest challenges of the teachers in KGBVs is retaining, mainstreaming, and preparing them for the

academic activities. The studies on KGBVs (Varalakshmi. G, Madhusudan. J. V, 2020) found that to retain these adolescent girl children, the facilities like accommodation, food, books and teaching material, library books, uniforms and shoes, soaps, oils, towels, tooth-paste, comb, slippers, sanitary napkins, toiletries, inner garments, uniform, pen, pencil, eraser and sharpener, geometry box, bed sheet pillow cover, blanket are provided and an amount of Rs 100/- is being given to each student, per month, as a stipend. The girl students are also trained on adolescent stage and health with specific reference to menstrual hygiene management.

As part of mainstreaming and preparing adolescent girl children, the KGBVs have initiated innovative practices (ibid) such as residential bridge course, formal state syllabus, examinations and evaluation of the academic performance. Apart from academic activities, the girl students are also trained in vocational, life skill education etc. The students are also exposed to the preparation of wall magazines, kitchen garden, sports and cultural activities.

State level SSC Results:

Table-6 on pass percentage of X class for five years from 2014-15 to 2019-2020 has been indicating that there is a cumulative increase in the pass percentage of KGBVs. In 2015 pass percentage was 89%, 94% in 2016, 89% in 2017, 99% in 2018, and 100% in 2020. The pass percentage in KGBVs revealing that the performance of these adolescent girl children has been on par with regular students to school since their childhood.

Table-6 SSC State level Results

Year	Percentage
2014-15	88.93%
2015-16	94.26%
2016-17	88.88%
2017-18	99.17%
2018-19	98.71%
2019-20	All pass

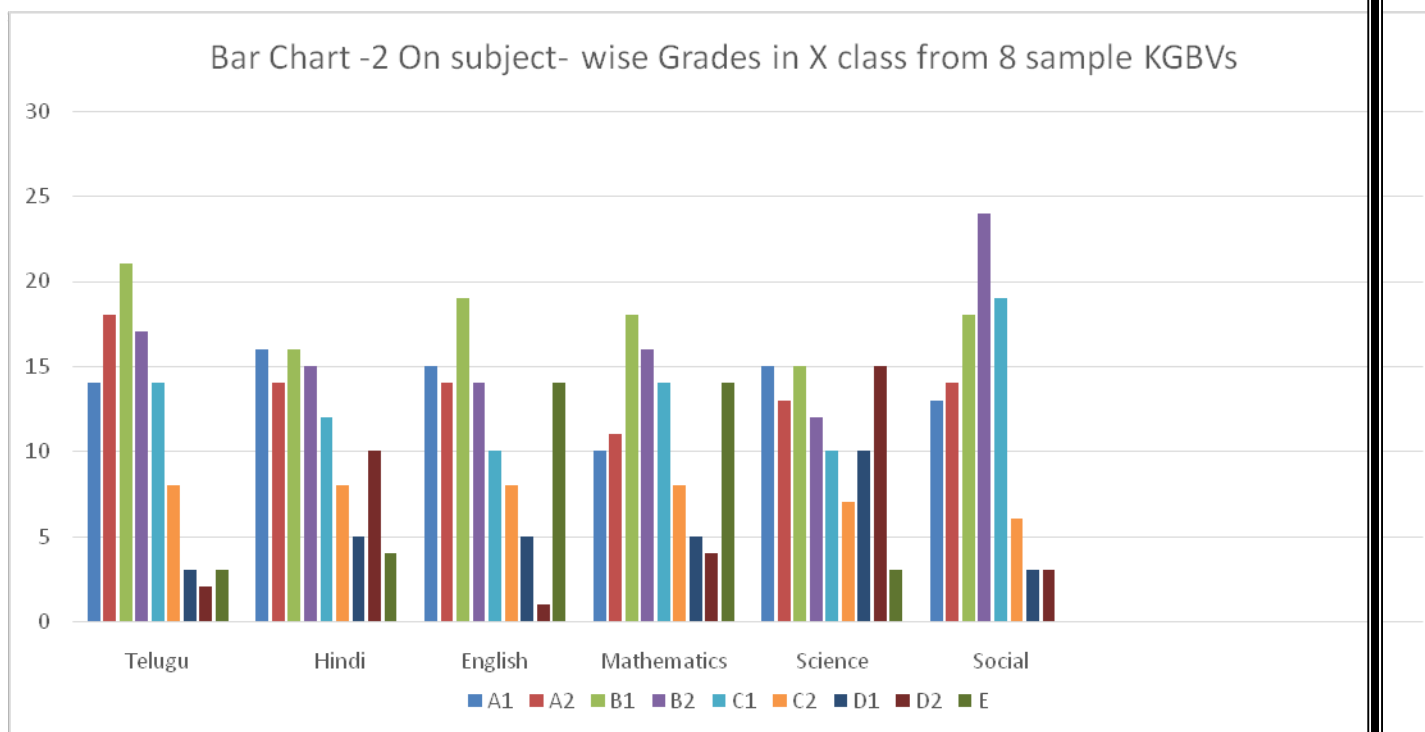
(Source: KGBV, Samagra Siksha, AP, 2020.)

Table-7on Subject-wise grades in X class from sample KGBVs

Subject	A1	A2	B1	B2	C1	C2	D1	D2	E
Telugu	14	18	21	17	14	8	3	2	3
Hindi	16	14	16	15	12	8	5	10	4
English	15	14	19	14	10	8	5	1	14
Mathematics	10	11	18	16	14	8	5	4	14
Science	15	13	15	12	10	7	10	15	3
Social	13	14	18	24	19	6	3	3	0

(Source: Generated by Researcher based on the field data)

The consolidated subject-wise grades of X class from eight sample KGBVs given in table-7 and bar chart-2 providing a comprehensive picture of the academic performance of adolescent girl children. As per statistical data provided by 8 sample KGBVs is classified into subject-wise grades. For instance, in Telugu, 14% A1, 18% A2, 21% B1, 17% B2, 14% C1, 8% C2, 3% D1, 2% D2 and 3% E grade is secured. In Hindi, 16% A1, 14% A2, 16% B1, 15% B2, 12% C1, 8% C2, 5% D1, 10% D2 and 4% E grade. In English, 15% A1, 14% A2, 19% B1, 14% B2, 10% C1, 8% C2, 5% D1, 1% D2 and 14% E grade. In the subject of Mathematics, 10% A1, 11% A2, 18% B1, 16% B2, 14% C1, 8% C2, 5% D1, 4% D2 and 14% in E. In Science, 15% A1, 13% A2, 15% B1, 12% B2, 10% C1, 7% C2, 10% D1, 15% D2 and 3% in E grade. In Social 13% A1, 14% A2, 18% B1, 24% B2, 19% C1, 6% C2, 3% D1, 3% D2 and 0% in grade E.



(Source: Generated by Researcher based on the field data)

Conclusion: The above analysis is an attempt to establish the co-relation among the variables of socio-economic profile of adolescent girl students, competencies of the teachers and academic performance of students in KGBVs of Andhra Pradesh. For the establishment of co-relation among the variables, the secondary sources of data from state, sample districts and KGBVs has been collected and the primary data is gathered from the teachers, who has been working in sample KGBVs. From the analysis of the data it is concluded that the adolescent girl children coming from marginalized and excluded social background proved that they can also excel in academic performance if minimum academic facilities in the form of infrastructure, competent teachers, teaching-learning material and other basic facilities.

From the sample KGBVs, it is evident that they are provided the basic required facilities, therefore, the adolescent girl children academic performance is on par with any regular students of government or private schools in terms of number of students who have passed and securing of the grades. However, the critical issue is the nature of appointment and service conditions of teachers. That is why it is suggested that there is need to resolve the grievances of the teachers.

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44. The Changing Narratives of Indian Gorkhas

• Dr. Geeta Rai, Assistant Professor, Department of Education
(CIE), University of Delhi, grai@cie.du.ac.in

Abstract

When we ponder over the question of Gorkha identity, it is often at a complex dualism of being and not being a part of the nation state and the crisis that exists in their identity as a result of the same. It is then, we should look at how identity construction is a goal on which hinges the opportunities and recognition for the scattered Gorkha populace in the country. The article charts the historical trajectory of the Gorkha community in India and its changing narratives and attempts to clarify the myth and paradoxes associated thereby. Further, it discusses how education as a potent weapon of social change has impacted the community to a larger extent.

Key Words: Narratives, Gorkhas, Community

1. Introduction

It has been rightly stated, “What is today, shall be different from what it would be tomorrow” (Shah nd.) The line suggests ‘dynamism’ and is synonymous to the ‘Gorkhas’ who are known to be brave and hence, the ‘Martial clan’. The description befits the community quite well, for they are known for their liveliness, vigorousness, powerfulness, positiveness and strength. However, when we ponder over the question of Gorkha identity in India, it is often at a complex dualism of being and not being a part of the nation state and the crisis that exists in their identity thereof. It is then, we should look at how identity construction is a goal on which hinges the opportunities and recognition for the scattered Gorkha populace in the country. This article charts the historical trajectory of the Gorkha community in India and its changing narratives and attempts to clarify the myth and paradoxes associated thereby. Further, it discusses how education as a potent weapon of social change has impacted the community to a larger extent. To understand the Gorkha ethnic identity, it is pertinent to know who the Gorkhas are and, how they are associated to the mainland India.

1.1. Who are the Gorkhas?

The term Indian Gorkhas is explicitly used as a, ‘distinction between Gorkhas, who are citizens of India, and those who are Nepali citizens living in India’ (Tripathi & Saha, 2018; Subba, 2018) particularly, in the Himalayan belt and belong to the two major races- the Caucasoid Khasas and

the Tibeto-Burmese Kiratas (Tamang, 2019). Authors such as Golay (2006), Chettri (2013) and Gurung (2014) referred to 'Indian Gorkhas' akin to the 'Gurkha syndrome' i.e., the large scale Gorkha recruitment in British army, an idea propagated by Cynthia Enloe (Thapa, 2020). The inherited trait of martiality (martial race) and the climatic factor that influenced the biological and sociological attributes of the inhabitants enhanced their ability as soldiers (Gurung, 2014:520 cf Thapa, 2020).

Besides being addressed as the martial clan, the Gorkhas from the Darjeeling hills are loosely narrated as being migrants from Nepal (Thapa, 2020). It is also very crucial to understand that Gorkhas are concentrated not only in the Darjeeling hills region but also in most of the North East states and Northern parts of India particularly in Dehradun, the capital city of Uttarakhand owing to army settlement in the past. The actual population of Gorkhas in India is difficult to project. A Facebook website known as 'We are Gorkha and we are Proud to be Indians' proclaims a population of 12 crores; however, if we count by the number of speakers, the record states 29,26,168 Nepali speakers (Census 2011) in India. This disparity in the data could be due to several factors, some of which are- the failure to document the correct data (speakers of language does not account to the population), acculturation and, the problems in identifying the seasonal migrants from Nepal who share the same culture, tradition and language (Sharma & Thapa, 2013).

Hence, to trace who the Gorkhas are, we need to look at the historical prevalence of Gorkhas in India even before the Indian Independence and the demand for recognition of identity while taking into account the '*othering*' of the host country which is also an unjustified tribulation to the community. In the context of the notion of being equal citizens then, Gorkhas have not only been deprived of a recognized identity but also in many facets of opportunities and development. The changing narratives of Gorkhas from just a '*Martial Race*' to crusading for varied employment and growing levels of education should also be seen as a marker of social change that Gorkhas strive for today.

