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The editorial board welcomes scholarly articles for the Volume-6, Issue-1, 2024 of MITE Journal of Education. The articles should be in APA format. The best fifteen research articles will be selected for publication in the journal. The articles should reach to the editor on or before 30<sup>th</sup> of October, 2024. The authors may send the articles to [mitejournal@emite.co.in](mailto:mitejournal@emite.co.in)

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# **MITE JOURNAL ON EDUCATION**

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MITE JOURNAL OF EDUCATION (AN ANNUAL REFEREED JOURNAL)



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भारतीय सामाजिक विज्ञान अनुसंधान परिषद्  
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INDIAN COUNCIL OF SOCIAL SCIENCE RESEARCH  
Ministry of Education, Government of India



RAMESH YERNAGULA

Dear Seminar attendee,

It gives me immense pleasure to know that the Modern Institute of Teacher Education (MITE), Kohima, Nagaland, is organizing a national seminar on the theme "Innovations in the Future Education System: India 2.0." August 10th–11th, 2023. The role of teachers is more focused in NEP 2020, particularly research, which plays a vital role for innovation in the education system in the country. In this direction, I am sure the deliberations at this seminar will provide an opportunity for all the participants to interact with each other and discuss issues related to the ways and means of the future education system in India.

I look forward to welcome to each one of you and to engage to evidence based discussions.

(Ramesh Yernagula)  
Director, NASSDOC, ICSSR

## **Message**

Dear Authors,

To achieve and promote excellence in publications and research, the Modern Institute of Teacher Education has taken the initiative to publish research papers and articles in the MITE Journal of Education with ISSN: 2582-1768.

Research is "creative and systematic work undertaken to increase the stock of knowledge. I request all the authors, researchers, teachers, educators, and educationists. Please concentrate on thrust areas to do research or to publish. It will be useful for society as well as the nation.

I wish all the members of the organizing committee of the Two Day National Seminar on “Innovations in Future Education System: India 2.0” who have been involved in bringing out the Journal for their greater success and career ahead.

Best wishes for their future endeavors.

**Dr. T Sharon Raju**

Associate Professor & Head,  
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## **Message**

Dear Authors,

I have great pleasure in conveying my best wishes to the Modern Institute of Teacher Education for releasing the MITE Journal of Education, Volume - 5, Issue - 1, 2023 which brings the authors and teacher educators of various disciplines on a common platform to share and display their ideas and research findings. I wish all the members of organizing committee of Two Day National Seminar on Innovations in Future Education System: India 2.0 and who have been involved in bringing out the Journal for their greater success and career ahead.

The editorial board has been putting efforts into good quality of papers for the benefit of the society. The MITE Journal of Education is a most powerful platform for the researchers, authors and teacher educators to share their views and research findings may be benefitted to society as well as the nation.

I express my sincere gratitude to the editor, editorial board and peer review team for their continuous support.

To conclude, I place on record my sincere gratitude to the Researchers, Educationists and Teacher Educators for their valuable contributions. I am grateful to the Management and Staff of Modern Institute of Teacher Education for putting in their efforts to make this MITE Journal of Education see the light of the day.

I wish all the authors a very happy reading.

**Dr. Kate Dandesh Kumar**

Principal,

Modern Institute of Teacher Education,

Kohima, Nagaland – 797001

## **Editor's Message**

Publishing of this Journal would not have been possible without the great and much appreciated contributions from the editorial and technical team and the strong intellectual support and well-timed contributions of content writers deserve special appreciation. The teacher educator researchers' force must work as collaborative, integrated team to achieve the goal of generating evidence-based research data required to address different problems and challenges faced in the field of teacher education.

The Journal wishes to serve as a mirror for showcasing and acknowledging the achievements of teacher educator researchers in Nagaland in particular and India in general. A vision for professional research (In the field of Teacher education) collaboration is needed to build up in academic and practice settings in support of teacher education. The Journal aims to provide such common platform for Teacher Educators, Student-Teachers, and researchers to promptly share their research findings and latest developments in the field of teacher education. We are relying on all our writers, editors, and contributors to make it up to date, vibrant and relevant publication. We hope you will enjoy reading and continue to support in future too.

Thank you

With regards  
**Dr. H.L. Gangte**  
Vice-Principal,

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Kohima, Nagaland – 797001



## **Convener Message**

It is a matter of great pleasure for me to welcome you all to the ICSSR Sponsored National Seminar on “Innovations in Future Education System: India 2.0.” in association with MITE Journal of Education on 10<sup>th</sup> and 11<sup>th</sup> August 2023.

Education is always a sign of development and learning. It should be research-oriented helping society to create something new. Thinking in an innovative and new way is significant to cope with changes in education system. This seminar provides a forum for scholarly discussion about future scenario. It is also relevant for exploring and searching various aspects of education through the appropriate application of technology and innovative ideas.

The response of contributors and likeminded educational fraternity showing their keen interest in this seminar is highly motivating. Presentation of such research papers is extremely beneficial for faculty members, research scholars, students’ teachers and stakeholders stimulating factor for us to organize such seminar frequently in future. I sincerely offer my earnest gratitude to those who have contributed through their research papers in the seminar. I am sure that the seminar would achieve its objective by providing a suitable platform for learning and experiencing the latest advancement in the field of education. The cohesive efforts of a dedicated and committed team become necessary for organizing such seminar. We are fortunate enough for having such a hardworking team with us.

Thank you

**Dr. R. Udhaya Mohan Babu**  
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## **PEDAGOGICAL INNOVATIONS IN EDUCATION**

**Dr. Kotra Balayogi**

### **ABSTRACT**

The present study is to obtain a broader knowledge of innovative pedagogical practices in education, and there is a broad consensus that the public school system is not delivering on its promise of quality education for all children, particularly for the disadvantaged learners. Under this circumstance, today there is an unprecedented level of support for doing things differently and widespread recognition that new approaches, skill, strategies, etc. and new structures will be essential to address all the educational level situations. When other sectors, like health, finance, management, economics, etc. have turned to innovation of new ways of doing things that bring about an improved result and it is sadly ironic that this is weaker in public education than in almost any other field, even though the purpose of this field is to advance learning among the twenty-first students and there is a lot of promising energy behind innovation in public education today. Any innovation in education sector, be it in student assessment, curriculum design, evaluation, use of technology, content organization, methods to learning, etc. aims at promotion/ advancement of learning only. Hence, knowledge of emerging theories of learning and pedagogies created from them, is a pre-requisite while designing innovations, particularly pedagogical innovations and the role of teachers by innovating pedagogy towards enhancing the present students learning is very essential and that requires a transformation of the pedagogy and pedagogical content knowledge towards quality learning experiences that aims for the holistic development of 21<sup>st</sup> century individuals.

**KEYWORDS** : Innovations, Learning, Pedagogy, Practices, Students, Teachers, Teaching

### **INTRODUCTION**

Pedagogy is referred to both as a science and an art of teaching, as enunciated by a number of educational philosophers, such as Kant (1724-1804) and Hegel (1770-1831) and added a higher dimension to the understanding of ‘pedagogy’ per se. It was earlier understood to be within discipline-specific

boundaries, but was not viewed from the perspective of moral development. Kant stressed a lot on institutions of education and their organizers as harbingers of moral and character development of individuals towards a meaningful living and responsible citizenry. In his view, Pedagogy should be such that it promotes the development of the natural aptitudes inherent in human nature and relates pedagogy to its emancipator role by way of critical philosophy which ascribes to the cultivation of reason, which should be mastered by those who are to teach. It is an ever-evolving concept and has undergone many paradigms shifts since ancient times, the Vedic period and in the present-day conception of the term, the educational practices in the ancient period (610 B.C. – 1285 A.D.) mostly comprised of moral instruction, reading, oral learning through repetition, etc. The Medieval period was marked by the influence of the Church over the lives of the people and even the system of education. The curriculum can be called as truly democratic if it enables young learners in decision-making and enterprising skills and gives them the freedom to construct their own knowledge as well as critique the present knowledge content based on valid reasoning and evidences. Pedagogy has largely been reduced to a ‘culture of reproduction’ and a transmission of knowledge. A critical pedagogy takes into account a sensitization toward the suffering of others by not just bringing the varied experiences into class room life but enabling the learners to also be critical agents who are responsible for the moral or political conflicts of their time. Cognitive psychology also had a major bearing on pedagogy and resulted in marked changes in its approach and understanding, from Behaviourism.

### **OBJECTIVES OF THE STUDY**

- ❖ To know about the theories of learning
- ❖ To study what is pedagogy and its core principles
- ❖ To highlight innovation and its difference with invention
- ❖ To discuss pedagogical innovations and its models

### **METHODOLOGY**

The present study is mainly established on secondary data which are gathered from renowned research articles, journals, position papers, etc. and are all related to Pedagogical Innovations in Education.”

## **REVIEW OF LITERATURE**

Barnett & Hodson (2001) developed a newer model for defining teachers' knowledge and termed it as 'Pedagogical Context Knowledge' that derives its basis in the Shulman's concept about Pedagogical Content Knowledge (PCK) that encompasses it as well. The model employs ways of ascertaining teachers' knowledge and situates them in different contexts such as the class room, the teachers' own belief systems, value structures, language culture, etc. and this list can be non-ending. Gudmundsdottir (1990) earlier proved that teachers' own value systems put a great impact upon their way of choosing the content specific teaching strategies, way of using the textbook as well as perceptions about teachers' learning needs and difficulties. Kagan and Tippins (1991) revealed the impact of teachers' beliefs on the structure and content of their teaching. Silver (1999) reviewed and discussed the nature of innovation in higher education teaching and learning. It traced a shift from innovation generated predominantly at the local form to innovation largely directed by the higher education institutions. Oulton (2004) pointed out that while dealing with controversial issues, multiple viewpoints surrounding these issues need to be regarded well different ways of interpretation occur depending on different worldviews, values, etc. and an issue can only be resolved once more information becomes available. Harper and Quaye (2005) emphasized a dual role wherein the students have a responsibility to be engaged in meaningful and mindful activities, while educators are responsible for providing such activities and experiences that engage them and educators may attempt to increase cognitive engagement by applying active learning strategies in their courses. Fatokun and Fatokun (2013) adopted problem-based learning, which is another active learning strategy, in their chemistry and mathematics classes. E-portfolio is another pedagogic innovation through which students use authentic evidence to document their achievements and skills, and for many other related purposes and uses. The potential of e-Portfolios to support and benefit learning and teaching has been increasingly recognized and understood (Jafari & Kaufman, 2006). ICT is effectively integrated into a high-quality environment, it can help deepen students' content knowledge, engage them in constructing their own knowledge and support the development of complex thinking skills (Kozma & McGhee, 2003). Every technology has its specific affordances,

affordability and constraints that influence what teachers do with it in classrooms. Understanding these dynamics is not so straightforward and may require rethinking teacher education and teacher professional development (Mishra, Koehler & Cain, 2013).

## **PEDAGOGY**

The etymology of the word "pedagogy" refers to the instruction of a child, although it historically has been used to refer to the education of someone of any age and the word should only be applicable to children and suggest that the practice of, methods for, and theories about teaching adults should be called and ragogy. It is the art of teaching, its theory, its practice, and its methods. In other words, it is the art and science of how something is taught and how students learn it. It is a deliberate attempt of improving learning process by considering their nature, contents, methods, media, and other aspects of the environment. Essentially, the idea of pedagogy concerns several related concepts. Exactly what should be taught and how it should be taught are deep pedagogical concerns, and the ongoing history of education shows that this question is never fully answered. It includes how the teaching occurs, the approach to teaching and learning, the way content is delivered and what the students learn as a result of the process and it is created from theories on learning, which then influences practice and/or subject. A teacher always has pedagogy, even if it is not clearly defined. A pedagogue must know the children, the content and must know how to put these two for quality learning.

## **CORE PRINCIPLES OF PEDAGOGY**

- ❖ Commitment to students and learning
- ❖ Teacher's grip on the subject
- ❖ Teacher's knowledge of how to teach subjects
- ❖ Teacher's responsibility for managing and monitoring student learning
- ❖ Thinking systematically about teaching practices
- ❖ Learning from experiences
- ❖ Teachers are members of learning communities

## **INNOVATION AND INVENTION**

We know that our students' world is ever-changing, so we can't stand still and 21<sup>st</sup> century students want an education that meets their individual needs, and opportunities that connect them to what is happening around the globe. They expect us to be innovative and to make learning environments more exciting, challenging and rewarding. We need to involve families and communities in the learning of young people, because learning forums are more open, transparent and collaborative. We can use technology more creatively so as to move beyond classroom walls and to transform education with completely new ways to learn new skills. The term innovation does not simply mean a moment of invention and it is a cycle that includes several stages and the work of many stakeholders. Innovation is about doing things in new or different ways and it has been defined and understood in a number of ways. There is no widely accepted standard definition however, we are not concerned with innovation in education merely for the sake of novelty. Educational innovation refers to an idea or practice new to a specific educational context that meets unsatisfied needs. It is the introduction/promotion of new ideas and methods that are devised in education and/or school practices which have a substantial effect on changing the existing patterns. They usually occur in response to particular problems that exist in the education system. Being innovative is about looking beyond what we currently do well, identifying the great ideas of tomorrow and putting them into practice. Invention is a new-to-the-world discovery/creation, driven primarily by inventor curiosity or research interest, merit defined by uniqueness, based primarily on scientific skills, etc.

## **PEDAGOGICAL INNOVATION**

According to Béchard (2000), pedagogical innovation corresponds to a change that he defines as, "an intentional action that aims to introduce something original into a given context, and it is pedagogical as it seeks to substantially improve student learning in a situation of interaction and interactivity." which he later expands upon with "In a university context, pedagogical innovations are often described as everything which is not lecturing, the method still used by the overwhelming majority of professors."(Béchard and Pelletier, 2001, p. 133).Huberman (1973), says that pedagogical innovation is "anintentional,

measurable and sustainable improvement that is unlikely to happen frequently”. It entails implementing, securing acceptance of and widely using a change that must survive without losing its initial characteristics. Innovation lies in integrating an institutional plan, a method, a process, a technology, etc. that is transferred, imported or borrowed from elsewhere (Cros and Adamczewski, 1996; Cros, 2001; Béchar, 2001). It is also how something new is perceived by the actors of previously well-established system (Rogers and Shoemaker, 1971). Whilst innovation allows a state to be improved, it does not constitute the solution to a problem, but demands creativity and originality (Cros, 2007). It is creativity, inventiveness and initiative through the renewal of an institutional measure, a method or a process (Cros, 2002-2).

## **PEDAGOGICAL INNOVATIONS**

### **The 5 E’s Model**

**Engage** : Students encounter the material, define their questions, lay the groundwork for their tasks, make connections from new to known, and identify relevance.

**Explore** : Students directly involved with material, inquiry drives the process, teamwork is used to share and build knowledge base.

**Explain** : Learners explain the discoveries, processes, and concepts that have been learned through written, verbal or creative projects. Instructor supplies resources, feedback, vocabulary, and clarifies misconceptions.

**Elaborate** : Learners expand their knowledge, connect it to similar concepts, apply It to other situations can lead to new inquiry.

**Evaluate** : It is an on-going process by both instructor and learner to check for understanding. Rubrics, checklists, teacher interviews, portfolios, problem-based learning out-puts, embedded assessments, etc. results are used to evaluate and modify further instructional needs.

## **BRUNER’S CONSTRUCTIVIST INSTRUCTIONAL STRATEGY**

**Invitation** : The Invitation stage is the element in the lesson plan where students ‘prior knowledge, ideas and beliefs about the concepts in the lesson sequence are

brought into play and the teacher might use a provocative question or a demonstration or an interesting challenge for the purpose.

**Exploration** : The purpose of the Exploration stage is to assist students in exploring the concepts, phenomena, and ideas of the lesson.

**Explanation** : The Explanation stage should help the students discuss and reflect on their findings, data, and analysis and they should have the opportunity to see what others found, to compare their ideas to other students and experts on the topic.

**Taking Action** : Here, students should be involved in an activity that will assist them in taking personal and/or social responsibility for the concepts and ideas they researched and this stage provokes the student to ask, “What did I learn, and how can I use this knowledge to solve a problem?”

### **INQUIRY-ORIENTED CONSTRUCTIVIST MODEL**

- ❖ Introduction phase
- ❖ Puzzling situation
- ❖ Data generating/Experimentation by students
- ❖ Hypothesizing and explaining
- ❖ Analysing the inquiry process

### **THE INTERPRETATION CONSTRUCTION (ICON) DESIGN MODEL**

- ❖ Observation: Students make observations of authentic artefacts anchored in authentic situations.
- ❖ Contextualization: Students access background and contextual materials of various sorts to aid interpretation and argumentation.
- ❖ Cognitive Apprenticeship: Students serve as apprentices to teachers to master observation, interpretation and contextualization.
- ❖ Collaboration: Students collaborate in observation, interpretation and Contextualization
- ❖ Interpretation Construction: Students construct interpretations of observations and construct arguments for the validity of their interpretations.
- ❖ Multiple Interpretations: Students gain cognitive flexibility by being exposed to multiple interpretations.



- ❖ Multiple Manifestations: Students gain transferability by seeing multiple manifestations of the same interpretations.

## MODELS OF PEDAGOGY

**Problem Posing :** It is a systematic approach to empowering learners to control their own learning. To problematic a term, a text, an opinion, or personal perspective is to construct them as challenges that encourage learners to attempt to transform their circumstances or views. Problematisation is based on a dialogue or process that takes the common knowledge about a situation and transforms that knowledge into a problem.

**Problem Solving :** It has several advantages over expository methods. It assumes that students are active participants in the construction of new knowledge rather than passive receivers of knowledge. Its strategies give students opportunities to think rationally. The higher levels of learning, like reasoning, critical reflection, imagination, which involve transfer and application of knowledge and understanding to new situations, can be achieved through problem solving.

**Team Teaching / Co-teaching :** It is possible to learn from others in many different situations including: tutorials/seminars; web-based discussion forums like e-mail groups, in-class discussions/debates, working as a group on an assignment, etc.

**Experiential Learning :** It is not just ‘field work’ which means connecting learning to real life situation on the contrary, it is a theory that defines the cognitive processes of learning and asserts the importance of critical reflection in learning.

**Concept Mapping :** Concept mapping is a technique of graphically representing concepts and their hierarchical interrelationships in a meaningful network and emphasis on the students’ prior knowledge in subsequent meaningful learning and can be used both as an instructional tool and as an evaluation tool.

## CONCLUSION, DISCUSSION AND SUMMARY

The present paper divulges the pertinent and emancipator role played by the pedagogies in Higher Education and has helped in addressing pressing issues related to subject-based pedagogies, pedagogies that cut across all the disciplinary areas and the significance of lecture as a pedagogy that is needed to promote

intellectual culture and training of the mind can also not be undermined. It has been emphasised that content and pedagogy alone can't lead to a comprehensive and holistic understanding of the subject matter, rather there has to be an implicit and seamless blend, which is referred to as Pedagogical Content Knowledge in the mind of the teacher. The ideas, beliefs and preconceptions of the teachers are as important as the knowledge about the content areas and these need to be taken into consideration for better teaching and learning outcomes. The goal of education pedagogies is on building among the learners, certain skills, attitudes, values and development of identity for creating their own niche in the society and to serve as active citizens of that society. In order to address these challenges, education needs to be linked with employability and skill generation. This will also help in enabling the individuals to become more independent and financially stable, which would ultimately contribute towards making 21<sup>st</sup> century India self-sufficient and self-reliant. At the same time, the need of the hour is to nurture certain values, ethics and attitudes among the citizens that help in building a cohesive society where cooperation, equality, humanity and empathy prevail as opposed to competition, hatred, envy and selfishness. Educational institutions have to model such kind of ideals and environment, as institutions are the miniature societies and reflect the society at large. This can happen only when the pedagogies support and facilitate such growth and academic freedom. This was also envisaged by the University Education Commission to serve as a place where individuals are not bound by set knowledge structures and disciplines, but are free to explore and transgress the disciplinary boundaries to reach an authentic understanding. Thus, Pedagogy in education needs to be situated in this wider context. The current pedagogy, particularly at school level, is following up the trend of a "shift from teaching to learning". The process of students' learning assumes centrality in the whole process of education thus, it is not sufficient just to present the learning material before the students or to put them into the internet. Pedagogy, as it is understood here, mainly focuses on the activities of the learners and the teachings primarily from the point of view of support. This is known as student-centered pedagogy in this context, the construction of learning environments is evolving as one central task of the teachers. This task is not as simple as it appears to be. It requires teacher to get rid of his traditional role as 'a sage in the stage' and to collaborate with the other stakeholders of education. There is no universal/readymade approach to do this

hence, the teachers need to seek not only support but also ideas from parents and other members of community infringing out 21<sup>st</sup> century pedagogical innovations.

### **Educational Implications and Suggestions**

- ❖ Differentiated instruction
- ❖ Group work
- ❖ Cooperative and collaborative work
- ❖ Case study
- ❖ Problem-based learning
- ❖ Problem-solving method
- ❖ Role play
- ❖ Blended learning
- ❖ Flipped classroom
- ❖ Activities
- ❖ Presentations
- ❖ Quizzes
- ❖ Seminars

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## **PROMOTING ORIGINALITY IN THE CLASSROOM: EXPLORING ELEMENTARY SCHOOL TEACHERS' CREATIVITY FOSTERING BEHAVIOUR**

**Azono Nakhro & Dr. Rashmi**

### **ABSTRACT**

The ability of a teacher to demonstrate behaviours that stimulate creativity during regular contact with pupils places the teacher in a crucial position to encourage the creative development of learners. The educational system is gearing towards a creative pedagogy to equip learners with creative and innovative skills to face future challenges. The study investigates the creativity fostering teacher behaviour of elementary school teachers and how it is influenced by gender, management, professional qualification, and teaching experience. For the present investigation, a descriptive survey method was employed, and simple random sampling technique was used to select the sample of 200 teachers from four districts of Nagaland. CFT Index by Soh (2000) was used to collect data. Descriptive statistics and one-way analysis of variance analysed the data. It was revealed that a significant number of teachers displayed a need for more creativity fostering teacher behaviour. The study also found statistically significant differences regarding gender and type of school management, with female and private teachers showing higher levels of creativity fostering teacher behaviour than male and government teachers respectively. The results show that training did not affect the teacher's creativity-fostering behaviour. The study reveals that teacher creativity fostering behaviour declines for highly experienced teachers.

**KEYWORDS** : creativity, teacher behaviour, creativity-fostering behaviour

### **INTRODUCTION**

Creativity is one of the essential skills for the 21st century, and has gained attention in various fields, including education. As noted by several researchers, enhancing creativity has become a priority and necessity due to global social and economic developments (Craft, 2005; NACCCE, 1999).

The role of a teacher in fostering students' creativity is critical. With the understanding that creativity can be promoted, teachers' facilitative role in

nurturing pupils' creativity has gained due attention. Esquivel (1995) suggested that teachers can contribute significantly to student creativity through their philosophical attitude, the instructional methodologies they adopt, the interactions with students, and the learning environment they create. Cropley (1992) studied teachers' behaviours that foster students' creativity and found that teachers who understand creativity and the creative process can enhance their pupil's creativity, even if the teachers themselves do not vigorously engage in it. Creativity-fostering teachers stimulate creative thinking in their pupils and reward diverse thinking and problem-solving. Creativity-supportive teachers stress the worth of all ideas for solving challenges and respond to unexpected queries with curiosity and respect instead of annoyance. Teacher creates a creative climate in the classroom by encouraging the pupils to take risk, facilitate experiential learning, and promote group trust, self-discipline and tolerance for ambiguity (Beghetto & Kaufman, 2010). According to Cropley (1992), teachers who foster student creativity encourage students to develop autonomy in their learning and the ability to think in diverse ways by allowing them to play with ideas and materials and solve problems.

Based on Cropley's (1997) list of nine teacher characteristics that foster students' creativity, Soh (2000) developed the CFT Index under the following dimensions: Independence, Integration, Motivation, Judgement, Flexibility, Evaluation, Question, Opportunities, and Frustration.

According to Soh (2000), the teacher's "actions and reactions" are critical in fostering the pupils' creative abilities (p.118). In classroom settings, teachers can directly support their student's creativity by identifying their creative traits, valuing the effort they put into the creative work, and honouring the outcome or product of their creative endeavour. The teacher can also indirectly support or stifle students' creativity in their daily interactions. A thoughtless, insensitive remark by the teacher can deter students from pursuing their creative ventures.

## **NEED AND SIGNIFICANCE OF THE STUDY**

In India, educational policies and curriculum frameworks have placed a strong emphasis on the development of creativity. The National Education Policy (NEP) 2020 vision is to enhance academic quality by promoting creativity and

innovation and transforming India into a competitive knowledge society. A core principle of National Education Policy 2020 is to adopt a creative pedagogy to meet the developmental needs of every learner at all stages of development. However, a significant concern noted is the "creativity crisis" (Bakhshi, 2020) facing our educational system. Nurturing creativity requires an environment that encourages and rewards creativity. As Sternberg (2006) noted, though an individual may be inherently creative, without an environment that recognizes and values creativity, the individual may never fully realize his creative potential. Despite many teachers' noble intentions to encourage children's creative potential, they differ in how much they support, enhance, or foster creativity in the classroom (Flieth, 2000).

While students' creativity has widely been measured, there is a dearth of research measuring the creativity-fostering behaviours of teachers. The current investigation aims to address the gap in the subfield of student creativity development by examining the creativity-fostering behaviours of teachers in the classroom. As the state of Nagaland, along with the rest of the country prepares to implement the new educational policy (NEP 2020), a crucial goal of which is to foster creativity and innovation, the investigator is hopeful that the findings of the research will be helpful for policy makers, teacher educators, teachers and educational planners.

### **OBJECTIVES OF THE STUDY**

1. To assess the level of creativity fostering teacher behaviour of elementary school teachers in Nagaland.
2. To examine the difference in the creativity fostering teacher behaviour of elementary school teachers with regard to gender, type of school management, professional qualification and teaching experience.

### **RESEARCH QUESTION:**

1. What is the level of creativity fostering teacher behaviour of elementary school teachers in Nagaland.



## **HYPOTHESES OF THE STUDY**

1. There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to gender.
2. There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to type of school management.
3. There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to professional qualification.
4. There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to teaching experience.

## **METHODS AND PROCEDURES:**

### **METHODOLOGY**

“Descriptive Method of Research” was used for carrying out the study.

### **SAMPLING**

In the present investigation, a representative sample of 200 elementary school teachers from Kohima, Peren, Tseminyu, and Dimapur districts of Nagaland were selected by applying simple random sampling technique.

### **RESEARCH TOOLS USED**

*Creativity Fostering Teacher Behaviour Index (CFTIndex)* by Soh (2000) was used to collect the data. It is a Likert scale with six points, 6 as *Always* and 1 as *Never*. The instrument had 45 items covering nine dimensions i.e., Independence, Integration, Motivation, Judgement, Flexibility, Evaluation, Question, Opportunities, and Frustration.

### **RESULT AND DISCUSSION:**

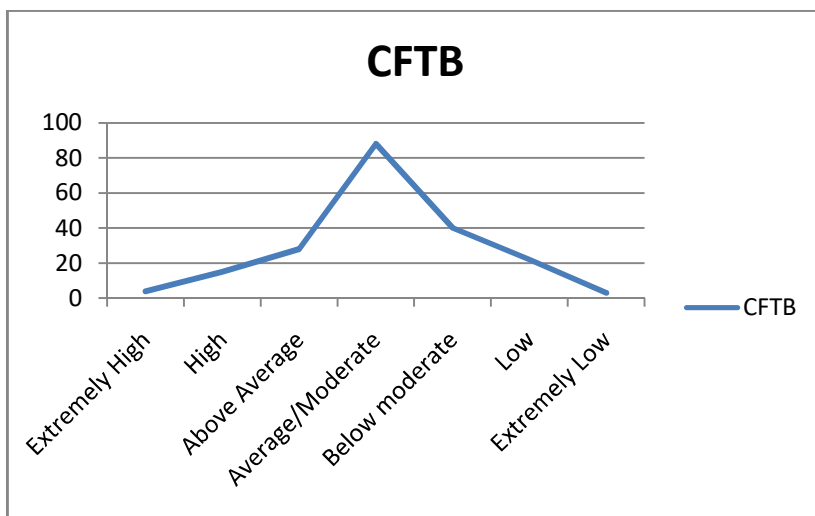
The results have been discussed in the light of the objective, research question and hypotheses of the study.

### Creativity Fostering Teacher Behaviour

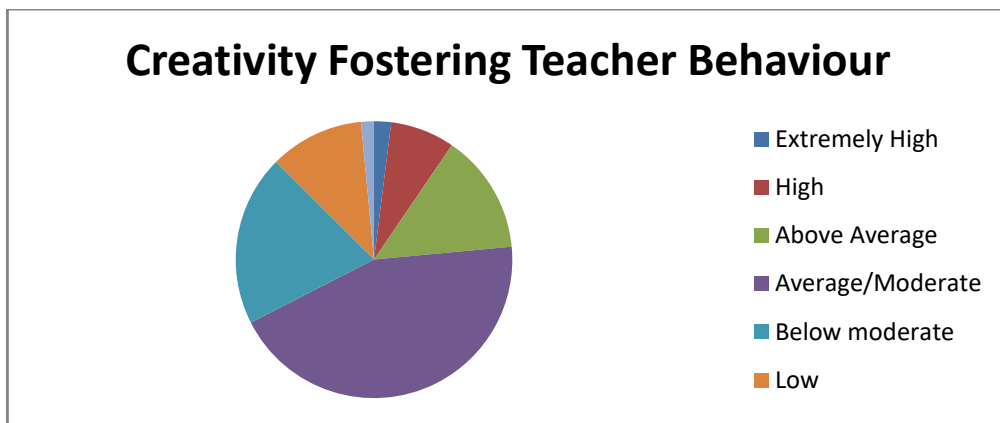
Creativity Fostering Teacher Behaviour of elementary school teachers was measured by Creativity Fostering Teacher Behaviour Index (CFTIndex) developed by Soh (2000). The data has been classified under seven categories viz., Extremely High, High, Above Moderate, Moderate/Average, Below Moderate, Low, and Extremely Low.

**Table 1: Levels of creativity fostering teacher behaviour of elementary school teachers**

Sl. No.	Range of z- scores	Grade	Levels of Creativity Fostering Teacher Behaviour	Number of teachers
1	+2.01 and above	A	Extremely High	4
2	+1.26 to +2.00	B	High	15
3	+0.51 to +1.25	C	Above Moderate	28
4	-0.50 to +0.50	D	Moderate/Average	88
5	-1.25 to -0.51	E	Below Moderate	40
6	-2.00 to -0.52	F	Low	22
7	-2.01 and below	G	Extremely Low.	3



**Fig. 1: Frequency polygon of the scores on teachers' creativity fostering behaviour**



**Fig. 2: Pie chart of the scores on teachers’ creativity fostering behaviour**

The analysis of the data reveals that 2% of elementary school teachers have extremely high creativity fostering teacher behaviour, 7.5% have high creativity fostering teacher behaviour, 14% have above moderate, 44% have moderate/average creativity fostering teacher behaviour, 20% have below moderate, 11% have low, and 1.5% have extremely low creativity fostering teacher behaviour.

**Table 2: Significance of the Difference between Means of Male and Female teachers’ Creativity Fostering Teacher Behaviour**

Variable	Group	N	M	SD	S <sub>EM</sub>	t-value
Creativity Fostering Teacher Behaviour	Male	86	214.10	19.51	2.10	<b>3.202</b>
	Female	114	223.04	19.57	1.83	

An independent sample t-test was conducted to compare the creativity fostering teacher behaviour between male and female elementary school teachers. The mean score for male teachers (M = 214.10, SD = 19.51) was significantly lower than the mean score for female teachers (M = 223.04, SD = 19.57), and t-value (t = 3.202), p < .05. These results suggest that there is a statistically significant difference in creativity fostering teacher behaviour between male and female elementary school teachers, with female teachers reporting higher levels of creativity fostering teacher behaviour than male teachers. Hence, the null

hypothesis  $H_{01}$  “There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to gender” is rejected.

**Table 3: Significance of the Difference between Means of Government and Private teachers on Creativity Fostering Teacher Behaviour**

Variable	Group	N	M	SD	SEM	t-value
Creativity Fostering Teacher Behaviour	Govt.	74	213.59	20.039	2.32	<b>3.103</b>
	Pvt.	126	222.49	19.30	1.71	

An independent sample t-test was conducted to compare the creativity fostering teacher behaviour between government and private elementary school teachers. The t-value is 3.103 with  $df=198$  which is significant at .05 level of confidence. The results suggest that there is a statistically significant difference in creativity fostering teacher behaviour between government and private elementary school teachers, with private teachers reporting higher levels of creativity fostering teacher behaviour than government teachers. Hence, the null hypothesis  $H_{02}$  “There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to type of school management” is rejected.

**Table 4: Significance of the Difference between Means of Trained and Untrained teachers on Creativity Fostering Teacher Behaviour**

Variable	Group	N	M	SD	SEM	t-value
Creativity Fostering Teacher Behaviour	Trained	119	219.78	18.89	1.73	<b>0.421</b>
	Untrained	80	218.56	21.64	2.42	

An independent sample t-test was conducted to compare the creativity fostering teacher behaviour between trained and untrained elementary school teachers. The t-value is 0.421 with  $df=197$  which is not significant at .05 level of confidence. The results suggest that there is statistically no significant difference in creativity fostering teacher behaviour between trained and untrained elementary school teachers. Hence, the null hypothesis is  $H_{03}$  “There is no significant difference in the creativity fostering teacher behaviour of elementary school teachers with regard to professional qualification” is accepted.

**Table 5: Summary of One-way Analysis of Variance on Difference in Effect of Teaching Experience on Creativity Fostering Teacher Behaviour**

Test of Homogeneity of Variances				
Age Groups	Mean	Std.Deviation	Levene's Statistic	Sig.
1-10 years	219.8594	19.06422	.781	.459
11-20 years	223.5870	18.84979		
Above 20 years	208.1923	23.09116		
ANOVA				
Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4091.341	22045.670	5.339	.006
Within Groups	75476.659	197	383.130	
Total	79568.000199			
Post-hoc comparison				
Teaching Experience Groups	Mean Difference	Sig.	95% Confidence Interval (LL – UL)	
Less to High	- 11.66707	.017	5.50659	- 6.14027
Moderate to High	- 15.39465	.004	5.59716	- 6.23084

*\*Significant at 0.05 level*

The hypothesis test if the creativity fostering teacher behaviour of teachers differs across different groups. The elementary teachers were grouped into three categories (Group 1: Less experienced (1-10 years), Group 2: Moderately experienced (11-20 years), Group 3: Highly experienced (Above 20 years). The ANOVA results suggest that the creativity fostering teacher behaviour scores of the groups differ significantly ( $F_{2, 197} = 5.399, p = <0.05$ ).

Since the Levene's Statistic is not significant, the equal variance was assumed. To check for individual difference between groups post-hoc comparisons were assessed using Tukey HSD. The test indicated that the mean score for Less experienced teachers ( $M = 219.8594, SD = 19.06422$ ) was significantly different from Highly experienced teachers ( $M = 208.1923, SD = 23.09116$ ), Moderately experienced teachers ( $M = 223.5870, SD = 18.84979$ ), differed significantly from Highly experienced teachers. The mean difference was significant at the 0.05 level. However, no significant difference was detected between Less experienced and Moderately experienced teachers.