1.2. Historical trajectory of the Indian Gorkhas

A brief historical outlook provides us with facts about the Gorkhas annexation towards India through the Himalayan belt. Several authors like Subba (2002), Sharma & Thapa (2013), Dhakal (2016) and Gurung (2016) acknowledge the historical fact that the first movement of Nepalis to the territories of India began with being recruited in the regiment of Sikh ruler Ranjit Singh in the

Northern frontiers of India. Secondly, during the time of Anglo-Nepal war of 1814 to 1816, the Britishers had signed a 'Treaty of Sagauli' (1816) which allowed for Gorkhas to be recruited in the army of the East India Company (EIC). Interestingly, the sheer courage and fearlessness of the Gorkhas was not something the EIC was used to. Though the Gorkhas were ill equipped, yet their courage impressed the Britishers. Thus, continued the valour of the Gorkhas as brave soldiers and their settling down in the region they were victorious. Moreover, during the same time several push factors such as the grinding poverty and repressive regime of the Rana ruled-Nepal and a set of pull factors like jobs in the army of the EIC, tea plantation, labour in the construction, forests and a variety of opportunities also led to a large number of Nepali people to move to the Indian soil (Sinha, 2009). On the other side, Darjeeling hills in West Bengal have had a turbulent history, marked by repeated annexations. Initially under the rule of the king of Sikkim, it was captured by Nepal in the Sikkim Nepal conflict of 1790. Following the Anglo-Gorkha war and the signing of the *Treaty of Titalia*, it came under the control of the British rule in 1835. This was followed by the British annexations of Kalimpong and the Terai region (which includes Siliguri) from Bhutan (1865) and Sikkim (1850), respectively (Dasgupta, 1999). Hence, when we look at the historical aspect, the Gorkhas have had tumultuous rise and fall stories that form an integral part in the Indian history that is often excluded. Golay (2006) writes that the tendency of hybridity in today's global world has facilitated integration in the form of transnational politics but at the same time newer forms of micro politics is emerging to rekindle better representation and acceptance.

Thus, the challenge that how the politics of identity has been constructed and conceptualised through the 'history' for the Gorkhas in India needs to be deconstructed and re-defined and the changing narratives about the community be made noticeable. The need is also felt because due to the lapse of literature to clarify the myths, the community has seen a positive trend which is more so observed in the educated ones who are well aware of their rights.

According to Gillin and Gillin, "social change is the variation from the accepted modes of life which is the resultant of several factors such as, alteration in geographical conditions, in cultural, composition of the population or ideologies and is brought about by diffusion or inventions within the group." (cited in Shah nd.). These factors interlink to bring about the change and the result of the same is exhibited in the ways society and social life of man achieves mobility. Here, education plays a pertinent role, for it reconstructs the social stratification through vertical mobility and rise in the socio-economic status. Hence, we can say that change is the law of nature

and, when it occurs, it happens not only at the individual level but within the community and society at large. This suggests that the life of man and the society that they are a part of, changes with time. This change in the community has been brought through a wave of educated young Gorkhas who simply desire to exist as a part of mainland India and not be called foreigners henceforth.

2. Education and Social change among the Indian Gorkhas

Auguste Comte, the father of sociology, in his discourse on social static and social dynamic has mentioned that no society remains static for a long time as it keeps on evolving. Social change is inevitable and is prevalent in all societies. Most of the understanding and studies on social change point out changes that encompass the entire social structure. These include changes that take place in the social institutions, relationships, ways of life, norms and rules, works, activities etc. All of them are in a constant process of changing and evolving over time which is the result of social change. While social change is being considered one factor that plays an important role in societal changes, education has been one of the important means of facilitating the social change. It has been an agent of social change and development for decades. Hence, education empowers an individual to actively participate in transforming the society. Signifying the role of education, author and business tycoon, *Shiv Nadar* says, 'Education is and will be the most powerful tool for individual and social change; and, we must make an effort to make it accessible to all.' Similar views have been shared by author, statesman and former Prime Minister of India, *Atal Bihari Vajpayee* who said, "Empowering the individual means empowering the nation and empowerment is best served through rapid economic growth with rapid social change."

Studies have also shown significant relationship between the variables (i.e., education and social change) wherein an upward trend in the perception and involvement in social change activities increased with the achievement of education (Brown & Baltes, 2017). Education can thus; initiate social changes by bringing about a change in outlook and attitude of man (Patil, 2012). Irina Bokova, Director General of the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2015) further commented:

There is no more powerful transformative force than education- to promote human rights and dignity, to eradicate poverty and deepen sustainability, to build a better future for all, founded on equal rights and social justice, respect for cultural diversity, and

international solidarity and shared responsibility, all of which are fundamental aspects of our common humanity. (p. 4)

Hence, education has been seen as a potent weapon of social change which can bring about a change in the pattern of social relationships and thereby, it may cause social changes. An educated person can effectively contribute to the development of the society and thereby the nation (Idris et. al., 2012). Critical theory formalized the role of education as an important agent of social change (Corradetti nd.). This was further elaborated by Paulo Freire (1970) in his seminal text 'Pedagogy of the Oppressed' in which he emphasized its significance by stating that education enables the oppressed to regain their 'sense of humanity and escape their role of the oppressed' (cf. Brown & Baltes, 2017). To add further, Raymond Boudon in his work on 'Education, Opportunity and Social inequality' (1974) has shown that the position of man's social class has relation with the attainment of education. He has said that the working-class person with higher level of education alienates the attachment with the family in terms of choice in careers after education. However, same would not be the case for persons belonging to the upper-middle class strata. Instead, they would strengthen their attachment with the family and work to continue the family status. Thus, Boudon claims that the position in the class hierarchy affects the choices that individuals would make with respect to their career after their education. When we link the same understanding to the Gorkha community, it is interesting to note how the notions are changing and narratives in ideas about career choices are different than their forefathers. Earlier we have seen, heard and read about how the legacy of being good soldiers influenced the Gorkha boys to join the army and young girls on the other hand, were blessed to get married to 'Lahure' ((a term for soldiers serving in British Regiment) as that provided social security and a fulfilling life (Gurung, 2011). However, in the contemporary times we cannot disregard the changing narratives of the community in terms of what they are choosing for career paths. This, then leads us to understand the important role of education which is affecting the patterns of occupational mobility and overall social change in the community.

2.1 Identity crisis

We all agree that society is ever changing and is in a continuous flux of being dynamic and these are understood in terms of social processes and social interactions and social organization. In this general view, we see society as a space of ever evolving and changing in the patterns of interaction; but the question arises; are all societies accommodating the fact that multi-cultural

groups interlink and co-habit? The answer is usually ‘no’ for the marginalized community with distinct characteristics. Hence, the demand for recognition of identity is one social change that the Gorkhas of India still aspire for in the country, and beneath this aspiration is the intrinsic need for ‘wanting to belong’ and to get ‘equal treatment’ and ‘opportunities.’ The identity of the Gorkhas then rationalizes into a social need and a social construct upon which various other factors are dependent as has been discussed above. This issue of identity is often at a complex dualism of being and not being a part of the nation state and the identity crisis that exists thereof. The idea of belongingness then becomes central to understanding the importance of the history of the Gorkhas of India. The feeling of ‘otherness’ meted out to the community with remarks such as ‘foreigners’, ‘Nepali citizens’, in the country where they have lived prior to its independence and proved their patriotism. Such remarks should no longer be used and they should be assimilated, recognised and identified as any other citizen in the country. This, however, has been a challenge since decades and requires an attitudinal change within and outside the community as well. Change is the law of nature and therefore, accepting the diversity of its population has been the characteristic of the Indian society which itself is heterogeneous.

Further, when we look at the movement of Gorkhaland than a strong narrative that has been constant in the need for identity or what Gorkhas call the ‘identity crisis.’ This demand and a need for asserting their identity has a historical linkage with colonialism and movement of people. The feeling of displacement that is attached because of the historical reasons and a constant othering in the present times has created a sense of what Homi Bhaba has coined ‘unhomeliness’. Adding to this, Tyson (2004) has stated, *“To be ‘unhomed’ is not the same as being homeless. To be unhomed is to feel not at home even in your own home because you are not at home in yourself: your cultural identity crisis has made you a psychological refugee, so to speak.”*

Therefore, when we try to attempt to focus on Gorkha identity crisis then it speaks of a constant consonance of a created identity by colonialism through categorizing them as ‘martial race’ which has stereotyped the identity in negative ways. This has further marginalized the position of Gorkhas of India in their own homeland and has in many ways limited their social mobility in terms of equal opportunities, development and equal treatment. That is how we are attempting to understand that the politics of identity and Gorkhaland is a crux on which other aspects like development, opportunities are dependent as the sense of othering and forefinger treatment solely

based on how Non-Gorkhas see the identity of Gorkhas is a blockage to mobility and development of the Gorkhas.

2.2 Myth and Paradoxes

The realm of Gorkha identity in India is intertwined by factors like history, colonialism, language and a different culture that does not align with the idea of what others consider 'Indian' enough. Firstly, at this point it becomes necessary to deconstruct the pre-conceived notions on Gorkhas who belong to India. As reiterated earlier, the Gorkhas of India have a historical legacy as the 'martial race' that began with the coming of Britishers and their recruitment policies. While, the legacy has been an important identity to be proud of but at the same it is important to question how well we see its consonance with the Gorkhas of India today? In this context, we must also look at the recruitment of various men into the Gorkha regiment comprising of Nepalese from Nepal and Gorkhas of India. Although a historical similarity in terms of culture and language can be found but the parlance of being 'Lahure' has close association more so with the men from Nepal and not from Gorkhas of India. So, it becomes crucial to look at the confused identity construction for the Gorkhas of India. When we look at the region of Darjeeling hill, we rarely get to hear or see people talking about wanting to join the army or continue its legacy. The use of term like 'Bir Gorkha' has become just a political slogan during agitation and protest rallies and showcases an ambiguous relationship with history. However, Dehradun has a different story to relate. The region constitutes of many army settlements due to Gorkha Regiment in the region for decades before it was shifted by the then Chief Minister of Uttar Pradesh, Sri Hemvati Nandan Bahuguna (Uttarakhand was a part of Uttar Pradesh till 9 November, 2000). It witnessed the establishments of many prominent institutes and one cannot forget to mention the proud institution - Indian Military Academy which trains army cadets. Seeing one in the 'Olive uniform' therefore, attracted its residents.

Apart from being deployed in the army and police, Gorkhas are also referred to as, graziers, potters, peons, and chaukidars (Subba, 2018; Chetry, 2016). Perhaps, the confusion exists with those workers who migrate from Nepal to their friendly neighbouring country India to earn their livelihood. Since the language, culture, religion and even castes are similar, evaluating them as one is a possibility. Here, I would therefore mention few Gorkha achievers whom I interviewed and met as a part of my research as well as from the glimpse of their writings. To mention a few, Col. Siddhiman Rai achieved the status of the first Inspector General of Assam Rifle; Lt Gen.

Shakti Gurung has been an army hero; his wife Madhu Gurung is a famous writer and journalist; footballer Shyam Thapa played and coached the Mohun Bagan football team in West Bengal for decades. Academician, anthropologist and writer Professor T. B. Subba continues to contribute to the community through his articles, seminars and books. He is an anthropologist and has held positions as Head, North-East Hill University, Shillong; Honorary Director, Indian Council of Social Science Research in North Eastern Regional Centre and former Vice-Chancellor of Sikkim University. In the present generation, it will be worth to mention Roshni Rai, who is a motivator, writer, and lawyer and runs an NGO with the slogan, “We are Gorkhas: Proud to be Indian”. To conclude, the Gorkhas are working in order to make their community proud and the nation in all spheres of life. Hence, a need was felt to bridge the gap between the paradoxes and reality about the community who have been present even before the country’s Independence.

At this juncture, it is important to understand that the construct of Gorkha identity has limited the way others look at the community. The historical understanding that they make good soldiers because they are brave, loyal and honest does not cater to the fact that they are much more than that and have surpassed professions beyond serving just as ‘sepoys’ in the army. They have also achieved the highest official portfolios in the same. From a pastoral and agro-based economic life to changing levels of modern-day professions, Gorkhas have been achieving different feats. These examples are not limited to what Gorkhas of India have achieved and there are much more than that. Having said that, it becomes then, very crucial to understand that the changing narratives of the community shows a trend of change being brought. From being known just as a ‘martial race’ to the important portfolios they have achieved denotes a positive social change in the community. The achievement and contribution of the community to the larger society rarely gets highlighted and is often misrepresented. If we take into account the wider discourse, the community is often misrepresented and seen largely as inhabitants belonging to Nepal causing anxiousness and insecurities and a fear of eviction based on past experiences as in states like Mizoram, Nagaland, Assam, Manipur and Meghalaya (Subba, 1992 cf Subba, 2018). It has rightly been stated then, “Anxieties over national belonging remains a powerful, but less understood, force of contemporary politics. Capable of galvanizing individuals and publics alike, they continue to imbue national and sub-national politics with alarming volatility and transformative possibility” (Middleton, 2013). The sub-national politics among the Gorkhas are a result of the intensified movement that has crossed the mark of a hundred years. It has transitioned into a demand that is

collectively emotional and resonates with every Gorkha person scattered in the country. Tracing the lineage of the community, Gorkhas are settlers before India got independence. Moreover, it is also important to highlight that academic discipline and research studies have specifically been focused on the issue of identity crisis and Gorkhaland movement which also cannot be disregarded and denied. However, what gets lost in between is to record and depict that the community has come a long way and is in the pace of achieving tremendous feats in their social life. It highlights their changing social life with the achievement in getting education which is not just limited to degrees. Education as a concept in general, plays an informative role of bringing transformation and this is what the paper is attempting to look at and is being studied elaborately in the study funded by ICSSR, New Delhi titled, Education and social change: A study of Gorkha community of India.