## **DISCUSSION AND CONCLUSION**

The study examines the creativity-fostering teacher behaviour of elementary school teachers, where it was found that a significant number of teachers exhibit lack of high creativity-fostering teacher behaviour. The study further revealed that there was statistically significant difference regarding gender, with females showing higher levels of creativity fostering teacher behaviour than their male counterparts. This result corroborates with the findings of Dababneh, et al.,(2019) but is inconsistent with studies done by other researchers (Hondzel, 2013; Forrester & Hui, 2007) where no statistically significant difference was found between male and female teachers on teachers' CFTIndex subscale scores. The results also show that the creativity fostering teacher behaviour of private teachers is significantly higher than government teachers. This could be due to higher expectations and accountability of teachers from the private institutions and also availability of more resources.

The study further revealed that training did not affect creativity fostering teacher behaviour. This finding is similar to Forrester and Hui's (2007) study, where teacher qualification did not affect the teachers' CFTIndex subscale scores. An important finding is the statistically significant differences concerning teaching experience. The study reveals that teacher creativity fostering behaviour declines for highly experienced teachers. This result aligns with the findings of Cayirdag (2017), whose study found that more experienced teachers engage in less creativity-fostering practices. This decline in teacher creativity-fostering behaviour may be due to highly experienced teachers engaging in more administrative roles, lower motivation to try new and innovative teaching strategies, teacher burnout or teacher often engaging in traditional teaching methods.

To foster creativity within educational settings, teachers must be equipped with "capacity-building behaviours" (Soh, 2015, p.2). It is suggested that teacher education programmes and professional development courses emphasise developing teacher expertise in fostering creativity by having a sound understanding of creativity and the creative process. Enhance the pedagogical skills of teachers to nurture creativity in the classrooms. As fostering creativity is a challenging task, besides capacity building, teachers need assistance from the school administration to establish an environment that allows them to teach

creatively. In addition, as stated by Beghetto & Kaufman (2014), teachers should take the role of creative leaders and regard teaching as a creative act.

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# **ENHANCING SCIENCE EDUCATION THROUGH IMMERSIVE VIRTUAL FIELD TRIPS: EVALUATING THE EFFECTIVENESS OF KNOWLEDGE ACQUISITION AND STUDENT ENGAGEMENT**

**Dr. Vinod Kumar Kanvaria & Monika**

## **INTRODUCTION**

Science education plays a crucial role in equipping students with the knowledge and skills necessary to understand and apply scientific concepts. Traditional classroom instruction provides a foundation of theoretical knowledge, but it often lacks the experiential component necessary for a comprehensive understanding of scientific principles. Field trips have long been recognized as valuable opportunities to bridge this gap by providing students with firsthand experiences and direct interaction with real-world scientific phenomena. However, logistical challenges, budget constraints, and limited access to relevant sites often limit the frequency and scope of traditional field trips. In recent years, advancements in technology have opened up new possibilities for enhancing science education. Immersive virtual field trips made possible through virtual reality (VR) and augmented reality (AR) technologies, offer an innovative and accessible alternative to traditional field trips. These virtual experiences allow students to explore scientific sites, ecosystems, or archaeological locations in a highly immersive and interactive manner, providing a level of engagement that was previously limited to physical field trips. The immersive nature of virtual field trips enables students to navigate virtual environments, observe scientific phenomena, conduct virtual experiments, and engage in interactive simulations. By replicating the sights, sounds, and even tactile experiences of real-world settings, immersive virtual field trips create a dynamic learning environment that can significantly enhance students' understanding of scientific concepts.

## **SIGNIFICANCE OF THE STUDY**

Virtual field trips break down geographical barriers, allowing students to virtually explore diverse scientific sites, ecosystems, or archaeological locations worldwide. Students can visit places that may be logistically challenging,

physically inaccessible, or prohibitively expensive to reach in person. They can engage in hands-on activities, conduct virtual experiments, and simulate real-world scenarios, promoting deeper comprehension and retention of scientific concepts. Virtual field trips offer flexibility and personalization in science education. Students can revisit virtual environments multiple times, at their own pace, reinforcing their understanding of concepts. Additionally, virtual field trips can be tailored to meet individual learning needs, allowing students to explore specific areas of interest or focus on challenging topics. This flexibility and personalization foster student engagement and motivation in science learning. Certain scientific sites or experiments may involve safety risks or ethical considerations. Virtual field trips provide a safe and controlled environment where students can explore and engage with such content without compromising their well-being or violating ethical guidelines. By engaging with digital tools, students develop critical digital literacy skills necessary for the 21st-century workforce. They also gain experience in using technology as a tool for scientific inquiry and exploration, preparing them for future careers in STEM fields.

Overall, the importance of virtual field trips in enhancing science education lies in their ability to provide accessible, immersive, experiential, and personalized learning experiences that complement traditional classroom instruction. By leveraging technology to explore diverse scientific environments and phenomena, virtual field trips empower students to develop a deeper understanding of scientific concepts, foster engagement and motivation, and cultivate a lifelong passion for scientific inquiry.

## **REVIEW OF RELATED LITERATURE**

The study investigated the benefits of taking virtual field trips in immersive virtual reality, providing evidence for the immersion principle in multimedia learning (Makransky & Mayer, 2022). The study discussed the opportunities and challenges in the context of education for sustainable development in national collaborative teacher training (Leininger-Frézal & Sprenger, 2022). Mixed-methods study on elementary students' presence and perceived learning during immersive virtual field trips, revealing the positive impact on student engagement and learning outcomes (Han, 2020). Virtual reality-based field trips in science education heightened student engagement, motivation, and active participation, as

the immersive experience stimulated interest and curiosity toward scientific phenomena(Li et al., 2020). Optimizing immersive virtual learning in climate change education can be achieved through virtual field trips, which offer valuable insights into the design considerations for effective virtual learning experiences (Petersen et al., 2020).The study explored the use of immersive and interactive virtual field trips to promote science learning, emphasizing the engagement and knowledge acquisition benefits(Mead et al., 2019).Virtual field trips, according to Klippel et al., (2019), provide valuable insights into the design and implementation of effective virtual experiences. Virtual field trips (Prasetya & Padmawati, 2019) improved students' ecological conceptual understanding, and explanatory abilities, highlighting the significance of immersion and interactivity in facilitating learning. Kenna and Potter (2018) focused on the use of virtual field trips to enhance social studies instruction, highlighting the benefits of virtual experiences in expanding students' global perspectives. Norris et al., (2015) conducted a pilot study on virtual field trips as physically active lessons for children, suggesting the potential for integrating physical activity and learning through virtual experiences. Plass et al., (2014) discovered that virtual and physical field trips in biology education yielded similar gains in student learning outcomes and engagement, showcasing the cost-effective potential of virtual alternatives. Kamarainen et al., (2013) discovered that both virtual and physical field trips in geology resulted in significant improvements in content knowledge and spatial thinking skills, suggesting that virtual field trips can be a viable alternative with comparable learning outcomes. Knowledge gained in biology and ecology between real field trips and virtual field trips in a nature preserve highlights the educational value of both approaches (Puhek et al., 2012). Virtual field trips support multidisciplinary learning, emphasizing the potential of virtual field trips as a tool for interactive and experiential learning(Jacobson et al., 2009).

## **RESEARCH OBJECTIVES**

- To evaluate the effectiveness of immersive virtual field trips in enhancing knowledge acquisition and student engagement in science education.
- To compare the outcomes of students engaged in immersive virtual field trips with that receiving traditional classroom instruction.

- To explore students' experiences and perceptions of immersive virtual field trips in science education.
- To provide evidence-based insights and recommendations for the integration of immersive virtual field trips into science education.

## **HYPOTHESES OF THE STUDY**

**Ho1** : There is no significant difference in the protest scores between the control group (receiving traditional classroom instruction) and the experimental group (engaged in immersive virtual field trips) on the achievement test.

**Ho2** : There is no significant difference in the post test scores between the control group and the experimental group on the achievement test.

## **RESEARCH METHODOLOGY**

### **RESEARCH DESIGN**

A mixed methods research design including both quantitative and qualitative approaches was used to collect the data. The integration of quantitative and qualitative methods allows for a comprehensive examination of the effectiveness of virtual field trips in enhancing science education, while also capturing students' experiences and perceptions. The quantitative component of the study involved the administration of pre-tests and post-tests to measure knowledge acquisition. The qualitative component of the study focuses on capturing students' experiences and perceptions of engagement during virtual field trips.

### **SAMPLE AND SAMPLING TECHNIQUE**

The sample was consisting of students from a tenth-grade of English medium school. The participants were randomly selected by using a purposive sampling approach, ensuring that both the control group and the experimental group have similar characteristics in terms of demographics, prior knowledge, and academic performance. Ethical considerations were taken into account, including obtaining informed consent from students and heads of the schools.

### **DATA COLLECTION METHODS**

The quantitative data collection involved administering a pre-test and a post-test to both the control group and the experimental group. The pre-test was

conducted before any intervention, serving as a baseline measure of student's initial knowledge and understanding of the concept. The pre-test consisted of items aligned with the learning objectives of the curriculum covered in the virtual field trips. After the completion of the virtual field trips or the traditional classroom instruction, the post-test was administered to assess the knowledge gained by the students. The post-test contains equivalent questions to the pre-test, allowing for a comparison of learning outcomes between the control and experimental groups. The post-test measured the extent to which students have acquired and retained knowledge through their respective learning experiences. t-test was used to determine the significance of any observed differences. Qualitative data collection methods interviews and observations were used to focus on capturing students' experiences, perceptions, and engagement during the virtual field trips. Semi-structured interviews were conducted with participants of the experimental group to gain deeper insights into their experiences of engagement attitudes, and motivations related to the virtual field trips. Observations were conducted during the virtual field trips to directly observe and document students' engagement behaviours and interactions with the virtual environment.

## **DATA ANALYSIS**

The quantitative data collected through pre-test and post-test assessments were statistically analyzed to examine the differences in knowledge acquisition between the control and experimental groups. Descriptive statistics such as means, standard deviations, and frequency distributions were used to calculate the pre-test and post-test scores separately for both the control and experimental groups.

## **HYPOTHESES TESTING**

**H<sub>01</sub>** : There is no significant difference in the pre-test scores between the control group and the experimental group.

**H<sub>02</sub>** : There is a significant difference in the post-test scores between the control group and the experimental group.

**Table 1****Pre-test and Post-test Scores for Control and Experimental Groups**

Group	Pre-test Mean (SD)	Post-test Mean (SD)	p-value
<b>Control Group</b>	<b>75.2 (8.3)</b>	<b>78.6 (7.9)</b>	<b>p = 0.162</b>
<b>Experimental Group</b>	<b>75.1 (7.8)</b>	<b>81.4 (8.7)</b>	<b>p &lt; 0.001</b>

*Inferential Remark:*Based on the p-values

**Ho1 :** The p-value (0.162) is greater than the significance level of 0.05. Therefore, fail to reject the null hypothesis, indicating that there is no significant difference in the pre-test scores between the control and experimental groups.

**Ho2 :** The p-value (<0.001) is less than the significance level of 0.05. Hence, reject the null hypothesis and conclude that there is a significant difference in the post-test scores between the control and experimental groups.

There is no significant difference in the pre-test scores between the control and experimental groups. However, there is a significant difference in the post-test scores, indicating that the virtual field trips had a significant impact on the knowledge acquisition of the experimental group compared to the control group.

## **RESULTS AND FINDINGS OF THE STUDY**

The findings of the study suggested that the virtual field trips had a significant impact on the knowledge acquisition of the students in the experimental group compared to the control group. The results indicated that the virtual field trips were effective in enhancing knowledge acquisition among the students, as evidenced by the significant difference in post-test scores. Study emphasizing the value of incorporating virtual field trips into science education to enhance engagement, promote active learning, and foster deeper conceptual understanding. Future research could further investigate the long-term effects of virtual field trips and explore the specific factors that contribute to increased engagement and knowledge acquisition.

## **DISCUSSION AND INTERPRETATION**

Traditional field trips have long been recognized as valuable learning experiences that allow students to directly observe and interact with real-world environments providing a hands-on approach and the opportunity to engage multiple senses. On the other hand, virtual field trips offer the advantages of accessibility, cost-effectiveness, and the ability to simulate diverse environments that may be logistically challenging to visit in person. However, it is important to acknowledge that virtual field trips may lack the physical and sensory aspects of traditional field trips. The findings demonstrated a positive impact of virtual field trips on both knowledge acquisition and student engagement. The study emphasized that virtual field trips effectively engage students, promote deeper understanding, and contribute to the overall learning process and also support the theories of constructivism, which emphasize the role of active participation and meaningful experiences in learning. Also, the study helped in addressing discrepancies or gaps between the findings and existing literature, identifying potential areas for further research.

## **CONCLUSION**

Research findings indicate that virtual field trips have a positive impact on both knowledge acquisition and student engagement in science education. The quantitative analysis revealed significant differences in post-test scores, suggesting that virtual field trips enhance knowledge acquisition. The qualitative analysis highlighted active participation, realistic immersion, collaboration, and motivation as key factors contributing to increased student engagement during virtual field trips. These findings underscore the effectiveness of virtual field trips as a pedagogical tool for enhancing science education.

Virtual field trips can also address logistical and financial constraints associated with traditional field trips, making them more accessible to a wider range of students. Continued research and implementation efforts can further refine and enhance the use of virtual field trips, ensuring their optimal integration into science curricula and maximizing their impact on student learning and engagement.

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## **ISSUES AND CHALLENGES OF B.Ed. INTERNSHIP IN KOHIMA DISTRICT**

**Kavani Hekha & Dr. Surendra Yadav**

### **ABSTRACT**

Like all other professional programmes, field engagement is an essential component of any teacher education programme. In the case of teacher education programme, field engagement involves engagement with the students and teachers in schools. The sustained engagement with the school over a period of time is known as school internship (NCTE, 2016). Through professional development and competencies, the Student-Teachers acquire the right methods and techniques to implement in the real classroom teaching. Internship is one such platform where they are exposed to all innovative teaching learning process because lacking of innovative measures in teaching leads to great obstacles in the development of pedagogical skills. But with such platform, there are a lot of problems faced by student-teachers, schools, B.Ed. institutes, school students and teacher educators. This paper will focus on the issues and challenges faced by Student-Teachers and teachers of practice teaching schools regarding Internship

### **INTRODUCTION**

Like all other professional programmes, field engagement is an essential component of any teacher education programme. In the case of teacher education programme, field engagement involves engagement with the students and teachers in schools. The sustained engagement with the school over a period of time is known as school internship (NCTE, 2016).

The geographical area of the study selected is Kohima, the state capital of Nagaland, India. There are 4 B.Ed. institutes in the state capital. After the two years B.Ed. course started Internship programme has become a challenge not only for the B.Ed. institutes but also with the schools in and around the district. To delimit the study of the issues and challenges of B.Ed. internship and bring about detailed remedies, Kohima district has been selected. The present study focus on the Internship carried out by B.Ed. Student-Teachers. The duration for Internship is for 2 months which is not very effectively carried because schools are not willing to

accommodate student teachers for two months as interns. With the new constructivist approach the method of teaching learning is modelled with the 5E lesson plan which is not well versed by student-teachers and even teacher educators.

The present study focuses on the issues and challenges of Internship because after the implementation of 2 Years B.Ed. programme the duration of internship has been increased to 2 months which schools are not willing to cooperate with teacher education institutes because of various problems faced by them. But not only schools, Student-Teachers also face a lot of challenges. For this purpose the study is carried out to propose measures and suggestions for better implementation of Internship.

#### **OBJECTIVES OF THE STUDY:**

1. To find out the problems faced by teachers of practice teaching schools
2. To find out the problems faced by Student-Teachers of B.Ed. Institutes

#### **NATURE AND SAMPLE OF THE STUDY**

The study is Qualitative Research in nature and the sampling technique used for obtaining data is Purposive Random Sampling

#### **TOOLS**

Self-made open-ended questionnaire developed by the investigator is used to collect information.

#### **PROBLEMS FACED BY TEACHERS OF PRACTICE TEACHING SCHOOLS**

1. It is very difficult to accommodate student-teachers for 2 months. The approaches and methods used by them during internship are helpful but they are not able to complete the syllabus on time. The school teachers have to rush in to finish the syllabus which at the end affects the students.
2. Classroom management and lack of discipline in the class is also another problem faced by teachers. Student-Teachers are not able to manage the class during their stay and they do not impose discipline to the students. After the

end of internship when respective subject teachers take up the class it is difficult to bring the students back to the normal routine.

3. Another major problem faced by teachers is re-teaching of lessons delivered by student-teachers. The lack of subject mastery and good communication skills affects the school students and the teachers have to perform extra duty by re-teaching the topics all over again. Because of this many school teachers do not encourage internship for 2 months.

### **PROBLEMS FACED BY STUDENT-TEACHERS**

1. Majority of the schools are not welcoming towards interns and so there is not cordial relationship between them. Student-Teachers also face problems with the schools' infrastructure because they are not given proper rooms to accommodate during their internship period.
2. During one on one interaction with Student-Teachers, language is also another problem faced in government schools. Most of the time Student-Teachers use nagamese to communicate with the students in the classroom.
3. Due to large number of students in a class it is very difficult to manage and control the students. And moreover, interns are there for a specific time so students do not respect and obey them.
4. Internship of two months becomes very expensive for student-teachers because all expenses have to be borne by them and no stipends are provided.
5. The location of schools allotted during internship has raised a major concern among Student-Teachers. Some interns are sent to very far areas from the place of their residence and thus giving them less time for preparation which also raises concern with mental well being of student-teachers.

### **SUGGESTIONS AND RECOMMENDATIONS FOR BETTER IMPLEMENTATIONS OF B.ED. INTERNSHIP**

- Coordination between schools and B.Ed. Institutes is a must.
- Orientation regarding internship should be carried out with school teachers so that they get acquainted with the importance of carrying out internship in their respective schools.

- Proper orientation as well as instructions to be provided to Student-Teachers before commencement of Internship so that they do not face any problems in the school.
- Student-Teachers should get acquainted with the skills before they go for Internship. They should be able to deliver their class with the proper usage of skills and techniques so that students do not face any confusion or misunderstanding.
- Schools should be approached in advance with detailed routine of internship and how to proceed. Instructions should be made clear not only with school heads but also with teachers.
- Student-Teachers should meet concern subject teachers well in advance and plan out the lessons to be taught so that they get enough time to prepare their lessons and deliver it systematically during internship. They should be trained and equipped with skills and teaching methods in order to avoid confusion and re-teaching of lessons by subject teachers.
- Student-Teachers should have good command of the language. Often time students do not understand what is being taught in the class.
- MOU between Directorate of School Education (DOSE) and B.Ed. Institutes for smooth functioning of Internship. Also, the number of B.Ed. Institutes are increasing with increased intake capacity of Student-Teachers, it is very difficult to approach selected few schools.

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# **AN ASSESSMENT OF STUDY HABITS AMONG SECONDARY SCHOOL STUDENTS WITH RESPECT TO TYPES OF SCHOOL AND GENDER**

**Emilo Kikon**

## **ABSTRACT**

Study habits are study practices that include the frequency of studying sittings, rehearsal of learned material, review of material, studying in a favourable surroundings and self-testing. Different learners profess different study habits in order to achieve his or her goals in life. Therefore the present study intended to assess the study habits professed by learners of Secondary school, where types of institution and gender was taken into account. Descriptive survey method was used for this study. This study comprised of 100 secondary schools students of both Government and Private schools, where they were selected using stratified random sampling technique. Primary source ie the Study Habit Inventory (1989) developed by M.N Palsane and Anuradha was used to collect the data needed to assess the study habits of students who studied in Secondary schools of Wokha town.

**KEYWORDS :** Study Habits, Assessment, Types of school, Gender, Secondary schools.

## **INTRODUCTION**

Education is considered to be a manifestation of perfection that is existing in men and study habits is the tool manifesting it. Education is a channel towards progression and plays a cardinal role in the development of confidence, personality and career growth in individuals. With the world becoming more competitive much stress is laid on academic achievements of the learners. Therefore, it has become a matter of concern for educationist and psychologists to understand the intellectual and scholastic aspects of individual learners. The success of an individual depends largely upon his study habits therefore individual learner needs to set up an organised routine to promote and adapt to a certain study habit. The art of studying or cultivating good study habits is a life- long process. And for the learners to get accustomed to the advancement of learning one should be ready to modify one's

method of study. Development of good study habits is the highway to the goals of an individual, whatever they maybe.

Grace (2013) maintains that the process of learning is still a little mysterious but studies show that the most effective process for studying involves highly active behaviour over a period of time. In other words, to study effectively, one must read, draw, compare, memorize and test himself over time. The sooner the student starts practicing and developing good study habits, the better chances he will have that he will continue with them. For a child to develop good study habits he must have an organised and daily study routine. Planning a study schedule in advance and ardently sticking to it not only saves time but also relaxes the anxiety level of the learners during test-taking time and examinations.

### **SIGNIFICANCE OF THE STUDY.**

The study titled “An Assessment of Study Habits among Secondary School Students with respect to Types of School and Gender” in Wokha town was taken up as, it will benefit students in understanding the importance of cultivating good study habits in order to yield good results not only in the academic field but also in the growth and development of their overall personality. Learners by forming good study habits will develop in themselves positive qualities like discipline, punctuality and higher thinking abilities which will help them in the long run.

This study will enable parents to see the importance of providing their children with the value of inculcating positive attitude towards maintaining good study habits for the learners to excel in all aspects of life.

### **METHODOLOGY**

Descriptive survey methods was used for this study. By adopting Descriptive survey methods study habits of secondary school students was assessed.

### **STATEMENT OF THE PROBLEM.**

The study was titled “An Assessment of Study Habits among Secondary School Students with respect to types of School and Gender in Wokha town, Nagaland”.



## OBJECTIVES OF THE STUDY.

1. To find out the difference in study habits between Government and Private School students.
2. To find out the difference between boys and girls in relation to their study habits.

## HYPOTHESIS

1. There is no significant difference in study habits of students studying in Government and Private schools
2. There is no significant difference between boys and girls in relation to their study habits

## ANALYSIS AND INTERPRETATION.

Analysis and interpretation was done according to the objectives of the study. The investigator distributed 100 samples out of which 100% of the samples were positively responded. The explanation of the calculation and results found has been presents in the following by framing the hypothesis.

**Hypothesis-1: The objective was to find out the difference in study habits of students studying in government and private schools.**

Table 1. School wise Mean, SD, and t- value of students Study Habits.

School	Number	Mean	SD	Df	t-test
Government	50	48.3	8.94	98	3.84
Private	50	56.4	11.8		

\*significant at .01 and .05 level

From table:1 it is observed that the t-value of Study Habits of Government and Private school students is 3.84 which is significant at(.01 &.05) level with df=98. It indicates that the Mean score of Govt and Private schools differ significantly. Thus, the null hypothesis that there is no significant difference in the mean score of study habits of government and private school students is rejected. It

may therefore be said that the Private school students have significantly higher level of study habits as compared to Government school students.

**Hypothesis 2: The objective was to find out the difference between boys and girls in relation to their study habits.**

Table:2 Gender wise Mean, SD, and t- value of boys and girls in relation to their Study Habits.

Gender	Number	Mean	SD	df	t-test
Male	50	52.4	12.6	98	2.31
Female	50	57.7	10.1		

\*significant at 0.5 level.

From table: 2 it is observed that the t-value of Study Habits between boys and girls is 2.31 which is significant at (0.5) level with  $df=98$ . It indicates that the Mean score of Study Habits between boys and girls differ significantly. Thus, the Null hypothesis that there is no significant difference between boys and girls in relation to their study habits is rejected. It may therefore be said that Female students have significantly higher level of study habits as compared to Male students.

## MAJOR FINDINGS

The major findings of this study revealed the need for Secondary school students to develop study habits as it is seen as a means and ends of learning.

**Study habits of Government and Private schools students of Secondary level :** The study was conducted on the types of school i.e Government and Private school. Government school comprises of 50 students in number and private school comprises of 50 students in the study. It indicated that statistically there is significant difference between government and private school students of secondary level. So, it showed that private school students had better study habits as compared to government school students.

**Study habits of male and female secondary school students :** The total respondent of the study was 100 secondary students comprising of both male and female. It was found that statistically there was significant difference between

mean scores of male and female students of secondary level in relation to their study habits. Which indicated that female students has better study habits than their counterpart.

## CONCLUSION

Learner's learning character is characterized by his study habits. It is any body's guess that good habits and skills will help us to promote efficiency in our tasks. In education, proper study habits and skills entail to proficiency as well as high quality of learning (Dehghani & Soltanalgharaei, 2014). The students cannot be expected to learn everything needed about the subject from their teachers in the classroom alone, it is the combination of both the classroom learning and out of classroom learning that make up students study habits. Crow and Crow (2002) stated that effective study habits include plan place, a definite time table and taking brief of well-organized notes.

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## **INTEGRATING CRITICAL THINKING IN SCIENCE TEACHING AND LEARNING**

**Megosielie Khate & Tiajungla**

### **ABSTRACT**

Developing scientific temper and scientific aptitudes of students are important components of science learning. With the present pedagogical focus on students constructing their knowledge, attempts at integrating critical thinking in science teaching and learning have received a lot of interest. The present study dwells on the integration of critical thinking in science teaching and learning by graduate science teachers in high schools of Nagaland. The effective implementation of integrating critical thinking in science learning needs proactive and educated science teachers and a community of committed learners. The study found that certain components of critical thinking have been practiced to some extent. But there is an urgent need to comprehensively incorporate this regularly in all their classes.

**KEYWORDS** : critical thinking, integrating, critical thinking skills.

### **INTRODUCTION**

The birth of critical thinking traces back 2500 years as a teaching practice and vision of Socrates. This practice called the Socratic Method is marked by probing questions where pupils can justify their claims to knowledge rationally. The Socratic Method focuses on asking deep questions and inquest profoundly into thinking before an idea, opinion, fact, or any form of knowledge is accepted. The word 'Critical', derived from the Greek word 'Kriticos', describes conscious inquiry. Critical thinking is also defined as making reasoned judgments (Beyer,1995). In addition to that, Howie (2011), considered critical thinking as the highest intellectual activity in human interaction which enables people to engage in the process of making meaningful decisions. Thus, critical thinking occurs when one asks a question, reason, analyses, interprets, evaluates, synthesizes information, form arguments, and even solve a problem or even reach a conclusion. Critical thinking is reflected as a life skill in NCF 2005 as this is one of the skills required for dealing with the demands and challenges of everyday life, and the student's

critical thinking skills need to be developed and nurtured. The latest educational policy of the country, NEP 2020, has given so much emphasis on 21st-century skills. These 21st-century skills broadly consist of three main skill sets or 3Ls namely - Learning skills, Literary skills and Life Skills). Learning skills comprise Critical thinking skills, Communication skills, Collaboration skills and Creative thinking skills. The focus on these 21st-century skills in NEP 2020 is because of the necessity to enable an individual to face the challenges of the 21st-century world that is dynamic, accelerating, and creatively progressing. Thinking itself is a skill and everyone possesses the skills to think critically; it is only the extent and the motivation that varies. Therefore, teachers are required to play an important role to accomplish this task and are encouraged to use different kinds of teaching methods for nurturing students' abilities to think critically.

## **LITERATURE REVIEW**

A look at the application of critical thinking in school teaching across different school systems shows varying degrees of observation. Critical thinking activities when applied in science teaching provide the highest level of learning competencies among learners. It also enables the scientific community to reap benefits from the work of inquisitive young minds. Peter (2017) discussed that giving real problems for students to solve has enhanced their technical skills and their critical thinking ability, it also allows active collaboration with their peers and teachers. Students generally enjoy the experience of solving games in class, in the competitive spirit of the age group they wished to outscore their peers (Scott, 2017). Problem-based learning has a significant influence on developing the critical thinking skill of students (April et al,2020). Kelly et al (2014) through their experimental study highlights that the critical thinking competencies of students can be enhanced by providing training on inquiry-based and direct instruction methods. Thomas et al (2021) observed that the professional development of STEM teachers is generally episodic and fragmented and does not afford the time necessary for learning that is rigorous and cumulative. Workshop alone did not result in insignificant differences in teaching, but self-determination growth teachers were more involved in motivating their students, therefore the workshop needed to focus on how to train teachers in this sector. Joe (2000) argued that uncritical critical thinking was hyper-rationalized, reduced to a set of micrological

skills that promotes a form of procedural knowledge. Teachers and students were not encouraged to confront why they tend to think for themselves and they taught a fragmented version of scientific thinking. And that critical thinking is not only confined to gifted students but is an important element of reflective practice.

## RESEARCH QUESTION

1. How do teachers integrate critical thinking into their teaching and learning process?

## METHODOLOGY :

A review of literature that focuses on critical thinking and its implications in the schooling system was meticulously studied to serve as a focal point of the present study. A questionnaire incorporating the parameters of critical thinking was developed on Google form to collect the opinion and experiences of science teachers about the integration of Critical thinking in their teaching and learning process. The samples were collected from Graduate Science teachers from across Nagaland. 61 respondents were selected using the snowball sampling technique and the data collected from the respondents were analyzed using simple percentages.

## ANALYSIS OF DATA

Out of the 61 respondents, there were 39 females and 22 males and 69 percent have completed their B.Ed course. Most of the teachers (41 percent) had 6-10 years of teaching experience.

1	Your knowledge about critical thinking.	Poor	Average	Good	Excellent
		0	23	33	5
2	How have you developed your knowledge about critical thinking abilities? ( <i>multiple selection</i> )	Attending Workshops	Reading Literature	Teacher Training	Others
		30	21	46	17
3	Do you allow internal marks for critical thinking activities?	Yes		No	
		55		6	

**Table 1 : Teachers’ opinion on the internal marking scheme, self-assessment, and source of developing knowledge on critical thinking.**

Data analysis of Table1 shows that 54 percent of the teachers have sound knowledge of critical thinking and teacher training courses have contributed a maximum (75 percent) to the development of their knowledge of critical thinking. The other sources include attending workshops and reading literature. Almost all the teachers responded that they allot internal marks for the critical thinking activities carried out by the students.

**Table 2. Data was generated from the responses to the questionnaire provided.**

Sl. No	Questions	Never	Rarely	Occasionally	Very frequently	Always
		The figure represents the number of respondents.				
1	How often do you use critical questioning in your teaching?	0	2	33	22	4
2	How often do you give assignments which involve data collection?	2	8	46	4	1
3	How often do you facilitate brainstorming activities in your class?	0	2	29	25	5
4	How often do you engage your students to make inferences from activities conducted in the class?	0	5	28	22	6
5	How often do you allow your students to make keen observations of any event/ phenomenon/situation and make a prediction?	0	6	24	23	8
6	How often do you allow your students to communicate	0	0	5	25	30



	freely to share their opinions?					
7	How often do you ask open-ended questions to students, to explore their minds while teaching?	0	0	13	34	14
8	How often do you allow students to try out their ideas in solving a problem?	0	3	22	26	10
9	How often do you use students' ideas and experiences to relate to a concept in science?	1	4	30	16	10
10	How often do you give projects or home assignments which involve problem-solving?	1	5	40	13	2
11	How often do you give brain teasers or puzzles to your students for solving?	1	17	31	10	2
12	How often do you use controversial issues in Science for discussion in class?	3	24	29	4	1
13	How often do you use ICT resources to help students in developing their critical thinking?	0	16	24	17	4

Analysis of **Table 2.** shows that 54 percent of the teachers use critical questioning occasionally and only 7 percent of teachers use it regularly in class.

A larger number of the teachers give assignments involving data collection occasionally and 13 percent rarely give assignments in this form. Brainstorming as an activity is occasionally conducted by 48 percent, 41 percent very frequently, and regularly by 8 percent of the teachers.

About 46 percent of teachers engaged students very frequently to make inferences from the activities conducted in the class and only 10 percent always use this strategy. The skill of observation and prediction was emphasized by 38 percent of teachers very frequently and rarely by 10 percent.

50 percent of the teachers can create a democratic classroom where students are allowed to communicate freely. To facilitate students to explore their minds, 56 percent of the teachers ask open-ended questions occasionally and 23 percent of them prefer to use it regularly.

16 percent of the teachers always allow the students to try out their ideas for problem-solving and the rest of them use it only occasionally. While teaching Science, 49 percent of the teachers occasionally use student's ideas and experiences to relate to the concept they are teaching and 10 percent of them use this method in all their classes.

Only 21 percent of them give projects or assignments involving problem solving consistently and most of them give such tasks only from time to time. Only 16 percent of them give brain teasers or puzzles to students to solve and 28 percent of them hardly involve their students in such activities.

Usage of controversial issues in Science for discussion in class is hardly taken, though 48 percent of them do this occasionally. It has also been observed that 28 percent of the teachers use ICT resources very frequently as a support in developing student's critical thinking ability and 26 percent of them rarely use these resources for this purpose.

## **DISCUSSION**

The analysis of the data gathered about the current status of Integrating Critical thinking in science teaching and learning classes by Graduate science teachers shows that they do have a sound knowledge of critical thinking but the implementation of this knowledge in their class is still very inconsistent. Rather than giving more emphasis on the activities required for developing critical thinking skills, the data shows that the teachers practice these activities very occasionally.

Although sparingly used, the strategies employed by the teachers show that asking open-ended questions and critical questions are the most preferred method, followed by problem-solving and brainstorming activities. These are some important practices that can be efficiently implemented in all science classes.

Engaging students in carrying out observation of events and making predictions and inferences are also other methods used by some teachers. These activities are core components of the scientific method and should be reflected in every teaching and learning process of science.

Most of the teachers also strongly felt that a democratic classroom is necessary to carry out critical thinking activities. Such an environment will enable the students to express their opinions freely and help them to inculcate logical reasoning skills, defending an argument, analyzing ability, etc.

Discussion on controversial issues in Science classes is only occasionally taken up by the teachers. Such activity should be featured more as it serves as an important exercise for students to approach them with a scientific mindset. It will also enable them to think out of the box and come up with effective solutions. Activities like brain teasers and puzzles are very rarely given to students for solving. It should be encouraged more as it allows students to strengthen their mental abilities. Most of the projects and assignments given out to students seemed to be confined to traditional methods whereas they should be tailored more towards data collection and problem-solving. A significant number of teachers have integrated ICT resources in their classes with the view to assist in developing critical thinking among the learners. It was very encouraging to see that almost all the teachers allot marks for critical thinking activities they conduct, which is a significant development in moving forward from confining to the traditional method of evaluation. It can also be noted that a teacher training course is the foremost source in helping a teacher to develop knowledge about critical thinking skills.

## **CONCLUSION**

It is very encouraging to observe that the teachers are well aware of the role of critical thinking and its importance in the holistic development of a student. However, for students to develop their critical thinking abilities, teachers must incorporate more such activities that will enable the students to achieve the desired goal. Although some components of critical thinking are sparingly used by science teachers, more consistent efforts should be given to integrate activities that promote the development of critical thinking.