2.3. Glimpses from the field visit

Drawing linkages to the Gorkha community of India, it is, therefore, imperative to understand the way education has mobilized the community to assert for their identity, demand opportunities where needed. At the same time, the community accepts social change resulting from education for the benefit of their younger generation. Hence, it becomes interesting to understand that identity, which is, a crux of their demand for recognition, can also be seen as an important social construct requiring acceptance and representation in the society. Further, I would like to add few glimpses from my field visit to provide a nuanced idea of what the study is trying to look at.

- Education has been looked at as an important aspect that brings changes in the lives of the community and forms linkages to social change and mobility.
- Being broad minded, there has been acculturation and many families have assimilated with their surroundings with regard to marriage, culture and food habits. Although the community has attained social mobility through education and place themselves well in administrative and academic fields, the number is handful as majority of them still live below the poverty line.
- Further, the language they speak i.e., Nepali is losing its significance as today's youth prefers to speak in English or Hindi especially in Uttarakhand and U.P. regions. Therefore, alienation from tradition, language and food habits was observed as an important element of social change. It also indicates 'identity crisis' especially among the younger generation as they themselves are in the dilemma of being or not being faithful to their native language and hence, their culture and tradition. Thus, the demand and recognition for identity of the Gorkhas in

India is an integral and recurring movement thus unifying the Gorkhas living in every part of the country. This demand observes a central position because the identity has been a major issue and debate upon which Gorkhas of India have remain marginalized in other aspects of opportunities, social mobility and focus from the larger national discourse.

3. Concluding Remarks

To conclude, the Gorkhas are brave and peace-loving people. Though the article argues that the paradox attached to the community as being the ‘Martial clan’ still continues to ring in the ears even today of which the community is proud of it. However, they would also like to be recognised in other areas of achievement and not only as soldiers and gatekeepers.

The gap that exists in academia and research to address such issues is the kind of debates and works we need rather than just the dominating ‘Gorkhaland’ issue primarily concerning Darjeeling hill region that is read in the news widely or studied by researchers. We need studies that also curates and brings forth the positions of Gorkhas in all the regions of their settlement throughout the country in aspects of education, opportunities and social change. This is because, with identity, the above-mentioned issues are equally important and should draw attention to the immediate need of the community. The study also identifies gaps in academia and research on the basis of how little Gorkhas history has been written about thus, creating difficulties in acquiring references. Largely, the studies are centric to Darjeeling hill region which gives an opportunity to delve our focus also in other parts of the country where Gorkhas are situated. Lastly, the regions of Gorkhas settlement and their history is a site of intense socio-economic inequality and exploitation which has resonance even in the present. The diverse spaces where Gorkhas have settled are also important factors of understanding how a collective need for a recognition and identity is crucial to how they are not equal recipients of developments in terms of better education, economy and rights.

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45. Cyber Bullying among School Children: A Review of literature

- Shweta Singh ,Research Scholar, Faculty of Education, Banaras Hindu University, Uttar-Pradesh, India, Email- shwetaankitsingh@gmail.com
- Dr. Seema Singh, Professor, Faculty of Education, Banaras Hindu University, Uttar-Pradesh, India, Email- seemansh@gmail.com

Abstract

The Internet has touched every aspect of human life, bringing ease in connecting people around the globe and has also made information available to huge strata of the society on a click of a button. With advancement, came unforeseen banes of cyber offenses. Cyber-bullying is one of them. Cyber-bullying occurs through the use of ICT. Any aggressive act or behavior that is carried out using electronic means by an individual or by a group of people repeatedly and against a victim with the intention to harm others or feel bad, who is unable to defend himself/herself (Smith et al., 2008). Cyberbullying is a barrier in the way of student wellbeing, bullying takes place in each and every place, whether it is a classroom, playground, home, or community. It starts from home, at home siblings tease each other, in the same way in school students tease(bully) each other. Bullying behavior affects children negatively. The purpose of this paper is to review studies from India and abroad based on cyberbullying, its causes, consequences, and remedies, etc. This paper analyzes these studies regarding their objectives, location of research, research design, sample, tools/measure, findings. This paper focuses on which types of research are conducted in the field of cyber-bullying in the present era. What research findings say about the causes of bullying and its impact on the students who are involved in this process. This review paper will help us to understand cyber-bullying and its causes, consequences, etc. and also seek the attention of everyone towards its eradication. After knowing the causes, we can prevent bullying by interventions.

Key-words- Cyber-bullying, Causes, Consequences, Remedies.

Introduction-

The school is an institution designed for the holistic development of students enrolled in it and focused to develop the student through knowledge acquisition so that he/she may become a social being. By this, the student is expected to learn how to relate with fellow students, teachers, and significant others in the school on the one hand, and live in a harmonious way (by blending with societal values) in the society on the other hand. The school is also expected to be a place other

than home where students should feel safe and secure, and they can count on being treated with respect. The reality, however, seems to be that only a few students or pupils can harmoniously blend with their schoolmates without experiencing violence in the school. Violence in schools is an issue that has become more prominent in the last few years, Violence broadly speaking includes any condition or act that creates a climate in which the individual feels fear or intimidation in addition to being victims of assault, bullying, theft, or vandalism. This, as a matter of fact, is becoming a growing problem in our schools (Omoniyi, 2013). Bullying is also a form of school violence, which needs to be addressed. for this present study is conducted to know the prevalence of cyber-bullying among school children, their causes, consequences on students and what different researches suggested regarding the presentations of cyber-bullying, and its remedies. Researches were analyzed while keeping some major themes of the study as, the concept, the prevalence, the causes, and consequences of cyber-bullying, Remedies/ suggestions for cyberbullying prevention. Only those studies are taken which are available online.

Concept of Bullying-“Bullying is a subset of aggressive behavior, it is generally agreed that it refers to repeated, intentionally aggressive acts against someone who cannot easily defend themselves” (Smith,2016). Bullying behavior is recognized by an imbalance of power, repetitiveness, and the intention of the bully to harm the victim. Bullying has 4 major elements like: (i) power imbalance i.e. physical, social, emotional, intellectual, or economic. (ii) repeated action (iii) actions are intentional i.e. to hurt or intimidate targeted victim (iv) unpleasant display of emotions

Bullying is a repeatedly occurring problem in school going students. This problem affects all students whether they bully, the victim, the bully-victim, and the witness. Bullying includes verbal and physical assaults, threats, jokes, mockery, criticizing, insulting behavior, and facial expression. Bullying is an intentional and deliberate behavior that occurs repeatedly and causes harm to someone else. Bullying can be verbal, physical, psychological, social, or cyberbullying. bullying can happen face to face, or online. Bullying can be an individual activity, or it involves a group of people, who have greater power over victims.

Different types of bullying are as-

Verbal bullying- This type of bullying behavior done only verbally such as- name-calling and nickname, slangs, scolding, threatening, etc.

Physical bullying- Bullying behavior includes physical damages such as- pushing, fighting, hitting, scratching, knock off, shoving, spitting, etc.

Social bullying- In this type of bullying, the bully and the victim does not involve individually but the bully makes false rumors, backbiting, telling lies about the victim, social exclusion or isolation and make him/her feel socially low.

Cyber-Bullying (via cell phone or the Internet)- Any aggressive and intentional behavior that is carried out by using electronic means or using the internet by an individual or a group of people repeatedly and against a victim who is unable to defend himself/herself (Smith *et al*, 2008). This occurs through the use of ICT. Qing Li (2007), revealed that one in every three adolescents was a cyber victim, one in every five was a cyberbully, and over 50% of the students had either experienced or heard about cyberbullying incidents. Cyber and traditional bullying are highly connected to each other. it is extremely important to understand the connection because there are high chances that if a child is experiencing cyberbullying, then they have a high possibility to experience traditional bullying as well when they attend school (Wilson, 2019). 90% of teens who report being cyberbullied have also been bullied offline (George and Odgers, 2015). approx 50% of the cyber victims had no idea who the predators were. Traditional bullying is a strong predictor for cyberbullying and also for cyber victimization. Gender also played a significant role, as males, compared to their female counterparts, were more likely to be cyberbullies. “Bullies come in all sizes, shapes, and abilities. They do not need to be larger to dominate their victims. However, bullies are typically stronger and more physically and verbally aggressive than their victims” (Lazarus & William, 2010). Those who bully tend to be hyperactive, disruptive, in the case of the cyber-bullying bully is known as perpetrator, “online bullying is characterized by anonymity, and lack of direct feedback from the victim, which distances the perpetrator from the victim” (Brewer and Kerslake, 2015). “Victims of bullying have been characterized as anxious and insecure. They often are not connected to a strong social network and have less effective social skills. They tend to be more submissive, quiet, and cautious and may lack the skills necessary to defend themselves effectively” (Lazarus and William, 2010). “Bullying usually involves more than the bully and the victim: peers are present in 85 percent of bullying episodes in classrooms and playgrounds” (Craig, 1998).

Table -1 Summary of studies on cyber-bullying

Study	Country	Year	Objectives	Method	Sample /Participants	Measure /tool	Major Findings
(Qing Li)	Canada	2007	Examines the nature and extent of adolescents' cyberbullying experiences. <ul style="list-style-type: none"> Explores the extent to which various factors, including bullying, culture, and gender, contribute to cyberbullying and cyber victimization in junior high schools 	Survey	A total of 264 grade seven students (130 males and 134 females)	Questionnaire	One in three adolescents was a cyber victim, one in five was a cyberbully, and over half of the students had either experienced or heard about cyberbullying incidents. Approx. 50% of the cyber victims had no idea who the predators were. Traditional bullying is a strong predictor for cyberbullying, and also for cyber victimization. Gender also played a significant role, as males, compared to their female counterparts, were more likely to be cyberbullies.
(Huang, and Chou)	Taiwan	2010	<ul style="list-style-type: none"> Do gender and academic-achievement differences influence cyberbullying? Do different technologies result in any differences in cyberbullying? Is there a correlation among the experiences attributable to different 	Survey method	A total of 545 participants, 228 students completed the questionnaire online and the remaining 317 students completed the same questionnaire in print	Questionnaire	Male students were more likely to be involved in cyberbullying, this is not affected by academic achievement of students. Cyberbullying forms are more pertinent to technology users, like using instant messenger (IM) frequently and for long duration experienced significantly more cyberbullied than users of other technologies. teenagers usually took no action when experiencing cyberbullying because of their tendency to avoid conflicts and to maintain group harmony.