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# **ENHANCING RESEARCH PRODUCTIVITY THROUGH OPEN EDUCATIONAL RESOURCES: A CRITICAL REVIEW OF OER INITIATIVES IN INDIA**

**K. Sathish Kumar & M. Mahendraprabu**

## **ABSTRACT**

Open Educational Resources (OER) have emerged as a promising means to enhance research productivity in India's higher education landscape. This critical review explores the landscape of OER initiatives in India and their potential impact on research output. Through an extensive examination of recent literature from original published articles on Google Scholar, this study assesses the accessibility, adoption, and effectiveness of OER in fostering research productivity across Indian academic institutions. The review also addresses challenges and identifies opportunities for further advancement. The findings offer valuable insights for policymakers, educators, and researchers seeking to leverage OER to enhance research productivity and foster a research-friendly environment in India.

**KEYWORDS** : Open Educational Resources, OER Initiatives, Research Productivity, Higher Education, Accessibility.

## **INTRODUCTION**

India's higher education sector is rapidly evolving, and in this digital age, Open Educational Resources (OER) has emerged as a potential game-changer. OER, which are freely accessible educational materials, hold the promise of democratizing access to knowledge and fostering collaboration among researchers and educators [1]. This critical review aims to investigate the impact of OER initiatives on research productivity in India. With a focus on original published articles from Google Scholar, the review examines recent literature to understand how OER adoption has influenced research practices and output across various disciplines and academic institutions in the country [2]. The importance of this review lies in its potential to shed light on the opportunities and challenges surrounding OER in India's academic landscape. By critically analysing recent literature, we can identify the strengths and limitations of current OER initiatives and propose measures to optimize their impact on research productivity [3]. The

review also aims to offer evidence-based recommendations to policymakers and institutional leaders to foster a research-friendly environment and promote the effective integration of OER into research practices [4].

### **NOTABLE OER INITIATIVES IN INDIA**

In India, there are several notable initiatives promoting Open Educational Resources (OER), both by the government and non-governmental organizations. Some standard OER initiatives in India are:

- 1) **NPTEL**: NPTEL provides free access to quality content, allowing learners to do online certification courses and receive certificates from IITs [5].
- 2) **SWAYAM**: SWAYAM is a government program aimed at providing access to the best teaching-learning resources for all, including disadvantaged students [6].
- 3) **IGNOU'S E-GYANKOSH**: E-GYANKOSH is an archive of various study materials freely available for all courses run by IGNOU [7].
- 4) **SAKSHAT**: Envisaged as a one-stop education portal, SAKSHAT facilitates lifelong learning for students, teachers, and those seeking knowledge [8].
- 5) **SWAYAM PRABHA**: SWAYAM PRABHA is a group of 32 DTH channels broadcasting high-quality educational programs 24/7 [9].
- 6) **Consortium for Educational Communication (CEC)**: CEC utilizes the power of television and ICT to address the needs of higher education. It offers live lectures and recorded videos on SWAYAM PRABHA and various social media platforms [10].
- 7) **E PG PATHSALA**: E PG PATHSALA is an initiative under NME-ICT by the University Grants Commission (UGC) providing interactive e-content in 70 subjects across all disciplines [11].
- 8) **National Digital Library of India (NDL India)**: Initiated by MHRD, NDL India aims to develop a virtual repository of learning resources with a single-window search facility [12].
- 9) **National Repository of Open Educational Resources (NROER)**: Managed by the Central Institute of Educational Technology, NROER brings together digital resources for all stages of school and teacher education [13].

- 10) **NCERT Online Service:** The National Council of Educational Research and Training (NCERT) offers easy access to NCERT textbooks online for classes I to XII in Hindi, English, and Urdu [14].

## **OTHER NOTABLE OER INITIATIVES**

Some other notable OER initiatives include:

- 1) **Open Learn** (<http://www.open.edu/openlearn>): A platform by Open University (UK) offering freely accessible short courses and educational avenues from regular university programs.
- 2) **OER Impact Map** (<http://oermap.org>): Developed by the OER Research Hub, it provides an overview of OER's global impact with visual representations of positive and negative effects.
- 3) **OERu** (<http://oeru.org>): An educational platform offering university courses, programs, and MOOCs for further studies.
- 4) **UNESCO-COL OER** (<https://www.col.org/programmes/higher-education/unesco-colchairs>): Coordinated by UNESCO and Commonwealth of Learning (CoL) to promote OER and open education for capacity building in research.
- 5) **Carnegie Mellon Open Learning Initiative** (<http://oli.cmu.edu>): Focuses on creating high-quality courses and transforming higher education.
- 6) **Directory of Open Access Journals** (<https://doaj.org/>): An online directory providing access to high-quality, peer-reviewed open-access journals.
- 7) **Community College Consortium for Open Educational Resources** (<https://www.cccoer.org>): Promotes open educational policies, practices, and resources at community and technical colleges.
- 8) **Minnesota Open Textbook Library** (<https://open.umn.edu/opentextbooks>): Offers a growing catalog of free, peer-reviewed, and openly-licensed textbooks.
- 9) **MIT Open Course Ware** (<https://ocw.mit.edu/index.htm>): Provides open access to course materials from MIT.
- 10) **Open Stax** (<https://openstax.org>): Offers free textbooks for college and advanced placement courses.
- 11) **Open Yale Courses** (<https://oyc.yale.edu>): Provides free materials and lectures on various disciplines from Yale University.



- 12) Saylor Academy (<https://www.saylor.org>): Offers free and open online textbooks and courses for learners.
- 13) Tidewater Community College (<https://www.tcc.edu>): Offers zero textbook cost (Z-courses) options to provide cost-effective learning.
- 14) The Open University (<http://www.open.ac.uk/>): Provides high-quality education for career and professional goals.
- 15) Iversity (<https://iversity.org/>): A platform with structured course environments and multimedia instructional materials.
- 16) ALISON (<http://alison.com/>): An interactive global online learning community with high-quality learning materials.
- 17) Open Learning (OL) (<https://www.openlearning.com/>): Focuses on creativity and discovery through education in a learning community.
- 18) Coursera (<https://www.coursera.org/>): Offers online courses from top educational institutions.
- 19) Udacity (<https://www.udacity.com/>): Provides affordable and effective higher education for learners worldwide.
- 20) Future Learn (<https://www.futurelearn.com/>): Offers high-quality learning resources and courses from leading universities and organizations.
- 21) edX (<https://www.edx.org/>): Provides online courses and innovative pedagogy to widen access to education.
- 22) Edu Kart (<http://www.edukart.com/>): An Indian online education company offering distance learning courses for degrees and certificates.

## **LITERATURE REVIEW**

The literature on Open Educational Resources (OER) initiatives in India reveals the potential of these resources to enhance research productivity in the country's academic landscape. OER, which encompasses freely accessible educational materials, has gained traction as a means to address educational challenges and promote knowledge dissemination [15]. Existing studies highlight the emergence of OER platforms and infrastructures in India, supported by government bodies, educational institutions, and non-governmental organizations. The Emergence of OER Initiatives in India: The evolution of OER initiatives in India can be traced back to the early 2000s when digital technologies began revolutionizing the education sector [16]. OER Platforms and Accessibility: This

section explores the different OER platforms and their accessibility in India. It examines how these platforms are structured and the types of resources available, ranging from textbooks and lecture notes to research articles and data sets. The review highlights the significance of easy accessibility and user-friendly interfaces in enhancing research productivity and knowledge dissemination. Impact of OER on Research Productivity: Various studies have investigated the impact of OER on research productivity in India[17]. Quality Assurance and Credibility of OER: Ensuring the quality and credibility of OER is crucial for their effective utilization in research. Faculty Engagement and Institutional Support: Faculty engagement and support from educational institutions play a pivotal role in promoting OER adoption and research productivity [18]. Challenges and Barriers: Common issues include copyright and licensing complexities, lack of awareness and digital literacy among educators and researchers, and concerns about the quality and reliability of OER resources. OER and Inclusivity in Education: OER initiatives in India have demonstrated potential in promoting inclusivity in education and research. Sustainability of OER Initiatives: The sustainability of OER projects is a critical aspect that influences their long-term impact on research productivity. Government Policies and OER Integration: Government policies and initiatives have a significant role in shaping the landscape of OER in India[19].

## **NEED AND SIGNIFICANCE OF THE STUDY**

The study is essential to assess the impact of Open Educational Resources (OER) initiatives on research productivity in India. Investigating the role of OER in enhancing research output and fostering collaboration among researchers can lead to evidence-based decisions to improve academic productivity [20]. The need for a critical review of Open Educational Resources (OER) initiatives in India, focusing on their impact on research productivity, arises from several factors:

- Educational Transformation
- Addressing Knowledge Gaps
- Enhancing Research Output
- Facilitating Collaboration
- Inclusivity and Access
- Policy Implications

## **OBJECTIVES OF THE STUDY**

1. To assess the current status of Open Educational Resources (OER) initiatives in India and their accessibility across various academic institutions.
2. To critically evaluate the impact of OER adoption on research productivity in different disciplines and universities in India.
3. To identify challenges and opportunities in leveraging OER to enhance research output and foster a research-friendly environment in the country.

## **RESEARCH METHODOLOGY**

The research methodology for this critical review involves an extensive search for original published articles from Google Scholar, focusing on OER initiatives in India and their implications for research productivity. The search strategy includes keywords such as "Open Educational Resources," "OER Initiatives in India," "Research Productivity," and "Higher Education." The inclusion criteria comprise articles published within the last five years that specifically examine the impact of OER adoption on research practices and output in Indian academic institutions. Data extraction and analysis of the selected articles are conducted to synthesize key findings and draw meaningful conclusions.

## **RESULT AND DISCUSSION**

The review highlights the growing interest in OER initiatives across Indian academic institutions, with numerous universities and colleges actively promoting and adopting OER platforms. OER adoption has positively influenced research productivity by fostering collaboration, enhancing access to resources, and promoting knowledge dissemination [21]. However, challenges persist, including issues related to quality assurance, faculty readiness, and awareness among stakeholders. The review also identifies opportunities to further enhance OER adoption in research practices, such as creating faculty development programs, establishing clear guidelines for OER integration, and building strong institutional partnerships. Additionally, the study discusses the need for continuous evaluation to assess the long-term impact of OER on research productivity in the Indian higher education system [22].

## **FUTURE DIRECTIONS**

Moving forward, concerted efforts are required to address the identified challenges and maximize the potential benefits of OER in enhancing research productivity in India. Policymakers, institutional leaders, and educators must work collaboratively to develop comprehensive strategies for OER adoption, implementation, and quality assurance. Moreover, fostering a culture of openness and collaboration among researchers, faculty, and students will further strengthen the integration of OER into research practices [23].

## **CONCLUSION**

In conclusion, this critical review offers valuable insights into the potential of Open Educational Resources (OER) initiatives to enhance research productivity in India's higher education landscape. The findings underscore the significance of OER in promoting knowledge sharing, collaboration, and research dissemination. However, addressing the challenges surrounding OER adoption will be essential to unlock its full potential in fostering a research-friendly environment.

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## A STUDY ON THE AWARENESS OF MOOCs AMONG THE HIGHER EDUCATION TEACHERS IN NAGALAND

Limanenla Lkr

### ABSTRACT

We have witnessed massive transformations in the education system with the advancements and immense development. Online learning plays significant role in providing education. With the emergence of MOOCs, access to higher education has widened and it provides the opportunities to learn anytime and anywhere. Learning through online platforms benefits the tutor and the learner as well. With the new possibilities learners can access education from anywhere so, one should be well aware about the emergence of new online platforms, different programmes, online courses, and the innovative measures introduced to provide education and should curb every opportunities that comes on the way. Thus, this study is to examine the awareness of MOOCs among the higher education teachers.

**KEYWORDS** : awareness, MOOCs, higher education teachers

### INTRODUCTION

The world we live in is constantly changing and the application of technology in education has brought immense changes making the world a convenient place. Education through the use of technology develops our skills and knowledge and it also increases the rate of learning. Not only for professionals and teachers but online forum has also become equally important for students as well. With the advancement and development, *there is also rapid increase in the growth of online courses*. And today, online learning provides global learning environment through the use of technology and we are witnessing tremendous change in the teaching and learning process. Hence, technological globalization and increase in the use of technology has lead to the emergence of the concept of Massive Open Online Courses (MOOCs) which are free and allows unlimited participation all around the world via online readings, assessments, materials, video lectures, etc. It can be said that MOOCs promote lifelong learning. Education has become more creative with the passing of time. Hence, it has become important to cope up with the advancements and to adapt with the changes taking place. Teachers should not

be confident and confined in what they know but they should explore, expand and construct ideas to meet the challenges in daily life. They can play important role in introducing MOOCs to the students or they can enroll themselves to develop their skills and to acquire more knowledge.

### **SIGNIFICANCE OF THE STUDY**

MOOCs are relatively new, important for self directed learning and it has been rapidly evolving. It connects the scholars and learners around, giving free access and platform to learn through the use of internet, reaching thousand of learners irrespective of location. It has access to free course materials, supports life-long learning, provides equality of opportunity in education, gives platform for those who desire to boost their professional skills and upgrade their knowledge. MOOCs is helping professionals across the countries and continents to develop their knowledge and skills and so teachers should be well aware about the role of MOOCs, its importance and how it provides platform to have access to free learning. Teachers need to do a significant need of research studies on it.

Thus, the purpose of the study is to let the teachers aware about the awareness of MOOCs and its effectiveness in overall learning and applicability which will enable and empower them with knowledge and precise content they require to work better with higher efficiency levels.

### **OBJECTIVES OF THE STUDY**

1. To find out if there is any significant difference among *the higher education teachers* on the awareness of MOOCs *with regard to* the gender.
2. To find out if there is any significant difference among *the higher education teachers* on the awareness of MOOCs *with regard to* the management.
3. To find out if there is any significant difference among *the higher education teachers* on the awareness of MOOCs *with regard to* the experience.
4. To find out is there any significant difference among *the higher education teachers* on the awareness of MOOCs *with regard to* the marital status.

### **METHODOLOGY**

The present study was undertaken by using quantitative method to find the awareness on MOOCs among the higher education teachers in Kohima Town,



Nagaland. The tool adopted for the study was questionnaire. The tool was used to collect data from 8 institutes of higher education teachers in Kohima town. The sample for the study consisted of randomly selected 80 higher education teachers with 33 males and 47 females.

## DATA ANALYSIS AND INTERPRETATION

The analysis and interpretation of data are presented in the light of the objectives of the study. Following are the hypothesis-wise interpretation of results.

**Hypothesis 1: There is no significant difference between male and female on the awareness of MOOCs among the higher education teachers.**

t-test was used to test the above hypothesis.

**Table 1 shows the significant difference between male and female on the awareness of MOOCs among the higher education teachers.**

Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value
Male	33	7.58	3.298	.574	0.086*
Female	47	7.64	3.068	.447	

**Note:** \* indicates not significant at 0.05 levels.

**INTERPRETATION:** The mean of male is 7.58 and the mean of female is 7.64 which shows that male teachers has slightly less level on awareness of MOOCs than the female teachers. So from the above table it is concluded that there is no significant difference between male and female on the awareness of MOOCs among the higher education teachers since the obtained value is less than the table value for 78 df at 0.05 level of significance. Hence, hypothesis 1 is accepted for the variable 'gender' at 0.05 levels of significance.

**Hypothesis 2: There is no significant difference on the awareness of MOOCs among the higher education teachers in terms of management.**

t-test was used to test the above hypothesis.

**Table 2 shows the significant difference on the awareness of MOOCs among the higher education teachers in terms of management.**

Management	N	Mean	Std. Deviation	Std. Error Mean	t-value
Government	34	7.94	3.533	.606	0.776*
Private	46	7.37	2.839	.419	

**Note:** \* indicates not significant at 0.05 levels.

**INTERPRETATION:** The computed value of ‘t’ for the awareness of MOOCs on higher education teachers is less than the value of ‘t’ for 78 df at 0.05 level of significance. Hence the Hypothesis 2 is accepted for the variable ‘management’ at 0.05 levels of significance. Therefore, we do not reject the hypothesis of the study that “there is no significant difference on the awareness of MOOCs among the higher education teachers in terms of management.”

**Hypothesis 3: There is no significant difference on the awareness of MOOCs in terms of experience among the higher education teachers.**

t-test was used to test the above hypothesis.

**Table 3 represents teaching experience of the higher education teachers in their awareness level of MOOCs.**

Teaching Experience	N	Mean	Std. Deviation	Std. Error Mean	t-value
Below 5 Years	30	7.10	2.845	.519	1.174*
Above 5 Years	50	7.92	3.300	.467	

**Note:** \* indicates not significant at 0.05 levels.

**INTERPRETATION** The calculated ‘t’ value is less than the table value at 0.05 level of significance so the hypothesis is accepted. It is concluded that there is no significant difference on the awareness of MOOCs in terms of experience among the higher education teachers.

**Hypothesis 4: There is no significant difference on the awareness of MOOCs in terms of marital status among the higher education teachers.**

t-test was used to test the above hypothesis.

**Table 4 shows significant difference on the awareness of MOOCs in terms of marital status among the higher education teachers.**

Marital Status	N	Mean	Std. Deviation	Std. Error Mean	t-value
Married	42	7.76	3.075	.474	0.443*
Un Married	38	7.45	3.252	.528	

**Note:** \* indicates not significant at 0.05 levels.

**INTERPRETATION:** The above table 4 reveals that there is no significant difference on the awareness of MOOCs in terms of marital status among the higher education teachers since the calculated value of the above said variable is lesser than the table value at 0.05 level of significance at 78 df. So, we may conclude that the hypothesis there is no significant difference on the awareness of MOOCs in terms of marital status among the higher education teachers is accepted.

## FINDINGS

Following are the findings of the study –

1. There is no significant difference between male and female on the awareness of MOOCs among the higher education teachers.
2. There is no significant difference on the awareness of MOOCs among the higher education teachers in terms of management.
3. There is no significant difference on the awareness of MOOCs in terms of experience among the higher education teachers.
4. There is no significant difference on the awareness of MOOCs in terms of marital status among the higher education teachers.

## CONCLUSION

This study is undertaken to know the awareness of MOOCs among the higher education teachers in Kohima Town, Nagaland. The study reveals that there

is no significant difference on the awareness of MOOCs in terms of gender, management, experiences and marital status among the higher education teachers. Teacher should understand the various principles of learning, motivation, desire to acquire more and should try to bring and adapt to desirable changes to grow professionally. They should always try to create conducive conditions to learn and acquire more which will be helpful for self development. Today, one of the best platforms for delivering the professional development programs in higher education among the teachers are the platforms provided through MOOCs. Learning through online platforms offer a variety of benefits to the learners so it is essential to be aware and upgrade our knowledge to meet the needs and demands of the advancements and challenges.

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## **SELF- EFFICACY OF THE PROSPECTIVE TEACHERS**

**S. Rukmani & Dr. M. Vasimalairaja**

### **ABSTRACT**

This study was conducted on 1747 prospective teachers enrolled in the colleges of education during the 2011-2012 academic year in the four districts of South Tamil Nadu, Tamil Nadu. The self-efficacy of the prospective teachers was measured using the B. Ed. trainee's self-efficacy scale developed and standardized by the study investigator. The results showed that there was no difference in self-efficacy among male and female prospective teachers. It also showed that there was a significant association among the prospective teachers from the districts of Madurai (Madurai, Travancore, Chennai) and Virudhunagar (Vellore, Tuticorin).

**KEY WORDS :** Self-efficacy, prospective teachers.

### **INTRODUCTION**

Empowerment is at the heart of the social cognitive theory developed by Albert Bandura. Bandura's theory focused on the role of observation, social experiences, and mutual determinism in personality development. "Empowerment" refers to a person's belief in their capacity to perform well in a given situation. Bandura describes these beliefs as determining the way people think, act and feel. Empowerment can also influence everything from behavioral states to motivation. A number of teachers and researchers have studied the efficacy beliefs/ attitudes.

Trainee-teacher beliefs and classroom practices have been demonstrated to benefit from the opportunity to express one's beliefs, opinions and attitudes. According to Bandura, a teacher's beliefs in their ability to teach and influence their student's performance are a very powerful indicator of teaching effectiveness. Young argues that the efficacy beliefs of a new teacher are important because (a) their beliefs and attitudes towards teaching may influence their decision-making on how to employ different teaching techniques and methods in the course of their career; and (b) their attitudes and opinions derived from the efficacy beliefs may directly affect the effectiveness of their students. According to Karbenick and Noda, the efficacy beliefs and attitudes of a teacher are significant because they affect the teacher's motivation to interact with their students which can lead to

increased student motivation and higher student performance. A teacher's self efficacy beliefs may include instruction, adaptation of education to individual student's needs, motivation of students, maintaining discipline, cooperation with peers, management, and parents, dealing with current educational change and challenges, adapting various technological innovations and novel pedagogy aspects in classroom situations.

If the teachers education institutions or schools want to change the teaching learning process then the future teachers need to know their skills, capabilities and how effective they are at preparing lesson plans, teaching learning material, classroom administration, teaching, school activities, computing skills and personal efficacy belief. Therefore, the future teachers must be trained in soft skills as well as self-efficacy belief. Therefore, the aim of this study is to know the efficacy skills of the future teachers in preparing lessons, teaching competence and self-effectiveness. This study will be beneficial to the entire teaching community as it will reveal the importance and self-effectivity of the future teachers on the teaching-learning process.

## **BACKGROUND OF THE STUDY**

Sepp (2023), In numerous countries, primary school class teachers have problems regarding music teaching. It has been reported that there is a lack of both confidence and musical skills. However, the question often relates not only to a lack of self-efficacy beliefs but also to the organisation of the studies. This research looks for sources influencing the formation of self-efficacy beliefs through the lens of self-efficacy theory considering music studies and seeks possible solutions to motivate and develop student teachers' interest in teaching music at the primary school level. The research revealed several self-efficacy factors that had a significant influence on student teachers' later motivation for teaching music in the future.

Shah (2023) A key issue for teachers working in public secondary schools in Nepal is their confidence in their capability to complete the tasks associated with their professional activities. With this consideration, a study was carried out to explore the factors contributing to Nepali teachers' self-efficacy. To find out the factors, the study administered the NTSE tool, developed through the e-Delphi

technique. A sample of 390 public school teachers was drawn from a population of 3427 teachers in Kathmandu, Lalitpur, and Bhaktapur districts of Nepal. A cluster sampling technique was used to draw a local government body in each district. The exploratory factor analysis (EFA) was applied using a principal component matrix with varimax rotation. The EFA extraction was further validated by confirmatory factor analysis (CFA). The study found four factors, viz., efficacy in student engagement and efficacy in instructional preparation, which contribute to teachers' self-efficacy in Nepali public schools. The study helps streamline teachers' self-efficacy as a key psychological construct in their professional development opportunities, directly impacting students' academic learning and achievement.

Adalar (2021) This study aims at examining social studies teacher candidates' self-efficacy beliefs for technological pedagogical content knowledge through multiple variables and presenting new perspectives for researchers and practitioners. A causal-comparative research design was adopted for this study. Among non-random sampling methods, convenience sampling was used to select participants. The sample of the study consists of 349, 3rd and 4th year college students (teacher candidates) studying at three state universities in Turkey's Central Anatolia Region in the 2018–2019 academic year. The Technological Pedagogical Content Knowledge (TPACK) scale was used for collecting data in this study. T-test and one-way analysis of variance (ANOVA) was employed to analyze data. According to the obtained results, the social studies teacher candidates' self-efficacy beliefs for technological pedagogical content knowledge can be considered above average. No significant differences were found between participants' self-efficacy beliefs for TPACK and some independent variables such as gender, year in college, GPA score, personal computer ownership, and Instructional Technology and Material Development course score. On the other hand, it was determined that perceived technology competency and the use of content sharing platforms for professional purposes were important predictors for social studies teacher candidates' self-efficacy beliefs about TPACK.

Ramli (2020) The implementation of the mixed-ability classrooms in all secondary schools in Malaysia since 2019 calls for effective teaching strategies. Differentiated instruction is a teaching framework that takes into account the differences amongst students in creating learning opportunities for all. This study

aimed to identify the level of teachers' self-efficacy and its significant influence over the differentiated instruction practices. Data was collected using an online questionnaire from 428 teachers teaching in the east coast zone of Malaysia. Two sets of inventories, namely Teachers' Sense of Efficacy Scale (TSES) and the differentiated instruction practice inventories, were adapted and modified to suit the purpose of this study. Findings showed that teachers' self-efficacy level is Excellent. The results of this study also proved the existence of a significant positive relationship between teachers' self-efficacy and teachers' practice of differentiated instruction, which in turn proved that teachers' self-efficacy has a major influence and can predict teachers' practice of differentiated instruction in the classroom. Therefore, it is hoped that the Ministry of Education Malaysia, the State Education Departments, the District Education Offices, as well as the schools can create a conducive climate for learning in schools, apart from providing practical and continuous professional development training to support teachers' self-efficacy towards further developing the practice of differentiated instruction in the classroom.

## **OBJECTIVES OF THE STUDY**

### **TO FIND OUT THE LEVEL OF SELF EFFICACY OF THE MALE AND FEMALE PROSPECTIVE TEACHERS.**

1. To find out whether there is any significant difference between male and female prospective teachers in their self-efficacy.
2. To find out whether there is any significant difference between rural and urban prospective teachers and their self-efficacy.
3. To find out whether there is any significant difference among the prospective teachers from Madurai, Tirunelveli, Virudhunagar and Tuticorin districts in their self-efficacy.

## **HYPOTHESES OF THE STUDY**

1. There is no significant difference between male and female prospective teachers in their self-efficacy.
2. There is no significant difference between rural and urban prospective teachers and their self-efficacy.



3. There is no significant difference among the prospective teachers from Madurai, Tirunelveli, Virudhunagar and Tuticorin prospective teachers.

## METHOD

The investigator has used the survey method for obtaining the data for this study.

## POPULATION AND SAMPLE

The population for the present study consisted of the prospective teachers studied in the Colleges of Education during the academic year 2011-2012 in four southern districts affiliated to Tamil Nadu Teachers Education University, Chennai. 1747 B. Ed. students from 40 Colleges of Education in Madurai, Tirunelveli, Virudhunagar and Tuticorin districts were selected by the stratified random sampling technique.

## TOOL USED IN THE PRESENT STUDY

The investigator used the Self-efficacy Scale for the B. Ed., Trainees developed and standardized by the investigator and Annaraja (2010).

## OBSERVATIONS

For analyzing the data, percentage analysis, 't'-test and ANOVA were used.

## LEVEL OF SELF-EFFICACY OF MALE AND FEMALE PROSPECTIVE TEACHERS

Self efficacy and its dimensions	Low				Moderate				High			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Efficacy in writing lesson plan	97	13.8 8	12 9	12.3 1	52 9	75.6 8	78 4	74.8 1	7 3	10.4 4	13 5	12.8 8
Efficacy in preparing and using TLM	103	14.7 4	14 8	14.1 2	51 2	73.2 5	76 0	72.5 2	8 4	12.0 2	14 0	13.3 6

Efficacy in teaching	97	13.88	13.5	12.88	53.6	76.68	81.7	77.96	6.6	9.44	96	9.16
Efficacy in classroom management	94	13.45	11.7	11.16	51.5	73.68	80.6	76.91	9.0	12.88	12.5	11.93
Efficacy in Computer Skills	102	14.59	11.4	13.74	52.0	74.39	75.3	71.85	7.7	11.02	15.1	14.41
Efficacy in organizing school activities	83	11.87	13.3	12.69	53.4	76.39	80.1	76.43	8.2	11.73	11.4	10.88
Personal self-efficacy beliefs	91	13.02	11.5	10.97	53.8	76.97	82.4	78.63	7.0	10.01	10.9	10.40
Self-efficacy	90	12.88	11.5	10.97	53.8	76.97	83.7	79.87	7.1	10.16	96	9.16

(Low = below 40; Moderate = between 40-60; High = above 60 from the 'T' scores)

It is inferred from the above table that 13.88% of male prospective teachers have low, 75.68% have moderate and 10.44% of them have level of efficacy in writing lesson plan, whereas 12.31% of female prospective teachers have low, 74.81% have moderate and 12.88% of them have high level of efficacy in writing lesson plan.

14.74% of male prospective teachers have low, 73.25% have moderate and 12.02% of them have high level of efficacy in preparing and using TLM, whereas 14.12% of female prospective teachers have low, 72.52% have moderate and 13.36% of them have high level of efficacy in preparing and using TLM.

13.88% of male prospective teachers have low, 76.68% have moderate and 9.44% of them have high level of efficacy in teaching, whereas 12.88% of female

prospective teachers have low, 77.96% have moderate and 9.16% of them have high level of efficacy in teaching.

13.45% of male prospective teachers have low, 73.68% have moderate and 12.88% of them have high level of efficacy in classroom management, whereas 11.16% of female prospective teachers have low, 76.91% have moderate and 11.93% of them have high level of efficacy in classroom management.

14.59% of male prospective teachers have low, 74.39% have moderate and 11.02% of them have high level of efficacy in computer skills, whereas 13.74% of female prospective teachers have low, 71.85% have moderate and 14.41% have high level of efficacy in computer skills.

11.87% of male prospective teachers have low, 76.39% have moderate and 11.73% of them have high level of efficacy in organizing school activities, whereas 12.69% of female prospective teachers have low, 76.43% have moderate and 10.88% of them have high level of efficacy in organizing school activities.

13.02% of male prospective teachers have low, 76.97% have moderate and 10.01% of them have high level of personal self-efficacy beliefs, whereas 10.97% of female prospective teachers have low, 78.63% have moderate and 10.40% of them have high level of personal self-efficacy beliefs.

12.88% of male prospective teachers have low, 76.97% have moderate and 10.16% of them have high level of self-efficacy, whereas 10.97% of female prospective teachers have low, 79.87% have moderate and 9.16% of them have high level of self-efficacy

**Table: 2 Difference Between Male and Female Prospective Teachers in Their Self-Efficacy**

Self-efficacy and its dimensions	Male		Female		Calculated 't' value	Remarks
	Mean	S.D	Mean	S.D		
Efficacy in writing lesson plan	39.22	8.384	39.87	8.062	1.630	NS
Efficacy in preparing & using TLM	38.85	7.607	39.14	7.557	0.783	NS

Efficacy in Teaching	57.34	11.174	57.99	10.568	1.214	NS
Efficacy in Classroom Management	41.52	8.244	42.06	7.798	1.362	NS
Efficacy in Computer Skills	38.98	8.333	38.84	7.914	0.336	NS
Efficacy in Organizing School Activities	40.53	7.702	40.88	7.300	0.934	NS
Personal Self-efficacy beliefs	40.69	7.623	41.09	7.350	1.099	NS
Self- Efficacy	297.13	50.600	299.78	48.660	1.090	NS

(At 5% level of significance, the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference between male and female prospective teachers in their efficacy in writing lesson plan, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy beliefs and self-efficacy.

**Table: 3 Difference Between Rural and Urban Prospective Teachers in Their Self-Efficacy**

Self-efficacy and its dimensions	Male		Female		Calculated 't' value	Remarks
	Mean	S.D	Mean	S.D		
Efficacy in writing lesson plan	39.61	8.588	39.60	7.684	0.027	NS
Efficacy in preparing & using TLM	39.05	7.977	38.99	7.048	0.152	NS
Efficacy in Teaching	57.83	11.496	57.60	9.906	0.443	NS
Efficacy in Classroom Management	41.85	8.492	41.83	7.298	0.056	NS
Efficacy in Computer Skills	39.21	8.288	38.51	7.806	1.818	NS
Efficacy in Organizing	40.77	7.897	40.69	6.886	0.217	NS

School Activities						
Personal Self-efficacy beliefs	41.10	8.001	40.72	6.724	1.084	NS
Self- Efficacy	299.43	53.196	297.83	44.332	0.685	NS

(At 5% level of significance, the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference between rural and urban prospective teachers in their efficacy in writing lesson plan, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy beliefs and self-efficacy.

**Table:4 Difference Among the Prospective Teachers from Madura, Virudhunagar, Thirunelveli and Tuticorin Districts in their Self-Efficacy**

Self-efficacy and its dimensions	Sources of Variation	SS	Df	MS	Calculated 'F' Value	Remarks
Efficacy in writing lesson plan	Between groups	2573.139	3	857.713	13.031	S
	Within groups	114722.399	1743	65.819		
Efficacy in preparing & using TLM	Between groups	2375.501	3	791.834	14.106	S
	Within groups	97839.391	1743	56.133		
Efficacy in Teaching	Between groups	7127.312	3	2375.771	21.006	S
	Within groups	197133.623	1743	113.100		
Efficacy in Classroom Management	Between groups	4235.563	3	1411.854	22.999	S
	Within groups	106996.708	1743	61.387		

Efficacy in Computer Skills	Between groups	1232.866	3	410.955	6.349	S
	Within groups	112824.998	1743	64.730		
Efficacy in Organizing School Activities	Between groups	2659.240	3	886.413	16.335	S
	Within groups	94583.164	1743	54.265		
Personal Self-efficacy beliefs	Between groups	2409.982	3	803.327	14.772	S
	Within groups	94785.498	1743	54.381		
Self- Efficacy	Between groups	13829.498	3	46309.833	19.543	S
	Within groups	4130227.067	1743	2369.608		

(At 5% level of significance, for (3,1743) df, the table value of 'F' is 2.60)

The above table reveals that there is significant difference among the prospective teachers from Madurai, Virudhunagar, Thirunelveli and Tuticoring districts in their efficacy in writing lesson plan, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy beliefs and self-efficacy. While comparing the Mean scores of the prospective teachers from Madurai, Virudhunagar, Tirunelveli and Tuticorin districts, the prospective teachers from Virudhunagar district are better than the prospective teachers in their efficacy in writing lesson plan, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy beliefs and self-efficacy.

- There is no significant difference between male and female prospective teachers in their self-efficacy.
- There is no significant difference between rural and urban prospective teachers and their self-efficacy.

- There is no significant difference among the prospective teachers from Madurai, Tirunelveli, Virudhunagar and Tuticorin prospective teachers.

## **INTERPRETATIONS**

### **The findings and interpretations are as follows:**

1. Most prospective teachers, both male and female, have a moderate level of efficacy in their ability to write lesson plans, to prepare and use lesson plan materials (TLM), to teach, to manage the classroom, to use computer skills, to organize school activities, to believe in personal self-efficacy beliefs, and to feel good about themselves.
2. There is no difference between men and women in terms of self-efficacy when it comes to writing lesson plans, preparing and using the Learning Transformation Model (TLM), teaching, classroom leadership, computer skills, school activities, personal belief in self-efficacy, self-efficacy and self-esteem. This may be because both men and women are equally motivated and possess better efficacy beliefs.
3. There is no significant difference between rural and urban future teachers and their performance in preparing lesson plans, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy beliefs and self-efficacy. This may be due to the fact that both rural and urban teachers are qualified and efficient.
4. There is no significant difference between the prospective teachers of Madurai, Tirunelveli, Virudhunagar and Tuticorin districts in their effectiveness in planning lessons, preparing and using TLM, teaching, classroom management, computer skills, organizing school activities, personal self-efficacy, beliefs and self-efficacy. Prospective teachers from Virudhunagar district are better than prospective teachers from Madurai, Tirunelveli and Tuticoring districts in terms of self-efficacy and all its dimensions.