			<p>roles (cyberbullies, victims, and bystanders)?</p> <ul style="list-style-type: none"> • Could cyberbullying be characterized as anonymous • behavior? • (5) How do bystanders respond to cyberbullying? 		form.		
(Hinduja and Patchin)	USA	2010	<ul style="list-style-type: none"> • To which extent a nontraditional form of peer, aggression, cyberbullying is also related to suicidal ideation among adolescents. 	Survey	Approximately 2,000 students in 30 middle schools (6th through 8th grades)	National Adolescent Student Health Survey.	Students who experienced traditional bullying or cyberbullying, as either a bully or a victim, had more suicidal thoughts and more likely to attempt suicide than those who had not experienced such forms of peer aggression. Victimization was more strongly related to suicidal thoughts than bullies. The findings suggest that suicide prevention and intervention component is essential and should be implemented in schools.
(Mishna, K hourly-Kassabri , Gadalla , and Daciuk)	Canada	2012	<ul style="list-style-type: none"> • To examine the prevalence of cyberbullying among youth and categories of students involved in cyberbullying: victims, bullies, and bully-victims, • To compare these to bystander students. To 	Exploratory, and cross-sectional survey design	Total Sample - 2186 Middle and high school students .	Questionnaire	Over 30% of the students identified as victims in cyberbullying, , and one in four of the students (25.7%) involved in cyberbullying as both bully and victims. Students who were involved in cyber-bullying were more likely to report perpetration of violence toward peers. risk factors are to use computers for more hours a day, and to share their password to friends. Other

			explore the factors that contribute to involvement in cyberbullying.				risk factors, like gender, age, and safety, were found to be specifically for one category of cyberbullying.
(Slonje, Smith, and Frisén)	UK	2013	reviews some recent findings and discusses general concepts within the area.	in-depth interviews and analysis of studies.	nine Swedish students aged 13–15 years.	Questionnaire	The review covers definitional issues such as repetition and power imbalance, types of cyberbullying, age and gender differences, overlap with traditional bullying and sequence of events, differences between cyberbullying and traditional bullying, motives for and impact of cyber victimization, coping strategies, and prevention/intervention possibilities.
(Brett Holfeld)	Canada	2014	<ul style="list-style-type: none"> • Bystanders' perceptions of control, attributions of responsibility and blame for a hypothetical same-gender victim cyberbullying was examined within a blog. 	Experimental research	Participants included 1105 middle school, age from 10 to 14 years.	Questionnaire	passive responses elicited stronger perceptions of control, attributions of responsibility, and blame than active or reactive responses, particularly for male bystanders. Bystanders may be less likely to offer assistance to victims of cyberbullying who respond passively to their experience. Implications for understanding the factors that can increase or decrease bystander support in real-life cyberbullying situations.
(Brewer, and Kerslake)	UK	2015	To investigate the influence of self-esteem, empathy, and loneliness on cyberbullying.	Descriptive Survey	N = 90 aged 16–18 years 51 women and 39 men.	Revised Cyber Bullying Inventory (RCBI), UCLA Loneliness Scale,	loneliness, empathy, and self-esteem all together explain the levels of cyberbullying victimization and perpetration. Self-esteem is a significant individual predictor of cyberbullying victimization and perpetration. With low self-esteem

						Toronto Empathy Questionnaire, and the Rosenberg Self-Esteem Scale	is also likely to report the experience of cyberbullying. Empathy was a significant individual predictor of cyberbullying perpetration, such that as empathy decreases, the likelihood of cyberbullying perpetration increases. These findings indicate that self-esteem and empathy-oriented interventions may successfully address cyberbullying behavior.
(Shivashankar and Rajan)	India	2018	To analyses international laws prevailing and provision of cyberbullying in India and other countries, and highlight the need for defining cyberbullying from the Indian perspective, making specific regulations, and the experts needed in making such law.	Qualitative method (review)	Secondary data	Questionnaire	Indian laws are competent and well-drafted to punish traditional offenses on the physical space. Some laws to punish offenses on cyberspace are well-drafted to meet the ends of justice. Cyberbullying is one such crime. It can take place in many forms and can be tried under different provisions of existing laws but doing so will affect the evolution of cyber laws in India. Cyberbullying is one of the offenses which can take an ugly shape in the future and needs to be addressed soon. In the making of the cyberbullying laws, lawmakers should take the opinion of the psychiatrist since such offense affects the psyche of a child very much. The law should be made considering the psychology of people involved and the legal expertise of law enforcement. If a law is not made, many cyberbullies will be left open and victims will have to suffer the

							consequences and defeat the concept of justice.
(Song, and Oh)	Republic of Korea	2018	To investigate the experiential, psychological, and situational factors influencing behavioral reactions of bystanders witnessing cyberbullying. It also investigated whether the 'bystander effect' is valid in cyberbullying situations. In addition, a moderation effect of the presence of other bystanders was examined between various influencing factors and bystander's defending tendencies.	Survey	Total of 1058 students, 532 middle school students (279 male, 253 female) and 526 high school students (280 male, 246 female)	Questionnaire	Four types of bystanders were found: outsiders were the majority, followed by defenders, reinforcers, and assistants. Bystanders demonstrated more defending behaviors in the absence of other bystanders, thereby validating the 'bystander effect' in cyberbullying situations. low moral disengagement, low anti-social conformity, high perceived control of the situation, and bad relationship with bullies were identified as significant predictors of a bystander's defending tendency. Finally, the presence of other bystanders moderated the effect between moral disengagement and the bystander's defending tendency in relation to bullies.
(Alejandra Sarmiento, Mauricio Herrera-López, and Izabela Zych)	Colombia, Spain	2019	To describe different types of bystanders in cyberbullying. To design and validate a Cyberbullying Bystanders Scale	Ex post facto cross-sectional study.	Sample 997 participants Spanish -119 Colombian- 887 Age 16-35 Male	Questionnaire, Cyberbullying Bystander Scale (CBS)	Cyberbullying Bystander Scale was designed and validated. The questionnaire has excellent psychometric properties. Students are passive outsiders of cyberbullying online and passive outsiders of cyberbullying in face-to-face situations. Being an outsider was the most common type of cyber-bystander. Defending the victim is an

					and female both		important component of anti-bullying programs.
(Garaigordobil and Machimbarrena)	Spain	2019	To analyze the relation between victimization and perpetration of traditional bullying and cyberbullying.	a descriptive, comparative, and correlational cross-sectional design	Sample-1,993 students Aged 9-13 years, 49.8% were females.	Cyberbullying: Screening of peer harassment SPECI [Screening for Children's Emotional and Behavioral Problems] IECI [Inventory of Children's Daily Stress]	Students who have higher scores in victimization and perpetration of bullying/ cyberbullying also have higher levels of stress and many EBPs. Participants who have higher scores in victimization/ cyber victimization and perpetration of bullying also have significantly higher scores in all the dimensions of stress, while students who have higher scores in cyber-aggression only show higher school stress. Students who have higher scores in victimization/ cyber-victimization manifested internalizing and externalizing EBPs, whereas those who had higher scores in the perpetration of bullying/cyberbullying have fewer internalizing problems. Children who have higher scores in victimization and perpetration of bullying/cyberbullying had received psychological counseling significantly more frequently in the past year than those who had lower scores in indicators of bullying/cyberbullying. study also emphasizes the importance of prevention and intervention in bullying situations to reduce psychopathological problems.

Causes of cyber bullying- Huang and Chau (2010) found that using instant messenger (IM) frequently and for long duration experienced significantly more cyberbullied than users of other

technologies and found that they avoid these incidences just because to maintain group harmony. Kassabri, Gadalla, and Daciuk (2012) identify causes of cyberbullying is to use computers for extended hours and sharing passwords with friends or others, and also revealed the risk factors of cyberbullying, like gender, age, and safety, are only specific for one category of cyberbullying. Varjas, Tal-ley, Meyers, Parris, and Cutts, 2010 as cited by Slonje, Smith, and Frisen, 2013 found that causes may be categorized as either internal - seeking revenge, boredom, being jealous, trying out a new persona, or redirecting feelings; or external - no consequences, non-confrontational ('when a cyberbully did not want to have a face-to-face encounter with the victim or expressed fear of actually facing the person' (p. 271) or that the target was different in some way e.g., appearance. Brewer and Kerslake (2015) revealed in their study that low self-esteem was most likely to report the experience of cyberbullying, empathy decreases, the likelihood of cyberbullying perpetration increases. Song and Oh (2018) identify the reason for bystander defender activity as low moral disengagement, low anti-social conformity, high perceived control of the situation, and bad relationship with bullies were identified as significant predictors of a bystander's defending tendency.

Consequences of cyberbullying- Bullying not only affects the bully or victim but it also affects the bystanders. The harmful effects of bullying on students are as- If the perpetrator does not see the victim, then s/he may have less awareness of the consequences and the effects that their actions are causing. This is also two-sided. On the one hand, the satisfaction of seeing the victim suffer, or the public display of power in the peer group, maybe less available to motivate the perpetrator. On the other hand, without the direct feedback that traditional bullying may offer there may be fewer opportunities for empathy or remorse (Slonjeet *al.*, 2012) and therefore the bullying may continue for longer. Students who are bullied are more likely to be involved in other behavioral problems like- domestic violence, criminality, and drug abuse, and other dangerous power games in their adulthood or at any age stage. Victim students often face more problems than bully students. Physical symptoms such as stomach pain, headaches, sleeping problems, fear of going to schools, in a dark room, to the bathroom, etc. Psychological problems such as low confidence, think of themselves as stupid, a failure, or unattractive, problems in concentrating, loneliness, highly stressed, and many emotional and behavioral problems (Garaigordobil and Machimbarrena, 2019). Develop feelings of guilt for being bullied, that is my fault, that's why I'm being bullied. The drastic effect of repeated bullying is committing suicide (Hinduja and

Patchin,2010). Bully-victims have 2-9 times more tendency to attempt suicide than non-victims, according to studies by Yale University (“bullying and suicide,” n.d.). Bullying also affects the bystanders who witness bullying or observe bullying may feel anxious about being the next target or guilty for not intervening in stop-bullying. When bystanders are habitual to observe frequent bullying, they have less empathy for victim students.

Remedies/ suggestions for cyberbullying prevention- Brewer, and Kerslake (2015) suggested that self-esteem and empathy-oriented interventions may successfully address cyberbullying behavior. Slonje, Smith, and Frisen, (2013) suggested that programs dealing with traditional bullying can often be extended to deal with cyberbullying. In addition, new technical developments can be taken advantage of (as in cybermentoring), and specific interventions can be devised for cyberbullying (as in films and information brochures and websites). Sarmiento, López, and Zych (2019) suggested that defending the victim is an important component of anti-bullying programs. Hinduja and Patchin (2010) recommended that program for suicide prevention and intervention components is essential and should be implemented in schools.

Conclusion- Bullying is difficult to stop in schools, it is just like a never-ending process because every year a variety of students come from different family backgrounds, caste, class, religion, race, etc. and every student brings some prejudices with him/her in school about others, which may work as reasons for bullying. Bullying should not be underestimated because it may harm students in different ways, everyone should be aware of this, take it seriously and try to sensitize children towards bullying and its drastic impact on him/her or others. Every school should implicate strict anti-bullying policies for students and teachers. As we can see, cyber-bullying has now become a very big problem all over the world and very third students have experienced it either as perpetrator or victim or bystander. In the field of cyberbullying most of the research is descriptive in nature and very few researches are experimental in nature. This research revealed numerous causes of cyberbullying and its consequences, by knowing the root of the problem and can prevent the occurrence of that problem. There are a variety of reasons for being a bully—gaining power over others, experiencing excitement, being popular, making fun, etc. Bullying is a form of peer abuse, and the students who are being bullied need to be protected from such victimization.

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46. NEP (2020): Implementation and Returns

- Dr. Chhaya Goel, Former Professor, MSU- Vadodara- Gujarat-India
- Dr. Devraj Goel, Professor Emeritus, MSU- Vadodara- Gujarat-India

Abstract

This article focuses on NEP(2020) Vision & Mission encompassing School Education Ladder (5+3+3+4) expecting Holistic Education right from first transition of a child from Home to School through foundation, preparatory, middle, secondary and higher secondary stages culminating into learning outcomes in terms of individual development, social development & character formation. First transition of a child from home to school countrywide, despite, various conditions they live in is the most challenging task. Stage-wise preparation of the humane & professional teachers is equally challenging. The focus of the NEP(2020) is on the holistic development of children, doing away with the segregation between Academic & Vocational Streams, Rather than focusing on at end examination and cognitive achievement the focus would be on the skills, competencies in terms of the holistic learning outcomes at all the School Education levels (5+3+3+4). Evaluation would also be holistic, formative as well as, summative cutting across cognitive, affective, psychomotor, physical, metaphysical, that is, spiritual domains. There would be revival of SANATAN SANSKRUTI, where legacies are nurtured and dreams sustained throughout the entire journey of life. Entering into the portals of Higher Education is would be on the bases of the criteria which were observed by our ancient Indian Universities, particularly, NALANDA and TAKSHASHILA. We need to revive & modernize our higher education as envisaged by the NEP (2020), that is, it has to be multidisciplinary, interdisciplinary and cross-disciplinary. Our culture is eternal, that is, CHIR PURATAN NIT NOOTAN, that is SANATAN! Taking advantage of our decency & hospitality as peace loving non-violent and considering the entire VASUDHAIV KUTUKBKAM, that is, entire universe as A FAMILY, many a intruders cross borders, such as, PORTUGUESE, MUGHALS, THE ENGLISH, taking advantage of our decency and humane attitude, ruled over us, enslaved us, looted us, tried to destroy our culture, brutally. On one side the ancient Indian Universities were the remarkable centres of higher education, on the other side, these inhuman devils, such as, ALAUDDIN KHILJI set the NALANDA University Library to Fire, continuously, for more than six months. But he could never burn our legacies and dreams, he could never burn our brains & internal Storage. Despite all the atrocities we are still live and alive.

No institution can be called a University unless it is true representative of the universe. No Higher Education institution can be called Higher unless it is seedling, germinates, innovates, creates, constructs and connects.

The NEP(2020) is the third Indian Education Policy in the series 1968-1986-2020. It has been very well formulated through many a discussion forums across India.

It has a highly desirable vision, but, how to implement it is the core question. Constitution of the HECI with four verticals is highly justified, but, how about the consolidation of the apex agencies and institutions. Teacher Education by virtue of its nature is multidisciplinary and interdisciplinary in nature, because, all the disciplines emerge from Education and merge into Education. The emerging message of this article is that Education ought to be duly nurtured in our Nation, be it School Education or Higher Education! It is Education & Education only which can bewitch the minds to reconstruct a healthy & happy universe! The ultimate aim of our Education is development of universal beings having healthy interrelation, interdependence, integration amongst all the entities of the universe, where, ideas spring, feelings flow, motor muscles create, the soul reins and the self resonates with all in full swing.

Key Words: NEP(2020), Implementation and Returns

1. School Education: Ladder

As per the National Education Policy (2020), the School Education Ladder now will be 5+3+3+4, wherein, five is the foundation & formative stage when there is first transition of child from Home to School to Early Childhood & Care Education (ECCE) Level 1, the most difficult phase. Merely Right to Education (RTE) may not facilitate the first transition from Home to School.



A child of three year will have first transition from Home to School in ECCE Level, that is level 1 of the ladder. How the children of the laborers can have access to the schools? How the children of the farmers can come to the schools? How the Road Side Children can have access to the Schools? How the Children Acrobats can come to the Schools?

How to have compatible schools as per the Educational and Vocational Development of these children, simultaneously? We can have separate institutions for the children Acrobats, where, they present their feats and are paid regular salary! Similarly the children of a farmer would need to develop agrarian skills along with schooling. Children of the laborers would need to be with their parents when they labor on the sites. How about the Children of the *GADIA LOHARS who are mobile along with Parents?* We need to design children compatible schools with suitable Time-Space-Personnel Management! Despite the rules and regulations still the child laborers are in perceptible range. There has to be a separate Commission for facilitating first transition of the children from Homes to Schools. AANGANWADIS need to have ethos of AANGANWADIS. Kinder Gartens ought to have the Flora Fauna & Ethos and Legacies of the Kinder Gartens where the dreams of the children are sustained and developed! Even in the Capital of India, Children Acrobats perform their feats in between the traffic on Red Light Signals and spread their hands expecting some coins or currency! Rarely they meet their expectations. Universalisation of the Kinder Garten-1 (KG1) Education is most difficult.

Earlier the Society was governing the Society. Then the State started governing the society. Now the economy is overarching, both, the State & the Society. What is the resolve to solve the problems?

2. Ending Extreme Poverty: A Focus on Children

“India is a home to over 30% of almost 385 million children living in extreme poverty, the highest in south Asia, According to a new report by World Bank Group and Unicef,’ Ending Extreme Poverty: A Focus on Children.’

It said children are more than twice as likely as adults to live in extreme poverty. In 2013, 19.5% of children in developing nations were living in households that survived on an average of USD 1.90 a day or less per person, compared to just 9.2% of adults. Globally, almost 385 million children are living in extreme poverty.

The report said sub-Saharan Africa has both the highest rates of children living in extreme poverty at just under 50%. “South Asia has the second highest share at nearly 36%- with over 30% of extremely poor children in India alone,” it said adding that four out of five children in extreme poverty live in rural areas.

The report said children are disproportionately affected as they make up around a third of the population studied but half of the extreme poor. The youngest are the most at risk with more than

one-fifth of children under the age of five in the developing world living in extremely poor households. “Effects of poverty are most damaging in children. They are the worst off of all,” said Anthony Lake, executive director, Unicef.

https://m.economictimes.com/news/economy/indicators/30-of-very-poor-children-live-in-india--unicef/amp_articleshow/54685244.cms

There are many a issues that How the Education & Vocation of the children can go together? Can we have institutions providing regular occupation & Honorarium to Children Acrobats? Faculty of Family & Community Studies, MSU, has the provision for an AANGANWADI run by the expert staff.

3. Contribution of Gijubhai Badheka (15.11.1985 to 23.06.1939)



Teacher Profile for Foundation Stage

- GIJUBHAI BDHEKA was an educator who helped to introduce Montessori Education Methods to India.
- He was a High Court Lawyer, however, following the birth of his child in 1923, he developed an interest in childhood development and Education.
- He is well Known for Education Reforms and Children’s Education.

BOOKS by GIJUBHAI BADHEKA

- DIVASVAPANA: An Educator’s Reverie: It is the day dreaming of an Educator, when, the person is fully lost in his vision, neither aware of the self, nor, that of the environment, with deep determination & action, that is, *ANUPRANIT ANUBHOOTI*, to realize the dream or goal, that is the focus, that is the all.
- Mata Pita BANNA KATHIN HAI

- RANJEETRAM SUVARNA CHANDRAK
- MOOCHALI MAA: He was affectionate to his Students to the way & extent that he was called “ Mother with Mustaches!”. He was impersonally personalized, even, in his classes!

4. Our Communication

How long we will go on prescribing the medium of instruction? When will we transcend Three Language Formula? When will we and our children learn to communicate with the entire universe, both, biota and a-biota? We understand the languages of all the entities of the Universe. Even, we try our levels best to connect our AATMA with PRAMAATMA. Not only we understand the languages of the human beings, we also understand the language of the Animals, Birds, Glaciers, Water Falls, Rivers, Lakes, Ponds, Insects, Hills, Valleys and Plains, Oceans, Fish, Earth, Water, Air, Fire, AAKASH, one and all, the entire universe. Also, we try our levels best to transcend Time Space and Mind and have a connect with the Creator! Our *SNATAN SANSKRUTI* which is *NIT NOOTAN & CHIR PURATAN* connects us with all as a whole in *UNIVERSE!*

5. Experiential Learning

We ought to have ample scope for experiential learning. The innovative and creative faculties of our children ought to be nurtured. We need to REVIVE OUR SANSKRITI & SANSKRIT. We need to REVIVE the ETHOS of our ETIHAS, ETHOS of Our SINDHU/HINDU GHATI SABHYATA!

6. Entrepreneurship

We ought to have Entrepreneurship, both, at School Education Level and Higher Education Level! We ought to be theosophical! We ought to realize Skill, Scale and Speed. Rather than servants our Education ought to develop Entrepreneurs, that is Masters of their Professions! Our NEP(2020) converges on Entrepreneurship.

“BANTA BAS UDDYAM HI VIDHI HAI

MILTI JISSE SUKH KI NIDHI HAI !

SAMJHO DHIK NISKRIYA JEEVAN KO

NAR HO NA NIRASH KARO MN KO”

7. Contribution by ANNE BESANT



- Annie Besant came to India in 1895 AD.
- A British Socialist, Theosophist, Women's Right Activist, Writer, Orator Educationist and Philanthropist.
- Regarded as a champion of Human Freedom, she was an ardent supporter of both Irish and Indian Self Rule.
- As an Educationist , her contributions included being one of the founders of the Banaras Hindu University.
- As an Educationist , her contributions included being one of the founders of the Banaras Hindu University.
- She became a member of the Theosophical Society and a prominent Lecturer on the Subject.
- In 1898 she helped establish the Central Hindu School at Varanasi.
- In the late 1920s , Besant travelled in the United States with her protégé and adopted son Jiddu Krishnamurti, who she claimed was the new Messiah and incarnation of Buddha.
- Krishnamurthy rejected these claims in 1929.
- After the war, she continued to campaign for Indian Independence and for the causes of Theosophy.

Three Hindu Schools By Annie Besant at VARANASI

- Hindu Boys School
- Hindu Girls School

- Hindu Sanskrit School (Which was initially founded by Maharaja KRAN Singh Family).

8. Sucheta Jasrai

Dr. Sucheta Yogesh Jasrai Designed, Developed and Implemented a film for facilitating First Transition of Children from Home to Pre-School- SAFAR GHAR SE SCHOOL TAK. The following link provides link for the Film- SAFAR GHAR SE SCHOOL TAK:

https://drive.google.com/file/d/1OojIqDDUvXmLLFmNt4I1wCv5_q4hf9t_/view?usp=drivesdk

- This film was found to contribute significantly in facilitating the First Transition of Children from Home to Pre- School.
- Also, this Film- GHAR SE SCHOOL TAK was conferred 1st Award by the CEC, that is Consortium of Educational Communication, UGC.

9. Many a Attempts to Facilitate the First a Few Years in Schools

- Froebel Kinder Garten
- Montessori Nursery
- Children Aanganwadi
- Germination- Incubation- Development- Connection, that is, Constructivist & Connectionist Approaches need to be employed very carefully!
- **How to realize the ECCE?**

10. Piaget's Stages of Cognitive Development

- **Sensorimotor stage: birth to 2 years**
- **Preoperational stage: ages 2 to 7**
- **Concrete operational stage: ages 7 to 11**
- **Formal operational stage: ages 12 and up**

11. Rajkumari Mishra & Ritesh Vaniya

Development of the Creative Faculties of the Pupil Teachers Employing Participatory Approach:

Some Research Scholars at CASE, MSU, VADODARA employed Participatory Approach for orienting the B.Ed. Students on how to develop the creative composition faculties of the children! It was employed for both composition of Poems and non-fictional essays.

12. School Education Chaos

a. Status of Our Nurseries

Rarely the play centers have the facilities & attributes of the Play Centers. Nurseries rarely have congenial conditions for incubation! Schools are lacking Life Skills! Jean Paige's Stages of Cognitive Development are lost! Still we have not been in a position to resolve the issue of three language formula!

b. Status of Our School Subjects:

What do we learn in history? What do we learn in Science? What do we learn in Mathematics? What do we learn in Psychology? What do we learn in Languages? What do we learn in Sociology? What do we learn in Philosophy? Where are our life Skills?

c. Status of Co-Curricular Activities

Where are the co-curricular activities? Where are our Games & Sports? Where is our Athletics? Where are our- seeds-germination-incubation-creation- construction-connection & innovations? Where are our Pioneers? Where are the children of the labourers?

13. NEP (2020) for School Education

- NCPFECCE: National Curricular and Pedagogical Framework for ECCE up to the age of 8 has been envisaged to be developed by the NCERT. It is envisaged that prior to the age of 5 every child will move to a Preparatory Class or BALVATIKA (that is prior to Std.-1). The New Education Policy has proposed some Programs for training of the Anganwadi Teachers for the ECCE.

NCFSE for School Education

National Curriculum Framework for School Education will be undertaken by the NCERT. National Text Books with Local Content and Flavour. Transforming Assessment for Student Development. Support for gifted students. Support for Special Education & Inclusive Education.

Recruitment & Deployment of School Teachers

Four Year Integrated B.Ed. Program. The harmful practice of Teacher Transfer will be halted. TETs will be extended to cover teachers across all stages (Foundational, Preparatory, Middle & Secondary). Service Environment and Culture. Continuous Professional Development of Teachers.