## **CONCLUSION**

It can be concluded from the above that the prospective teachers are self-efficacious. Although there is no significant difference in the self-efficacy among the prospective teachers in terms of gender and location of the college. However,

there is a considerable difference between the prospective teachers from the Madurai district and the prospective teachers from Virudhunagar district, as well as between the prospective teachers in Tamil Nadu districts such as Tuticorin and Co. Measuring self-efficacy with the right tools may help in gauging the impact of teacher education initiatives aimed at better preparing the graduates for the use of technology.

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## **INNOVATIONS IN TEACHER EDUCATION FOR FUTURE SOCIETY IN INDIA-NEP 2020**

**Dr. Ganta Suman & Dr. Yejarla Gabriyelu**

### **ABSTRACT**

This Article discussing about the innovations in teacher education for future society in India Teacher education system is an important vehicle to improve the quality of school education. The revitalization and strengthening of the teacher education system is a powerful means for the up liftment of educational standards in the country. There are many issues that need urgent attention for improving the quality of teacher education programme. One of them is the need of innovations in teacher education programme. Innovativeness means the ability to think beyond the boundaries and create something which is different from that which already exists. Without innovations, no progress is possible. Teachers have to be innovative and their grooming has to start from their training institutions.

Today there are new expectations from teachers as they are future leaders to ensure suitable education. The main purpose of this paper is to indicate main changes that has incurred in teacher education in India and also provide as overview of trends, reforms and innovations in teacher education. It also discusses the need of teacher education programme to be innovative and various practices that can be included. It has been recognized that teacher education programme should be structured and modified in a way that enables them to respond dynamically to the new problems and challenges in the field of education, then only teacher can help in national development.

**KEY WORDS :** Innovations, Teacher Education, Challenges

“The vision of NEP 2020 is to bring in reforms in the existing teacher education structure and practices by moving it into the university system”.

### **MEANING OF INNOVATIVE PRACTICES**

Etymologically the word ‘Innovation’ is derived from Latin word ‘Innovate’, which means ‘to change something in to something new’. It is a promotion of new ideas and practices in education and tanning. Over the years

there have been many changes in the way education is designed and delivered in parts of the world. Innovation in education encourages teachers and students to explore research and use all the tools to uncover something new. It involves a difficult way of looking at problems and solving them. Innovative teaching is where good teachers are inventive and creative-where they continue to discover and devise new methods and content to ensure that students always get the best learning experiences.

## **INNOVATION IN TEACHER EDUCATION**

Education is the foundation of our economy. What and how we learn in school determines that what we will become as individuals and our success throughout our life. In today's world, innovation, economy and education becomes even more important for developing the next generation of innovators creative thinkers. Innovation should be done in each and every aspect of teacher education, like methodology, curriculum, research and evaluation. Many countries are using different kinds of innovations, such as school clusters, fields based trainings, school self review and development, distance learning methods and visiting advisors.

## **SOME INNOVATIVE PRACTICES IN TEACHER EDUCATION**

Following are some of the innovative ideas thus need to be focused:

### **a. Team Teaching**

Team teaching involves a group of instructors working purposefully, regularly and cooperatively to help a group of students of any age learn. Teachers together set goal for a course, design a syllabus, prepare individual lesson plans, teach students and evaluate the results. They share insights, argue with one another, perhaps even challenge students to decide which approach is better. The team-teaching approach allows for more interaction between teachers and students. Each member of a team responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement.

### **b. Reflecting Teaching**

Reflecting teaching is a self-assessment of teaching, wherein an instructor examines their pedagogy, articulates reasons and strengths for their

strategies, and identifies areas for revision or improvement. Reflecting teaching operates as an umbrella term denoting a variety of practices, including teaching inventories and observation protocols, self-assessment and consideration of student evaluation. It is a natural process that facilitates the development of future action from the contemplation of past and current behavior. When teaching reflectively, instructors think critically about their teaching and problem-solve for solutions to recurring issues, rather than relying on unchanging, established personal norms.

**c. Constructivism**

Constructivism is basically a theory, based on observation and scientific study about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. When we encounter something new, we have to reconcile it with our previous ideas and experiences. Constructivist learning is based on student's active participation in problem solving and critical thinking regarding a learning activity. The teacher is a facilitator who guides the student's critical thinking, analysis and synthesis abilities throughout the learning process.

**d. Blended learning**

Blended learning is an approach to education that combines online education materials and opportunities for interaction online with traditional place-based classroom methods. It requires the physical presence of both teacher and student control over time, place, path. Blended learning is often also referred to as 'hybrid' learning, and can take on a variety of forms in online education environments. While some organizations may only use blended learning technique on rare occasions, others might utilize it as a primary teaching method within their curriculum. Use of the web in such settings provides many affordances for the teacher and students in the form of communication channels, information sources and management tools. It is projected that blended learning will enrich students' learning experience; at the same time it also demands that the teachers should be trained as online facilitators.

**e. Soft Skills**

Soft skills are character traits and interpersonal skills that characterize a person's relationship with other people. In the work place, soft skills are considered to be a complement to hard skills, which refer to a person's knowledge and occupational skills. Sociologist may use the term soft skills to describe a person's emotional intelligence quotient (EQ) as opposed to intelligence quotient (IQ). It includes attributes and personality traits that help people interact with others and succeed in the work place. Soft skills are mostly related to teacher education program, thus the curriculum of teacher education could add to the holistic development of human capital that can nurture economic, social and personal development. Installing the soft skills in the curriculum of teacher education is the need of the profession for it to be successful.

**f. Information Communication Technology (ICT)**

ICTs have become the most basic building block of modern industrial society in a very short time. Mastering information technology, understanding basic skills and concept of ICT are now highly regarded by many countries. ICT has been used at amazing rate for instruction among teachers.

**RESISTING FACTORS IN INNOVATION**

- 1) Although there are so many innovative practices existing in Teacher Education Programme in India, but still there are some resisting factors in our education system which prevents the teacher education institution from being innovative and they are
- 2) Lack of Physical facilities and Funds - Majority of colleges suffer from lack of facilities in terms of space, equipment and personnel. Consequently, they have not been able to adopt innovations. For want of these facilities, many creative ideas are shelved.
- 3) Lack of Diffusion of Innovations among teacher educators - Most of the teacher education institutions is poor and indifferent towards the professional growth of their teacher educators. Many of the teacher educators are ignorant of the new trends in their area of studies due to lack of diffusion of new ideas among them.

- 4) Lack of Service - Due to administrative difficulties, teacher educators are not able to try, adopt and maintain innovations in teacher education institution. For any new experimentation, facilities are not usually provided by the administrators.
- 5) Lack of Support - It is unfortunate that teacher educators have not been able to adopt innovations due to noncooperation of practicing schools. The schools are not always willing to extend their facilities to the teacher educators for trying out new ideas because they do not want any disturbances in their daily routine.
- 6) Rigid framework - It is found that the rigid system of syllabus framing and theory respectively are responsible for the continuance of the traditional practices in teacher education Programme. The present examination system under a rigid framework is a big stumbling block in the process of innovation.
- 7) Lack of Expertise of the staff - Majority of secondary teacher education institutions are manned by teacher educators who have not been exposed to the functioning of institutions inside or outside the country. Moreover, it is found that due to lack of expertise of the staff members, innovations have not been diffused in the training institution.
- 8) Lack of Research Orientation - A vast majority of teacher educators have not yet developed research mindedness. Whatever Programme and practices have been adopted in the training institutions, they have been adopted on commonsense basis not on research findings.
- 9) Interpersonal Relationship Crisis - Teacher educators feel that there is a lack of cooperation among members of the staff. There are professional rivalries among co workers and there is no initiative from teacher educators for creative works. It appears that lack of interpersonal relationship is yet another factor preventing the spread of innovation in the training institutions.
- 10) Decision making by external agencies - Teacher educators simply follow the decisions taken outside by the university and government authorities for the adoption of innovations in their teacher training institutions. Teacher educators lose initiative and desire to venture innovation even in

the areas which fall within their purview such as methods of teaching, supervision and guidance to student teachers.

## SUGGESTIONS

The above observations clearly indicate that teacher education programme at secondary level needs to be examined critically in terms of its innovativeness. Here are some suggestions which can be used to overcome these problems-

- ❖ Identification of the innovative research could be done if all the Departments of Education Countrywide contribute in this area. They may periodically produce the Research Abstracts of the Studies conducted in their respective Departments, which may be made available on the World Wide Web.
- ❖ Every Teacher Educator may be given Unique Identification Number. It will facilitate Manpower Planning in Teacher Education.
- ❖ There should be networking amongst all the Teacher Education Institutions to learn from the innovative practices of each other.
- ❖ Efforts should be made to realize holistic
- ❖ Teacher Education by integrating various skills, such as, microteaching, info-savvy, techno-pedagogic, life skills in the various Teacher Education Programs. Along with cognitive development there should be adequate focus on emotional maturity, psycho-motor development, health and environment, and inter-disciplinary development.
- ❖ It is imperative to strengthen Vocational Teacher Education in almost all the domains of Vocational Education, such as, agriculture, horticulture, sericulture, servicing of the electric and electronic appliances. Innovative approaches need to be evolved.
- ❖ Physical facilities and funds should be adequately provided to the institutions by the government, local bodies and organizations.
- ❖ The internship model of practice teaching should be adopted. As some private universities such as Institute of Education and Research in Manglayatan University, Aligarh, G.E.A.R. (Gifted Education and Research) Innovative B.Ed. College, Bangalore, Prince Institute of Innovative Technology, Greater Noida etc. have already adopted. In the

same way, government universities should include it in their teacher training programme.

- ❖ The conventional system of a few demonstration lessons given by a few teacher educators at the beginning of the practice teaching may be replaced by display of some video recorded good lessons in each subject delivered by expert teacher educators, teachers and teacher trainees.
- ❖ Relevant methods of instruction such as tutorial, discussion seminar, team teaching and interactive teaching learning should be adopted.
- ❖ More co-curricular activities such as physical education, social services, tree plantation, and formation of eco club should be organized.
- ❖ Modern technological gadgets like computer, video, mass media, OHP should be used at the time of instruction.
- ❖ Counselling and follow up programs should be initiated and made effective.
- ❖ In service and extension services should also be organized frequently.
- ❖ Teaching staff should be given adequate representation in the management.
- ❖ The teacher educators should be made mobile so that they can see their professional world outside their institutions.
- ❖ The service and support from practicing schools, administrators, students-teachers, guardians and community should be encouraging.
- ❖ Teacher educators shall be given proper incentives for the professional growth.
- ❖ Publication and subscription to professional journals by the institutions should be encouraged.
- ❖ Research wings in the university departments and selected government colleges should be started.
- ❖ A healthy relation among teaching staff would evolve new procedures and move towards new goals.
- ❖ The management and administrators should be watchful in maintaining the health of the institutions so as to make them innovative and progressive.

## CONCLUSION

To meet the challenges of the new millennium, teacher education in India needs a tremendous change. The teacher educators need intensive training in various aspects related to new innovations. The above stated problems are

challenging and strategies to overcome these problems are the need of the hour. Therefore NCTE, SCERT/SIE and university department of education should take immediate action for making education system innovative. There is nothing to get disheartened. Indian Education is a state of flux. In India, teacher education is at new stake as far as new policies are concerned. Teacher education needs to orient itself to face new challenges. However college of Teacher Education and IASEs have been given the responsibility of initiating innovations in teacher education at secondary level. NCTE has also various steps to bring quality in teacher education. To meet the challenges of new millennium various attempts have been done through ICT mediated constructivist approach. Hence, attention should be given to such innovative methods and new ideologies and should be incorporated in teacher development programmes.

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## **THE ROLE OF SOCIAL MEDIA IN THE FLIPPED CLASSROOM**

**P. Gaayathri & Dr. A. Catherin Jayanthi**

### **ABSTRACT**

Social media can be a powerful tool in the flipped classroom. It can be used to provide personalized instruction, create a sense of community, and extend the learning process beyond the physical boundaries of the classroom. Instructors can use social media to post lecture materials, create discussion forums, and provide real-time feedback on student progress. Students can use social media to collaborate on projects, discuss course topics, and ask questions of the instructor and each other. Social media can be used as an effective tool for engaging students, increasing student participation, and improving learning outcomes. A normative survey method was employed for this study. A total of 200 high-school students participated in this study. The researchers employed Mean, Standard deviation and 't' test to analyse the data obtained. The study found that high school students level on role of social media is high. The study also found that the Government and Management, urban and rural students are having similar level in role of social media towards Flipped classroom. Male and Female students are significantly difference in the role of social media towards flipped classroom.

**KEYWORDS :** Social Media, Flipped Classroom, High School students.

### **INTRODUCTION**

Social media can be a valuable tool in education, as it can provide students with access to a wide range of resources, help promote collaboration between students and teachers, and encourage engagement in learning. Through the use of social media, students can find resources and materials that are relevant to their studies, connect with peers to discuss topics and ask questions, and engage in online learning activities such as online forums and webinars. Furthermore, teachers can use social media to post assignments, share resources, and provide feedback to students in a timely manner. Social media can also be used to extend the reach of education beyond the traditional classroom and open up new opportunities for learning.

Active classroom technologies are tools and systems which are used to engage students and enhance the learning experience. Examples of active classroom technologies include interactive whiteboards, student response systems, electronic polling, online collaboration tools, and virtual reality simulations. These technologies allow teachers and students to interact with multimedia content, create and share digital resources, and collaborate on projects in real-time. They also provide students with the opportunity to take an active role in their own learning, enabling them to become more engaged and empowered in the classroom. The flipped classroom is a learning model where students watch lectures or read materials outside of class and then use class time for activities, such as problem-solving, projects, and discussions. This allows students to learn from the lecture materials at home and use class time for activities that require more teacher interaction and guidance. This can be particularly beneficial for high school students, as it allows them to receive more individualized instruction and feedback from their teacher in class, and they can use their home time for taking notes, researching, or doing other activities that require more solitary work. Additionally, the flipped classroom model can help to improve student engagement by providing them with more active learning opportunities. This can help to foster critical thinking and problem-solving skills, and it can also help to keep students motivated by giving them an opportunity to have their work seen and discussed.

Social media can be a powerful tool for supporting the flipped classroom. It can help to make learning more engaging, collaborative, and personalized. Here are some specific examples of how social media can be used in the flipped classroom:

- YouTube: Teachers can create videos that explain complex concepts or that provide tutorials on how to solve problems.
- Twitter: Teachers can use Twitter to share links to resources, ask questions, and start discussions.
- Facebook: Teachers can create groups for students to collaborate on projects or to ask questions.
- Instagram: Teachers can use Instagram to share photos and videos of student work.

- Pinterest: Teachers can create boards to collect resources and ideas.

The specific social media platforms that are used will depend on the needs of the students and the teacher. However, all of these platforms have the potential to make the flipped classroom more effective.

## **NEED AND SIGNIFICANCE OF THE STUDY**

Flipped classrooms have been gaining popularity in recent years among high school students due to their ability to engage students in a more meaningful, interactive, and personalized learning experience. A flipped classroom is a teaching method where students watch lectures and complete assignments outside of class, and use class time for discussion and problem-solving activities. This approach encourages students to take ownership of their learning, as they are more actively engaged in the material. Social media is becoming increasingly important in the field of education. It offers an expansive platform for teachers, students, and parents to connect, communicate, and collaborate more effectively. It provides learners with an opportunity to access resources, share ideas, and stay up to date with the latest advancements in their field of study. It is also a great way for teachers and students to network and build relationships. The use of social media in education can also help to foster innovation and creativity. Students can use social media to share ideas, explore topics, and collaborate on projects in the flipped Classroom.

## **OBJECTIVES**

1. To find the level in the role of social media towards Flipped Classroom.
2. To find out the significant difference in social media towards flipped classroom among high school students with respect to Gender, type of School, Locality.

## **HYPOTHESIS**

1. There is no significant difference exist on the role of social media towards flipped classroom with respect to their Gender.
2. There is no significant difference exist on the role of social media towards flipped classroom with respect to their type of their school.

3. There is no significant difference exist on the role of social media towards flipped classroom with respect to their Locality.

## METHODOLOGY

The Researcher employed normative survey method. This study also measures the level of high school students towards role of social media towards flipped classroom.

## SAMPLE

The investigator had selected the sample of about two hundred high school students through random samples are taken from the schools in Thiruvallur District.

## TOOL

The investigator constructed the tool for collecting the data for the students use social media towards Flipped Classroom. It consists value of coefficient of the reliability test is 0.82 found to be highly reliable.

## STATISTICAL TECHNIQUES USED

The statistical techniques used by the investigator so as to carry out the present investigation are Mean, Standard deviation and 't' test.

## DATA ANALYSIS AND INTERPRETATION

The Statistical techniques were applied and data is analysed and the following results were obtained as can be seen in the tables given below.

### Hypothesis 1

**Table 1: Level of high school students towards role of social media in total.**

S.No.	Variable		N	Mean	S.D.
1.	Total		200	74.24	4.26
2.	Gender	Male	106	72.18	4.24
		Female	94	73.69	4.87
3.	Type of the	Government	118	64.21	5.11

	school	Management	82	63.81	4.19
4.	Locality of the school	Urban	119	74.29	4.29
		Rural	81	76.39	5.21

Table 1 shows, it is obtained that maximum and minimum mean and standard deviation values of the high school students towards role of social media in total sample were 74.24 and 4.26. It shows that the level of high school students towards role of social media is high.

### Hypothesis 2

**Table 2: Level of high school students towards role of social media with respect to Gender**

Variable	GENDER	N	Mean	Std. Deviation	't' value	Remarks not significant at 5% level
Flipped Classroom	Male	106	72.18	4.24	4.89	S
	Femle	94	73.69	4.87		

Table 2 shows, it has been observed that the calculated 't' value (4.89) is lesser than the table value(1.96) at 5% level of significance. Thus, there is significant difference exist in the mean scores of high school students towards role of social media with respect to gender. Hence above framed null hypothesis is rejected.

### Hypothesis 3

**Table 3: Level of high school students towards role of social media with respect to Type of School.**

Variable	Type of School	N	Mean	Std. Deviation	't' value	Remarks not significant at 5% level
Flipped Classroom	Government	118	64.21	5.11	0.84	NS
	Management	82	63.81	4.19		

Table 3 shows, it has been observed that the calculated 't' value (0.84) is lesser than the table value (1.96) at 5% level of significance. Thus, there is no significant difference exist in the mean scores of high school students towards role of social media with respect to type of school. Hence above framed null hypothesis is accepted.

#### Hypothesis 4

**Table 4: Level of high school students towards role of social media with respect to Locality of the School.**

Variable	Localityof theSchool	N	Mean	Std. Deviation	't' value	Remarks not significant at 5% level
Flipped Classroom	Urban	119	74.29	4.29	1.39	NS
	Rural	81	76.39	5.21		

Table 4 shows, It has been observed that the calculated 't' value (1.39) is lesser than the table value (1.96) at 5% level of significance. Thus, there is no significant difference exist in the mean scores of high school students towards role of social media with respect to Locality of school. Hence above framed null hypothesis is accepted.

#### RESULT AND DISCUSSION

- The male and female students significant difference in there mean scores of high school students towards role of social media.
- Based on type of the school, there is no significant difference exist between the students in the mean scores of role of social media.
- There is no significant difference exist between urban and rural students in their mean scores of high school students towards role of social media.

#### CONCLUSION

From the research findings it is found that high school students level on role of social media is high. The study also found that the Government and Management, urban and rural students are having similar level in role of social

media towards Flipped classroom. Male and Female students are significantly difference in the role of social media towards flipped classroom.

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## **EFFECTIVENESS OF E-LEARNING IN TEACHING AT HIGH SCHOOL LEVEL IN SIVAGANGA DISTRICT**

**Dr. S. Pazhanimurugan**

### **ABSTRACT**

Educational organizations to see advantages in making their programs accessible via a range of distributed locations, including on campus, home and other community learning or resource centers. Despite this level of interest in e-learning, it is not without constraints and limitations. The fundamental obstacle to the growth of e-learning is lack of access to the necessary technology infrastructure, for without it there can be no e-learning. Poor or insufficient technology infrastructure is just as bad, as it can lead to unsavory experiences that can cause more damage than good to teachers, students and the learning experience. While the costs of the hardware and software are falling, often there are other costs that have often not been factored into the deployment of e-learning ventures. The most important of these include the costs of infrastructure support and its maintenance, and appropriate training of staff to enable them to make the most of the technology. The high school stage is a very important stage, as it forms the feeder stage for higher education, both academic and technical. In this stage the public examination are introduced and specialization begins. English is one of the subjects in the high school level. In this stage, students face so many problems in learning Teaching. So, the investigator has decided to take up the research study on the effectiveness of e-learning in teaching at high school level.

**KEY TERMS:** E-learning in teaching

### **INTRODUCTION**

Language is the ‘species-specific’ and ‘species-uniform’ possession of human beings. Language is arbitrary and ubiquitous. It is present everywhere in our thoughts and dreams, prayers and meditations, relations and communications. In real sense knowing a language is a key part of being a human, a near universal achievement in our species, yet unknown, in its full-blown form, in any other species. Without language, our social interaction would be grossly impoverished and cooperative endeavors would be a thousand times more difficult. Without

language the transmission of information and the acquisition of knowledge, would be enormously impaired. Without language there would be no science and culture. Language is at the heart of and essential for, a huge range of human activities and achievements (Reisberg Daniel, 1997).

## **STATEMENT OF THE PROBLEM**

### **“EFFECTIVENESS OF E-LEARNING IN TEACHING AT HIGH SCHOOL LEVEL IN SIVAGANGA DISTRICT”**

## **REVIEW OF LITERATURE**

**H.M.Solanki, (2017)Topic:** Development and Effectiveness of Computer Aided Instruction (CAI) Programme for Teaching Articles in English of Standard VII at Primary Level.

## **OBJECTIVES:**

- (1) To develop a Computer Aided Instruction (CAI) Programme for Teaching Articles of Standard VII.
- (2) To try-out the effectiveness of the package in the context of the academic achievement of the students.
- (3) To study students’ reactions towards learning through the package.

## **PROCEDURE:**

The present research was of experimental type. The design was ‘Two groups randomized subjects only posttest design’. For sample Primary School was selected purposively. The data for analysis were collected by teacher made unit test and opinionnaire. ANCOVA technique and Chi Square test of statistics were used for analysis.

## **FINDINGS :**

- (1) The Computer Aided Instruction (CAI) Programme for Teaching Articles of Standard VII and Traditional method of teaching were equally effective with reference to the students’ achievement.
- (2) Students favoured learning through CAI programme.

**M.S.Cahary (2018) Topic:** A Comparative Study of Programmed Learning and Computer Assisted Learning on ‘Direct-Indirect Speech’ for the Students of Std- IX in English.

### **OBJECTIVES :**

- (1) To construct programmed learning for the students of std- IX on the topic of ‘Direct-Indirect Speech’ in English grammar.
- (2) To construct computer assisted learning for the students of std- IX on the topic of ‘Direct-Indirect Speech’ in English grammar.
- (3) To tryout programmed learning for the students of std- IX on the topic of ‘Direct-Indirect Speech’ in English grammar.
- (4) To tryout computer assisted learning for the students of std- IX on the topic of ‘Direct-indirect Speech’ in English grammar.

### **PROCEDURE:**

Researcher had selected three schools purposively of students of high schools were selected via cluster sampling method. Total 270 students of IX standard was taken as the sample of the study. Desai Verbal - non verbal Group Intelligence test and teacher made test were administered as tools. The design was ‘randomized group only posttest deign’. The one way analysis of variance (ANOVA) was used for data analysis.

### **FINDINGS:**

- (1) The result shows that the Conventional method was more effective than the computer Assisted Learning for the topic of ‘direct- indirect speech’ of std. – IX.
- (2) It is also resulted that computer Assisted Learning was more effective than the programmed learning for the topic of ‘direct- indirect speech’ of std. – IX.

### **METHOD OF THE STUDY**

Since the e-learning in teaching Approach for the present study was delivered in English language the sample selected for the presented was from Tamil medium high School Sivaganga District. The children of the same school should be divided into Control and Experimental group for conducting a research. Though the topic Teaching was included in the syllabus for the students of high level. The final

sample selected for the present study was confined to 60 students of high school. The students studying in high school were divided into two groups such as Experimental and Control groups. This was done based on 'Pre Test – Post Test Non Equivalent Group Design' and with the help of the teachers of the concerned schools who knew well the students intelligence, e-learning in teaching. Care was taken to include boys and girls in both groups. All students selected were of same age group. As they were all from Tamil medium schools, the medium of instruction was also controlled. The experimental group consisted of 30 students and the control group had 30 students. The distribution of the students in Control and Experimental group are given below.

### **SAMPLE AND SAMPLING TECHNIQUES**

Two schools are selected through stratified random sampling technique. The sample for the present study consisted of 60 high school students in Sivaganga district. The students of both sexes coming from both rural and urban areas were included in the study.

### **TOOL USED IN THE STUDY**

The data are essential for carrying out research investigation. The data are collected with the help of the special apparatus called as tools. The success of a research must be received by selecting a proper tool for the research. So, that the investigator used the following tool i.e. Effectiveness of e-learning in Teaching.

### **DATA COLLECTION**

Only one school was selected to administer the study. The investigator contacted the heads of the school in order to get necessary permission to administer the tool. The heads of the School gave dates to conduct the study.

On the appointed dates the investigator visited the school. A selected number of students according to the sample design were selected for the school. Based on 'Pre Test – Post Test Non Equivalent Group Design' and with the help of english teacher of the concerned school, students were divided into control group and experimental groups. After preparing the tools in the first phase, a pre-test was conducted on the sample selected from primary students.

In the next phase of the experiment, the students of control group were taught through Conventional Teaching Approach by the investigator herself for four days (45 minutes each). Material was given to the Experimental group for the same period. In the third phase, a post test constructed was administered to both the groups.

## **FINDINGS OF THE STUDY**

- It is found that, there is no significant difference between control and experimental group male students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group female students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group urban area students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group rural area students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group of illiterate parents of high school level students in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group of literate parents of high school level students in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group nuclear family students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is no significant difference between control and experimental group joint family students of high school level in their pre-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group male students of high school level in their post-test score in the effectiveness of e-learning in teaching.

- It is found that, there is a significant difference between control and experimental group female students of high school level in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group urban area students of high school level in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group rural area students of high school level in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group of illiterate parents of high school level students in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group of literate parents of high school level students in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group nuclear family students of high school level in their post-test score in the effectiveness of e-learning in teaching.
- It is found that, there is a significant difference between control and experimental group joint family students of high school level in their post-test score in the effectiveness of e-learning in teaching.

## CONCLUSION

The findings of the study clearly presents that the E-learning Approach is effective than the Conventional Teaching Approach. From the findings it can be concluded that the success of teachers largely depends upon the effective use of e-learning materials as a reinforcement strategy for effective learning.

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# **RELATIONSHIP BETWEEN PERSONALITY DEVELOPMENT AND ADJUSTMENT BEHAVIOUR AMONG HIGHER SECONDARY SCHOOL STUDENTS**

**Dr. M. Sanmugarevathi & Dr. S. Sumithra**

## **ABSTRACT**

This Pioneer Study assumes high significance because determining what the perceived personality was for higher secondary school students and how they adjusted with personality provides vital information about their behavior. These data will provide an important piece of information in understanding the role of these leaders in administering education to future generations in India. The conclusion of this study will help stakeholders in programs of education make decisions about determining needs, studying conditions, and excellence in adapting Pedagogy. The Indian Education System has often been termed as being “too bookish”. This study aims at exploring the unexplored avenues of Teaching and Learning. This is a virgin study about personality development and adjustment behavior of higher secondary students in the Coimbatore district. This research is also useful for social researchers, educationists as a reference in their advanced research on personality among school students. Furthermore, school authorities and the Ministry of School Education will have much useful information from the research to motivate the students.

**KEY TERMS :** Personality Development and Adjustment Behavior

## **INTRODUCTION**

The main purpose of education is the progress of physical, social, emotional, and wisdom of students. Adequate education makes good quality human resources for a rapidly developing country. According to this reason, many countries have been trying to develop the educational quality in the national policy and strategy to enhance effective implementation. This idea prevails in the Indian people.

The major content emphasizes the development of many functions of the Indian educational system. The student’s academic achievement problem is not



occurring in India but also in many countries around the world. Some countries have been trying to solve this problem by educational staff development, teaching processes, and parent and community cooperation and some countries have been looking backward to student's inner character by depicting causal relationships influencing academic achievement. The result of studies revealed some important factor strongly related to academic achievement is "self-concept and Emotional Maturity".

From knowledge of prior research about the relationship between self-concept and emotional maturity with the progress of analysis, this study has been emphasized to extend the recent knowledge more clearly than previous studies in terms of development theory and methodology in the future.

## **OBJECTIVES**

To find out the significant difference in Personality Development and Adjustment Behavior of the higher secondary school students based on gender, Type of Management, Medium of instruction, Locality of School, Type of School, Parents Educational qualification, and Family monthly income

## **HYPOTHESES**

There is no significant difference in Personality Development and Adjustment Behavior of the higher secondary school students based on gender, Type of Management, Medium of instruction, Locality of School, Type of School, Parents Educational qualification, and Family monthly income

## **METHOD & SAMPLE**

The normative survey method was used for this study. 10 schools were selected through the Stratified Random sampling technique. The sample for this study comprised 300 higher secondary school level students in the Coimbatore district.

## **TOOLS**

A suitable research tool contributes to the validity of the findings of any research study. The success of any research study depends largely on the nature of the tools used. Factual materials unknown so far are necessary for every

study. They can be obtained from any sources, direct or indirect. It is necessary to adopt a systematic procedure to collect essential data.

For collecting new and unknown data required for the study of any problem, various devices are made use of and the selection of such devices is of vital importance for any successful research. Different and appropriate tools are to be used for collecting various kinds of information for assorted purposes. The researcher uses one or more of the tools in combination for this purpose.

Since the study must gather the needed information from students regarding the nature and practice of internal assessment at present, two questionnaires were prepared, they are

1. Personality development questionnaire prepared by Investigator
2. Adjustment behavior Scale prepared by *Investigator*

## STATISTICAL TECHNIQUES

- Mean
- SD
- t-test
- F-test

## ANALYSES OF DATA

**Table 1;** Personality Development and Adjustment Behavior of higher secondary school students based on Institutional Variables.

S.N0			N	Mean	SD	t-value	Remark
1	Gender	Male	160	70.13 69.88	3.85 3.95	2.286	Significant
		Female	140	68.98 68.91	4.71 4.05		
2	Medium of Instruction	Tamil	165	70.24 69.89	3.61 3.86	2.822	Significant
		English	135	68.80	4.93		

				68.85	4.14		Significant
3	Locality of School	Rural	135	70.12	3.82	1.968	Significant
				69.59	3.64		
		Urban	165	69.16	4.64	0.658	Not Significant
				69.29	4.31		
4	Type of Family	Nuclear	163	69.09	4.36	2.178	Significant
				68.89	4.32		
		Joint	137	70.18	4.18	2.595	Significant
				70.07	3.53		

Table-1 also shows that the calculated t-values Adjustment Behavior for 0.658 are less than the table value 1.96 at 0.05 level of significance. And Personality Development for 2.286, 2.822, 1.968, and 2.178 are greater than the table value 1.96 at 0.05 level of significance. Then Adjustment Behavior for 2.075, 2.242, and 2.595 are greater than the table value 1.96 at 0.05 level of significance. Thus there is no significant difference in Personality Development and Adjustment Behavior of higher secondary school students in respect of the Gender, Medium of Instruction, Locality of school, and type of family.

S.No		Sources of Variation	Sum of Square	Df	Mean Square	Fvalue	Level of Significance
1	Type of management	Between	66.213	2	33.107	1.794	Not Significant
			39.327		19.664		
		Within	5482.357	297	18.459	1.221	Not Significant
			4784.059		16.108		
2	Type of school	Between	237.705	2	118.853	6.647	Significant
			207.663		103.832		
		Within	5310.865	297	17.882	6.681	Significant
			4615.723		15.541		
3	Parents Educational	Between	25.061	2	12.531	0.674	Not Significant
			0.408		0.204		

	Qualification	Within	5523.509 4822.978	297	18.598 16.239	0.013	Not Significant
4	Family Monthly Income	Between	157.271 133.101	2	78.635 66.550	4.332	Significant
		Within	5391.299 4690.286	297	18.153 15.792	4.214	Significant

From Table-2, the calculated F-values Personality Development for 1.794 and 0.674 is less than the table value 3.00 at 0.05 level of significance. and Adjustment Behavior for 1.221 and 0.013 are less than the table value 3.00 at 0.05 level of significance. then Personality Development for 6.647 and 4.332 is greater than the table value 3.00 at 0.05 level of significance. then Adjustment Behavior for 6.681 and 4.214 is greater than the table value 3.00 at 0.05 level of significance. Hence it is found that there is a significant difference in Personality Development and Adjustment Behavior of higher secondary school students in respect of the Type of management, Type of school, Parents Educational Qualification and Family Monthly Income

## FINDINGS OF THE STUDY

- It is found that the level of significance between personality development and adjustment behavior among higher secondary students mean value above-average level.
- It is found that there is a significant difference between male and female students of the higher secondary courses in respect of their personality development.
- It is found that there is no significant difference between types of management of higher secondary course students in respect of their personality development.
- It is found that there is a significant difference between Tamil and English medium students of the higher secondary course in respect of their personality development.

- It is found that there is a significant difference between rural and urban area students of the higher secondary courses in respect of their personality development.
- It is found that there is a significant difference between types of schools of higher secondary course students in respect of their personality development.
- It is found that there is a significant difference between nuclear and joint family students of higher secondary courses in respect of their personality development.
- It is found that there is no significant difference between parents' educational qualifications of higher secondary course students in respect of their personality development.
- It is found that there is a significant difference between family monthly income of higher secondary course students in respect of their personality development.
- It is found that there is a significant difference between male and female students of the higher secondary course in respect of their adjustment behavior.
- It is found that there is no significant difference between types of management of higher secondary course students in respect of their adjustment behavior.
- It is found that there is a significant difference between Tamil and English medium students of the higher secondary course in respect of their adjustment behavior.
- It is found that there is no significant difference between rural and urban area students of the higher secondary course in respect of their adjustment behavior.
- It is found that there is a significant difference between the type of school of higher secondary course students in respect of their adjustment behavior.

- It is found that there is a significant difference between nuclear and joint family students of the higher secondary courses in respect of their adjustment behavior.
- It is found that there is no significant difference between parents' educational qualifications of higher secondary course students in respect of their adjustment behavior.
- It is found that there is a significant difference between family monthly income of higher secondary course students in respect of their adjustment behavior.
- There is a relationship between personality development and adjustment behavior among higher secondary students.

## CONCLUSION

This methodology provides the guidelines for the investigator about the way the study has to be conducted. It is imperative to adopt a suitable methodology thereby we can generalize the findings. Research is a vital and comprehensive area. The purpose of any research is to find a solution mentally for the problem related to education, society, etc. Personality development and adjustment behavior are very essential in the educational field. They should be promoted in the minds of the students to improve their educational status without the fear.

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