Career Management & Progression

Teachers doing outstanding work will be recognized and promoted. National Professional Standards for Teachers will be developed by 2022 AD.

14. Approaches to Teacher Education

Teacher Education by 2030 AD will be moved into multidisciplinary colleges and universities. The multidisciplinary HEIs and Universities will aim to house outstanding Education Departments that offer B.Ed., M.Ed. And Ph.D. in Education. Provision for 4 year integrated B.Ed. Provision for 2 year integrated Program intended only for those who have already obtained Bachelor's degree in other specialized subjects.

One year B.Ed. Program will be offered only for those who have completed the equivalent of 4 Year Multidisciplinary Bachelors' degree or who have obtained a Master's degree in a speciality and wish to become a subject teacher in that speciality. The multidisciplinary Higher Education institutions offering 4 Year integrated Program and having accredited for ODL may also offer high-quality B.Ed. Program in blended or ODL mode.

Formulation of the NCFTE

By 2021 a new NCFTE will be formulated by the NCTE in consultation with the NCERT.

15. Teacher Education Ethos

We were never interested in B.Ed. It is B.Ed. which interested us . We opted for wandering wild, But, Education captured us; Far from structure of Phenol, Far from synthesis of Cholesterol, Far from super- het Receivers, Far from gold medal achievers; Far from differential & integral

Calculus, Far from GeoGebra & Quadratic Equation, Far from Equity & Logical Operators, Far from Mega Projects & Micro Processors; It is Education which eternally accomplished, The DNA structure, core & ethos of Life, More than Knowledge & Epistemology, Transcended us of Mind, Space & Time; GURUS the best Form of GUNA, Still NIRGUNA, Always make our Lives Sublime, No Storms can Shake a Butterfly, on Flower Petals with Nectar Divine!
Education facilitates our transition, From atom to nucleus, from dot to globe, One with the universe, the latest version, From self to Self, the blissful immersion!

16. Higher Education

Higher Education in India is being governed more by neo-liberalism, neo-capitalism and neo-colonialism. The increase in the demand of higher education be it liberal or technical is unmanageably large, rapid and pressing. Public and private dichotomy continues to be there in the higher education. The governance & administration of Higher Education ought to be based on scientific, democratic, humanistic principals. CBCS is being largely implemented in higher education. There has to be a significant shift from F2F to e-mode to distance mode. Apex agencies are still lost in the dual mode of granting & monitoring. Higher Education continues to be governed by bureaucratic, conservative, hierarchical and obsolete model.

Learning from the profiles of Nalanda & Takshshila the culture of Higher Education needs to be revived and even trans-created. We will have to do away with ritual convocations which are very often without invocations. The top academic leaders & administrators of Higher Education have to be creative & critical inter-disciplinary and multi-disciplinary experts having rich profiles and balanced personalities. The Professors ought to profess at the levels that every bit of their text and act is its own testimony. The support staff ought to support & guard Higher Education, always and all ways, every moment, everywhere, under all conditions. Higher Education rather than stretching hands for grants will generate corpus of funds through its own production and patents. Art without perspective, Commerce without substance, Science without ethics and Administration without sensibilities and sensitivities and Leaders without creative & critical thinking, decision making and problem solving abilities are worthless.

1. Teaching Staff Scenario in Higher Education

There is a void and vacuum in the State Universities. Persons have been serving as temporary lecturers, Temporary Teaching Assistants year after year in the State Universities. There is abrupt cut in the Teaching & Research positions. Even when the positions are sanctioned by the Centre

there is no State concurrence. Bricks, stones, cement, computers, white boards and smart boards do support education. Buildings do facilitate education. But, Machines cannot replace humans. Money cannot replace men.

2. Higher Education: Public & Private

The public and private dichotomy is a continuous phenomenon in higher education. A large number of existing institutions have inadequate infrastructure and education competence to bear Higher Education. Neither we have been in a position to sustain liberal arts nor develop science and technology. The product which gets the license from the institutes of Higher Education is rarely their product. This is largely the product of off-campus sector which operates in many varied ways. Higher Education day by day is being governed by the private sector, which mostly has more of commercial motive than educational. Higher Education has been made commodity and commerce. How to realize excellence, equity and equality at the same time?

3. Institutional Restructuring and Consolidation

NEP (2020: 10.1) reads that the main thrust of this policy regarding higher education is to end the fragmentation of higher education by transforming institutions into large multidisciplinary universities, colleges and HEI clusters/ Knowledge Hubs, each of which will aim to have 3000 or more students.

This would help build vibrant communities of scholars and peers, breakdown harmful silos, enable students to become well rounded across disciplines including artistic, creative and analytic subjects, as well as, sports, develop active research communities across disciplines including cross disciplinary research, and increase resource, efficiency, both, material and human across higher education.

Added focus on Multidisciplinary Higher Education Institutions in NEP

NEP (2020) envisages to have Multidisciplinary Higher Education Institutions progressively. Though our ancient Universities, namely, NALANDA and TAKSHILA were multidisciplinary, cross-disciplinary and inter-disciplinary, but, is there a single Higher Education Institution or University in India or even globe over at present which is true representative of the universe? The answer evidently is “NO”. Even if we have these as envisaged by 2040 A.D., then, how much flexible would be the CBCS? Why do we need twenty years to realize interdisciplinary Universities and Autonomous Higher Education Institutions? For skill, scale and speed we need creative and critical, governors and leaders, thinkers and workers (two in one).

4. Higher Education Scenario

The Gross Enrolment Ratio (GER) in higher education of Indian has registered an increase from 24.5% in 2015-16 to 25.2% in 2016-17 according to latest All India Higher Education Survey (AIHES) released by HRD Ministry. The survey findings were based on responses of 795 universities, 34,193 colleges and 7,496 standalone institutions. There are total of 864 universities, 40,026 colleges and 11,669 standalone institutions in the country.

Key Highlights of AIHES

- Gross Enrolment Ratio (GER): GER is statistical measure for determining number of students enrolled in undergraduate, postgraduate and research-level studies within country and expressed as a percentage of population. India is aiming to attain GER of 30% by 2020, but it is still far behind countries like China with GER of 43.39% and US with 85.8%.
- The proportion of students pursuing higher education in India hasn't increased dramatically from 2015-16 to 2016-17. It was in range of 23% to 25% since 2013-14. Tamil Nadu has highest GER in India at 46.9%.
- Six states have registered GER higher than national average (25.2%), with their share of students entering higher education is growing twice as fast as overall rate. These states are Tamil Nadu (46.9%), Himachal Pradesh (36.7%), Kerala (34.2%), Andhra Pradesh (32.4%), Haryana (29%) and Punjab (28.6%).
- However, eight states UP (24.9%), Madhya Pradesh (20%), Odisha (21%), Bihar (14.4%), Gujarat (20.2%), Rajasthan (20.5%), Mizoram (24.5%) and West Bengal (18.5%) had GER ratio far less than the national average. Bihar has lowest GER with just 14.4% of its eligible population (in age group of 18 to 23 years) pursuing higher education.

Gender Parity Index

- India registered its best performance on the GPI in last seven years — 0.94 in 2016-17 from 0.86 in 2010-11. GPI is calculated as quotient of number of females by number of males enrolled. GPI equal to 1 indicates 1, value less than 1 indicated disparity in favour of males. In Seven states — Goa, Himachal Pradesh, Meghalaya, J&K, Nagaland, Sikkim and Kerala — women in higher education have outnumbered men.

College Density

- States in south India have higher college density. It is defined as number of colleges per lakh eligible population. The college density in top three states/UTs is Puducherry (49), Telangana (59) and Karnataka (53). Bihar (7 colleges/1lakh population), Jharkhand (8) and West Bengal (11) on the other hand, are at the bottom in terms college density.

Number of Foreign Students

- There hasn't been much improvement in the inter-nationalization of education in the country. There is marginal improvement in number of foreign students —47,575 in 2016-17 from 45,424 in 2015-16— with 31,779 men and 15,796 women. The highest share comes from the neighbours Nepal (23.6%), Afghanistan (9.3%) and Bhutan (4.8%).

5. Teaching Staff in HEIs

- There is a void and vacuum in the State Universities.
- Persons have been serving as temporary lecturers, Temporary Teaching Assistants year after year in the State Universities.
- There is abrupt cut in the Teaching & Research positions. Even when the positions are sanctioned by the Centre there is no State concurrence. Bricks, stones, cement, computers, white boards and smart boards do support education. Buildings do facilitate education. But, Machines cannot replace humans. Money cannot replace men.

Staff Scenario of TEIs of KUK

- There were more than 20 Teacher Educators in the Department of Education KUK during 1990, whereas, now in 2021, there are only 4 Teacher Educators in the Department!
- There were 17 Teacher Educators in the University College of Education KUK during 1990, now there is only one permanent Teacher Educator!
- Emerging question is- Why the Permanent Teaching Staff positions have not been filled?

6. Relative Focus on Hard Skills and Soft Skills

- There is less creation, but more communication. Focus is more on marketing than production. The Higher Education youth is lost in customary designs. There is added focus on soft skills. Only Hard Skills will not do. Only Soft Skills will not do. Both hard and soft skills are crucial.

7. Higher Education: Maintenance & Expansion

- There is a problem of maintenance and expansion of higher education. A large number of institutes of higher education have constituted a variety of committees, such as, Admission Committee, Work Load Committee, Fee Committee, Selection Committee, Salary Committee. Despite all efforts by the institutes of higher education, there are numerous problems, such as, follows:
- A large number of State Universities are under staffed.
- The teaching staff positions are sanctioned by the Central Government, but very often there is no State concurrence.
- There is abrupt cut on the teaching and non-teaching staff positions by the States.
- Staff salary on Paper is different and in actuality is different, more so, in case of a sizeable institutions run by a large number of private trusts.
- There is degeneration of a sizeable number of higher education institutions in terms of various parameters- input, process, throughput, and output.
- There are demand and supply in-equations.
- There are problems of all levels of maintenance-preventive, corrective, adaptive and perfective.
- We have significantly lesser number of higher education institutions than what we need. Establish six more IIT. Open 'n' more IIM. Establish 1000 more universities. All excellent recommendations by the Committees and Commissions.
- But, how to? Professors cannot be produced over overnight. Merely pumping money, throwing grants and laying foundation stones do not ensure suitable infrastructure.
- Expansion of higher Education is beyond the limited data bases and faculties of Committees and Commissions.
- It requires sources & resources, vision & mission, determination & action.

8. Higher Education: Public & Private

- The public and private dichotomy is a continuous phenomenon in higher education.
- A large number of existing institutions have inadequate infrastructure and education competence to bear Higher Education.
- Neither we have been in a position to sustain liberal arts nor develop science and technology.

- The product which gets the license from the institutes of Higher Education is rarely their product. This is largely the product of off-campus sector which operates in many varied ways.
- Higher Education day by day is being governed by the private sector, which mostly has more of commercial motive than educational.
- Higher Education has been made commodity and commerce. How to realize excellence, equity and equality at the same time?

9. Higher Education: General & Honours

- Honors' at Bachelor's level is an anti-thesis to multidisciplinary.
- Graduates without sound knowledge base at a tender age try to be micro-specialists having little understanding of the whole.
- As a result, they are neither fit for self nor field.
- It is high time that the nation does away with Honors at under-graduate level. Even at Post-Graduate level, the specialization should emerge from the field.
- The Generalist & Micro-Specialist dichotomy ought to be resolved.

10. Institutional Restructuring and Consolidation

- NEP (2020: 10.1) reads that the main thrust of this policy regarding higher education is to end the fragmentation of higher education by transforming institutions into large multidisciplinary universities, colleges and HEI clusters/ Knowledge Hubs, each of which will aim to have 3000 or more students.
- This would help build vibrant communities of scholars and peers, breakdown harmful silos, enable students to become well rounded across disciplines including artistic, creative and analytic subjects, as well as, sports, develop active research communities across disciplines including cross disciplinary research, and increase resource, efficiency, both, material and human across higher education.

Added focus on Multidisciplinary Universities/HEIs in NEP (2020)

- NEP (2020) envisages to have Multidisciplinary Higher Education Institutions progressively. Though our ancient Universities, namely, NALANDA and TAKSHILA were multidisciplinary, cross-disciplinary and inter-disciplinary, but, is there a single Higher Education Institution or University in India or even globe over at present which is true representative of the universe?

- The answer evidently is “NO”. Even if we have these as envisaged by 2040 A.D., then, how much flexible would be the CBCS? How much will be the sharing of credits across disciplines?
- How much infrastructure will be required to convert this idealism into realism?
- Why do we need twenty years to realize interdisciplinary Universities and Autonomous Higher Education Institutions?
- For skill, scale and speed we need creative and critical, governors and leaders, thinkers and workers (two in one).

11. (NEP-2020) & Regulatory System of Higher Education

- The regulatory system is in need of a complete overhaul in order to re-energize the higher education sector and enable it to thrive.
- The distinct functions of regulation, accreditation, funding, academic standard setting will be performed by distinct, independent and empowered bodies.
- This is considered essential to create checks and balances in the system, minimize conflicts of interest, and eliminate concentrations of power.
- To ensure that the four institutional structures carrying out these four essential functions work independently yet at the same time work in synergy towards common goals.

HECI Umbrella with four Verticals

Four structures will be set up as four independent verticals within one umbrella institution, the Higher Education Commission of India (HECI) as follows:

- National Higher Education Regulatory Council (NHERC)
- National Accreditation Council (NAC)
- Higher Education Grants Commission (HEGC)
- General Education Council (GEC)
- A National Higher Education Qualification Framework (NHEQF) will be formulated by the GEC and it will be in sync with the National Skills Qualifications Framework (NHEQF).

Catalyzing Quality Academic Research in All Fields through a new National Research Foundation

- Institutions that currently fund research at some level, such as, Department of Science and Technology (DST), Department of Atomic Energy (DAE), Department of Biotechnology (DBT), Indian Council of Agriculture Research (ICAR), Indian Council of Medical Research (ICMR), Indian Council of Historical Research (ICHR), and University Grants Commission (UGC), as well as, various private and philanthropic organizations, will continue to independently fund research according to their priorities and needs.
- However, NRF will carefully coordinate with other funding agencies and will work with science, engineering, and other academies to ensure synergy of purpose and avoid duplication of efforts. The NRF will be governed, independently of the government, by a rotating Board of Governors consisting of the very best researchers and innovators across fields.

Professional Standard Setting Bodies

- The professional councils, such as, the ICAR, VCI, NCTE, COA, NCVET will act as Professional Standard setting bodies (PSSBs). PSSBs will continue to draw the curricula, lay down academic standards and coordinate between teaching, research and extension of their domain/discipline as members of the GEC.
- Despite the critical importance of research, the research and innovation investment in India is at the current time, only 0.69% of GDP as compared to 2.8% in the United States of America, 4.3% in Israel and 4.2% in South Korea. The NEP (2020) envisions the establishment of a National Research Foundation (NRF).

Primary Activities of the NRF

- Fund competitive , peer reviewed grant proposals of all types and across all disciplines;
- Seed, grow and facilitate research in academic institutions, particularly at universities and colleges where research is currently in a nascent stage, through mentoring of such institutions.
- Act as a liaison between researchers and relevant branches of government as well as industry, so that research scholars are made aware of the most urgent national research issues, and so that the policy makers are constantly made aware of the latest research breakthroughs; so as to allow breakthroughs to be optimally brought into policy and/or implementation;
- Recognize outstanding research and progress.

12. Higher Education Ethos

- Higher Education can develop and sustain its status as Higher, when there is an environ of germination, incubation, innovation, creation, construction and connection.
- We face problems right from infancy through old age. We identify, formulate and address the problems through research rigor.
- The NEP (2020) reads now, but, by virtue of our conditions we are multidisciplinary, interdisciplinary and cross disciplinary.
- We believe in harmonious coexistence. Harmonious coexistence demands caring and sharing. Caring and sharing demands research.
- Most of the pioneers, that is, topmost researchers were not materially rich. They did not stretch their arms and palms for funds. Despite the poor conditions of life, they have been labeled as pioneers because of their research and innovation.
- The terms, such as, regulation, recognition, funding, assessment and accreditation are being used very frequently.
- Expansion in any area demands, decentralization that too at the level of devolution. We expect that our NEP (2020) observes it.
- India is a land of Seers, Researchers and Sages. Honourable Prof. K.P. Pandey has always been of the view that we have wonderful researchers, some LAUKIK, some ALAUKIK, whereas, others both LAUKIK & ALAUKIK.
- We have Pioneers and Pioneers, Nobel Laureates and Nobel Laureates.
- They work silently, peacefully, and fully. They are fully lost in Innovation & Research. It is a fact that quality research is realized when the scholars are fully lost, when they have full immersion.

13. Effective Governance and Leadership for Higher Education Institutions

- All HEIs in India will aim to become independent self governing institutions pursuing innovation and excellence.
- Measures will be taken at all HEIs to ensure leadership of the highest quality and promote an institutional culture of excellence. Upon receiving the appropriate graded accreditations that deem the institution ready for such a move, a Board of Governors (BoG) shall be

established consisting of a group of highly qualified, competent and dedicated individuals having proven capabilities and a strong sense of commitment to the institution.

- It is envisaged that all HEIs will be incentivized, supported, and mentored during this process, and shall aim to become autonomous and have such an empowered BOGs by 2035. The BOGs shall be responsible and accountable to the stake holders through transparent self- disclosures of all relevant records. It will be responsible for meeting all regulatory guidelines mandated by HECI through the National Higher Education Regulatory Council (NHERC).

14. Inbreeding in Higher Education

- There is lot of inbreeding, that is, regionalism and provincialism in higher education.
- Some of the States insist on State domicile for admissions into the programs. In addition to this the services rendered by the teaching staff in the other States do not count towards the service benefits. As a result the higher education is administered by a mono- culture, largely, by mediocre.

15. Reservation Not Remediation

- We have sizeable reservation (>50%) in higher education. In this age of equity, equality and democracy, it is highly desirable.
- But, along with this, what is absent is, thorough remediation.

Inadequate Autonomy Flexibility and Transparency

- Higher Education institutions have only a little autonomy, flexibility and transparency, which is too meek to nurture higher education.
- Higher Education is being governed by bureaucratic, conservative, hierarchical, traditional model rather than by human relations model.

16. Higher Education: Input, Process and Output

- We have little control on the Inputs and Processes of higher education. So, the relevance and quality of the product of higher education cannot be forecasted and achieved deterministically.
- Process norms are grossly neglected. There is more focus on exposition and instruction, rather than creation and construction.

- Higher Education has become more theoretical than practical.
- There are wide gaps between vision and mission. There are wide gaps amongst educational objectives, curricula, modes of transaction, and evaluation.
- There is progressive dilution from objectives to evaluation.

17. Problems of Sharing of Resources, Inter-disciplines & Trans-Disciplines

- There is a little networking amongst the agencies and institutions of higher education.
- Exchange and sharing of sources & resources is very rare.
- A few consortiums here and there are more for demonstrations, than fully functional.
- There are rare repositories of learning resources.
- There are boundaries and seasoned gate keepers amongst disciplines.
- People from various disciplines rarely sit around the table.

18. Problem of Sharing of Sources & Resources

- There is a need to share credits intra-university and inter-university.
- Also, there should be provision for Credit Transfer, Student Mobility and Mutual Recognition.
- Most of the Higher Education Institutions are working more or less in isolation.
- There is a need of sharing resources and courses within institutions, between conventional and conventional universities, Open and open universities, and conventional and open universities.

19. Centralized Higher Education

- Most of the Universities in India are affiliating universities.
- The affiliated colleges go by the curricula, modes of transaction and evaluation designed by the Universities. They have little autonomy, because a large majority of them are not properly equipped for offering Post-Graduate Programs.
- Being economically affluent and politically powerful does not ensure the higher education credibility of a private trust.
- The Post-Graduate product of a large number of these trusts has little insight into the national problems and developmental challenges.
- Research has become a ritual. As a whole the quality of higher education suffers. Should the PG programs be delimited to Universities and autonomous institutions, only? Or else

could each and every institute of higher education be resourceful, powerful, and autonomous?

- Education, as on date, is on the concurrent list.
- But, most of the States have brutally abused Education. There are external shows to establish the face validity. But, the content & construct validity rarely exists, whatsoever was there has already faded or fading fast.
- It is high time that Education with all grace be on the central list.

20. In-Innovative Higher Education

- Despite the repeated focus on semester based credit system, still annual and marking system is prevalent in most of the institutions of higher education.
- Choice Based Credit System is offered by the rare institutions. Continuous internal evaluation is the feature of rare institutions. Still there is a primitive culture of flying Squads in Higher Education Examination.
- Even in this age of Technology in Education, Electronic Distribution of Examination Papers is done by only a few institutions.
- Very often the Innovative Programs proposed by the efforts of some Institutions are declared to be not under the purview of the apex agencies in the respective areas, because, the so called expert committees fail to appreciate these programs.
- The apex agencies need to be additionally careful while constituting the Expert Committees for the Innovative Programs.

21. Research at Higher Education: Mapping & Management

- It is of utmost importance that the young minds be attracted to the doctoral research, as it holds a promise for the development of the nation.
- There is evident upsurge in enrolment of Ph.D. Programs. Does it really hold a promise for the development?
- The reason for unproductive research in Education in India is the easy going tendency of the Researchers.
- Our only trend is to get the Ph.D. or book published at the earliest . Above all, the mindset of the researchers needs to be oriented towards research rigor.

- The essence of the degrees, such as, Doctor of Philosophy and Doctor of Letters ought to be rigorously observed. VIDYA VACHASPATI & VIDYA VARIDHI should be identified through their calibers. Their situational presence should justify their beings.

22. Invalid Evaluation in Higher Education

- Evaluation in higher education is largely invalid right from input through process to output to placement.
- Our admission criteria in most of the faculties are faulty, because we do not have the research base with respect to the predictors of performance in various programs.
- Still, the classical Norm Reference Testing continues in most of the institutes of higher education, promoting competition. Rarely we go by Criterion Referenced Testing and Item Response Theory.
- In the interview boards, rather than trying to know what the candidates know, we try to make them feel stupid by making them conscious of what they do not know.
- A large number of interview boards fail to discriminate finely between candidates. The problem becomes, still severe, when we need to discriminate between 98th and 99th percentiles.
- Internal evaluation, revaluation, double valuation, centralized evaluation, all have question marks. A person with B+ passes the life situations, whereas, A+ fails.
- What do the degrees of a degree represent, if not the helplessness of the Higher Education System? Rather than grading our product on an n point scale could we have pass and not-pass in Higher Education realizing mastery learning?

23. Low Return on Investment in Higher Education

- Only 5-6% of the persons who are conferred degrees are graduates in the real sense.
- Ritual convocations without real invocation are meaningless.
- How to observe the Higher Education wear the scarf with distinction, decency, decorum & discipline and glittering medals with resonating pride?
- For realizing that, we need to revive the culture of higher education. Rather than formally constituted knowledge commissions, each and every entity of higher education should realize and demonstrate its identity as a Knowledge & Action Commission.

24. Self Killing Complacency of Micro- Specialists

- Self-killing complacency of micro-specialists of Higher Education is a matter of great concern.
- How much each one of we Professors professes even our own discipline?
- Higher Education has made us more fragmented than holistic.

25. Placement, Promotion and Administration in Higher Education

- Where are the alumnus of Higher Education? Most of the institutions of Higher Education do not have record of alumnus.
- What would be more shameful than the institutions of higher education refusing to recognize their own products?
- Academic administration of the institution must by thinking, speech and action portray their commitment to high ethical standards.
- A sizeable number of educational institutions do not observe healthy constellation and ethical climate.
- Many academic administrators are not in a position to observe the laid down acts, rules, resolutions and ordinances.
- The true test of administration is when the rules and acts are silent. At times the conditions demand administrators to be over and above the system at the same time not against the system.

26. State of Arts, Science, Commerce and Administration in Higher Education

- Art without perspective, commerce without substance, science without ethics, and administration without sensibilities & sensitivities are meaningless.
- Who should be the top academic administrators of higher education? These have to be essentially inter-disciplinary experts having rich profiles & balanced personalities.
- An analysis of the top administration of higher education, nationwide, reveals, that civil servants, industrialists, pure academic professionals, and Statesmen all are misfits in the administration of higher education. There are rare personalities with integrated profiles.
- The Universities and Institutes of Higher Education have to bear with the best possible available. It is disgracing higher education to plant in-compatible administrators.

27. Stereotyping in Higher Education

- A large number of refresher courses which are meant for staff development and capacity building are not serving the envisaged purpose.
- Rather than designing means for staff development we have more of staff rating scales. These tools are more for describing the field than constructing.
- Same age old practical are repeated in the science laboratories. Same age old theories are practiced despite the changing conditions.
- Arbitrary criteria are superimposed on the reality promoting fundamentalism.
- Neither we have been in a position to sustain liberal sciences, nor, scientific realism.

28. Micro-Specialization, Narrow Breadth and Shallow Depth

- Though the various disciplines are doing a lot of service to the society, yet there are many emerging issues and problems.
- How to stop deforestation? Can Botany contribute to the reduction of pollution? How to mass educate the development of the seasonal plants? How to save endangered species of plants?
- Can Zoology contribute to the regulation of population? How to correct the imbalances in male-female ratio? How to control diffusible diseases? How to save endangered species, for example, lion, tiger, black- buck? How to realize mass production of compatible medicine?
- How can Chemistry contribute to the control of pollution? How to produce degradable polymers?
- How can Physics realize the conservation of energy using conventional sources?
- There is a lot left to be discovered/ constructed in the areas of laser technology enhancement, transportation and space research.
- Rather than abstract and empty, mathematics needs to be more real and meaningful.
- Languages should be register specific and functional.
- Commerce should be more with service motive.
- Technology is sweeping the globe. But, there is more of media crowd than culture. Educational Instructional Software are rarely user compatible right from KG to University and continuing education levels.

- Though information in Science and Technology is multiplying at exponential rates but still there is a wide gap between the expected rate of evolution of scientific knowledge and what it actually obtains.
- There are easily perceptible Science and Technology divides in the society.
- Philosophy and Psychology which are the strongest foundations for society are losing their identities?
- How top level administrators very often are found to have low level affect attributes?
- Our degrees of a Degree are representative of the extent of course completion than developed competencies.

29. Career Advancement Scheme in Higher Education

- CAS in higher education is highly desirable in this age of humanization and democratization, but, it has significantly lost its purpose.
- The Career Advancement rather than a function of merit is the discretion of whims and fancies of administration and it is losing credibility due to malpractices prevailing in the institutes of higher education, for example, referees not sending the reports in time, faculty having sound profile being not promoted.

30. Professional Ethics in Higher Education

- We are largely proud of the Indians for their roles & professional ethics. Despite all adverse conditions they perform their duties with all dedication.
- For parenting Indian parents are models for the globe, for software industry Indian Engineers, for patients Indian Doctors, for learners Indian Teachers. We have harmonious culture and healthy constellation amongst all entities.
- However, some deviants, here & there spoil the professional excellence, peace & harmony. How? Needs no illustrations. Everyone needs to rear the baby. We should not leave it to others.
- The very presence of doctors relieves the patients of disease and discomfort. All doctors need to observe punctuality & presence.
- Software engineers should produce vaccines to remedy than viruses to replicate.
- We teachers need to renew ourselves to remain alive and innovative rather than becoming stale to delete even the already running programs & courses. Rather than neo-liberalism,

neo-capitalism, neo-colonialism, let humanism flow through all professions governing higher education in India.

31. Causes of Chaos in Education

- Our Policies are reasonably good. But, the faults come up at implementation level. Our Educational Objectives are Excellent. But, first dilution takes place at the Transaction level, next at the Evaluation Level.
- We have a tendency to disregard the indigenous, even that of High Quality, and have developed a Craze for the Foreign. It is evident through our APIs.
- We have gone recursive after enforcing a Common University Act, State or Central. The Question is why should we have a Common University Act. The Root cause is we are neither powerful enough to appreciate autonomy, nor diversity. Let us learn to respect the uncommon & unique in us.
- We should not have a tendency to disrespect the Educational Administrators who very often operate in a multi-parametric setting. Many of we Educational Administrators serve as Honourary Honourable Servants.
- We need to develop a very strong Service Cadre in India of the Profile of Shri Shankran, Andhra Pradesh, 1957 batch and Shri S.C. Behar, Madhya Pradesh, 1961 batch.
- The UPSC should have due place for Education in Service Cadre.
- Establishment of Universities demands thorough preparation. We should assure & ensure that the Universities are properly established. India cannot afford to erect Universities arbitrarily.
- Some of the Universities have become abode of some criminal tendencies. The Universities should employ Strong Security with High Level Intelligence to control and counter all such devastating forces.
- The products of a large number of Scientists are not utilised, because of lack of facilities for Clinical Trials & Patenting.
- Indian Scientists should be provided due facilities in India.

32. Suggestions to Strengthen Higher Education Policy Perspective

- The Vice Chancellors, Executive Committee Members and Senate Members ought to be identified very rigorously. They should be the persons of very high caliber.

- The acts, statutes and ordinances of the higher education should be fully & strictly observed.
- It is high time that we do away with the crowds of regulatory bodies. Our higher education has degenerated with the induction of such regulatory bodies. In fact, these have become the hubs of malpractices. If such bodies cannot live by the principles, religiously, then how can these observe the act, statutes, NIYAMS and ADHINIYAMS.
- Higher Education, by virtue of its ethos, has to be autonomous. The higher education institutions should be stand alone. It is high time that we do away with the affiliations. The learning outcomes ought to be worked at for every type and level of higher education and those should be the referents for observing the quality of higher education.
- There should be uniform curricula of Science, Mathematics, Engineering ,Technology, and Medicine throughout India, to control any further dilution.
- The Liberal Arts should be fully strengthened. The power of India can be revived through the Cultural Heritage & Religious Heritage of India. The Liberal Arts ought to strengthened.
- Teacher Education Policy, Health Education Policy, ICT Education Policy should have the same status as that of Economic Policy and Fiscal Policy.
- Minimum 5-6% GDP should be spent on Education.
- Minimum 2-3 % of the GDP should be spent on Research.
- The Ph.D. Course Work made mandatory has mechanized Research in all the disciplines, all over India. The nation should attempt, aggressively, to de-mechanize research.
- The Academic Performance Indicators need to have Scientific Bases.
- Grants & Endowments are respectable in the Realm of Education, but, to sustain the status as “*Higher Education*”, the Higher Education should construct ample Patents to be self-supportive.
- Higher Education should realize autonomy in its True Sense and Spirit. It should no more be governed by Bureaucratic, Conservative, Hierarchical systematically Self-Killing Model.
- Who is the most Supreme Governor of India? Is it Education? Is it Society? Is it State? Is it Legislative? Is it Executive? Is it Judiciary? The immediate history is a witness to Judicial over-activism. Why? No in-depth evidence is required to infer that all the rest

have more or less lost their identities. It is bitter to relish the hard reality. The fact is that we all have over loaded the Judiciary to be over-active. Due to over-load on any system, either it goes mad or burns out. *It is Education and Education only, and more so, the Higher Education, which can bewitch the minds and control the crimes.*

- The entire Higher Education is sick right from Higher Education Policy to Practice, from Gross Enrolment Ratio to the % of the Pass-outs Employed. Over and above, the norms at all phases of the system parameters are highly wanting. The input norms, process norms, output norms, pick-place & promotion norms have to be worked out very scientifically.
- There is no Parallel amongst the Higher Education Institutions across India. Why? There is no comparability amongst the products of the various institutions, though towards the same PG Degrees or PG Diploma. The services rendered in one State largely do not count towards the service benefits in the other States. The superannuation age varies from State to State, State University to Central University.
- Is there no Press and Publisher in Our Village, Town, City, District, State, Neighbor State, Nation, Continent, that we like to fly to Oxford, Cambridge, VDM, to get our publications done? It is good that through this plight we are trying to realize the Universe-ideas ought to be distributed and disseminated globally. But, the problem lies elsewhere. We value more where it is published rather than what is published. We are seeking high-fidelity media. Cannot we develop these in India? There is a request & caution to all of us to revise our thinking. Let us learn to Love My India..
- Come what may, we should safe guard our Higher Education. The Higher Education should revive its identity. Modernization demands revival of the culture of ancient Indian Universities, such as, NALANDA, TAKSHSHILA, VIKRAMSHILA. There should be Higher Education DVARPANDITS!

43. Realizing the Identity of Education in India

- The moment we utter World Class Universities, we recall Takshila, & Nalanda, the Ancient Universities of India which have no parallel still!
- Let us have Quality Control in our Academic Institutions, so as to have Knowledgeable, Humanistic, Competent Graduates, not merely wearing Scarf & Holding Degree, but resonating with the universe with complete invocation & immersion.

- World class universities are where ideas germinate & spring, feelings flow, motor creates, the soul spirit reins, and the self resonates within and with the universe, where the Human Beings Transcend from Human Development Index (HDI) to Universal Development Index (UDI) and Human Beings tend to be Universal Beings, where we have unconditional love for the nature with super inner control. Let us cleanse ourselves with all compatible rinsing agents & submit fully, with complete immersion for understanding the manifestations of the universe.

Concluding Remarks

- India is a proud Nation, because, come what may we do not compromise with our principles.
- We have a very rich VIDYA HERITAGE.
- It is a blissful experience to dive deep into the Indian Scriptures. The deeper we dive the higher we are!
- We feel proud of our education which is education in the true sense. Truthfulness, Compassion and Forbearance are the essential features of Indian Education which are always higher.
- India is full of pioneers. Let us realize our collective wisdom!
- The NEP (2020), our New Education Policy, seems to be highly idealistic, when we perceive its face validity.
- But, its content and ethos deeply touch our cores and souls. We need to dive deep into our scriptures to cultivate & nurture this Universe.
- There is a need to remove KHAR- PATVAR & useless contents from our texts right from school education (5+3+3+4) through Higher and Continuing Education.
- The universities and Higher Education institutions have to be true representatives of the universe. Universe Development Index (UDI) ought to be the concern of every university.
- Unconditional love for all is the means of renunciation, to integrate with the whole, to merge with the whole, to be one with the whole. Our Higher Education should transcend us of the time, space and mind.
- We feel proud of Indian Education where Legacies are Nurtured & Dreams are Sustained, Developments are Continuous & Journeys are eternal.

- Our legacies are unconditional love & dreams are peaceful coexistence having knowledge of Thy creation, interrelation & interdependence, our developments are holistic & our Journeys are 360 degrees round the clock, endless infinite.
- Our Education prepares saints and seers, artists and scientists, technocrats and engineers, researchers and pioneers.
- Our NEP(2020) aims to develop we learners as holistic beings, as universal beings, where, entry into the Universities or HEIs will be on satisfactory dialogues with the DVARPADITS' profiles of NALANDA & TAKSHILA and exit by the ACHARYAS, all in one, such as, STEAM & SCOPE, that is Science Technology, Engineering, Arts and Mathematics, as well as, Spiritual, Clinical, Organizational, Positive, Educational Psychology all in one, PNHENTOP, that is, Physiotherapist, Neurologist, Heart-Specialist, Ear-Nose-Throat, Orthopedic & Physiotherapist all in one.
- As per the NEP (2020) our Higher Education will deterministically prove its identity at the functional level.
- It will justify its name only when it revives our legacy and realizes our dreams.
- It will groom us into our ancient universities and religious scriptures, as well as, facilitate full, meaningful, peaceful, happy, and healthy coexistence!
- The ultimate aim of our Higher Education or University Education is Uni-verse. To realize uni-verse all the constituents of the universe have to be in unison, treating every one as a source than re-source.
- There has to be eternal connect of AATMA with PRAMAATMA.
- We believe in SATYAM-SHIVAM-SUNDARAM. We need humanistic, holistic, completely interconnecting always smiling Vice- Chancellors of the Universities who can nurture the legacies and sustain the dreams. Who believe in growing together, developing together, where, the journey is eternal despite all the odds and evens. Let us utilize our Collective Wisdom for Development of Thy Creation!

AUM NMAH BHAGWATE VASUDEVAAYE!

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