

Vol-09

JAMIA JOURNAL OF EDUCATION



ISSN 2348 3490



Jamia Journal of Education

Optimising Learning: Policies and Practices

Peer Reviewed

REFEREED INTERNATIONAL BIANNUAL PUBLICATION

Volume 09 Number 01 & 02 October 2022 & March 2023

ISSN 2348 3490

JAMIA JOURNAL OF EDUCATION

A Peer Reviewed Refereed International Biannual Publication

Volume 9

Number 1 & 2

October 2022 & March 2023



FACULTY OF EDUCATION

JAMIA MILLIA ISLAMIA

NEW DELHI – 110025

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JAMIA JOURNAL OF EDUCATION

A Peer Reviewed Refereed International Biannual Publication

Volume 9

Number 1 & 2

October 2022 & March 2023

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ISSN 2348-3490

Jamia Journal of Education

A Peer Reviewed Refereed International Biannual Publication

Vol. 9 No. 1 & 2 October 2022 and March 2023

Published by:

Faculty of Education
Jamia Millia Islamia
New Delhi, INDIA.

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Jamia Millia Islamia
jamiajournalofeducation2019@gmail.com

Composed, Editing & Corresponding by:

Mr. Mumtaz Ali & Ms. Shahin Parveen
Office of the Dean, Faculty of Education, JMI

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Octorb 2022 & March 2023

	Content	i-iii	
	V C Message	iv	
	Dean's Message	v	
	Editorial	vi	
Sr. No	Author Name	Page	Title
1.	Sara Begum & Mumtaz Bano	1	Optimising Spatial Concept Learning for Orientation & Mobility among Visually Impaired Learners
2.	Sana Afreen & Jessy Abraham	12	Language Development in Early Childhood: NEP 2020 Perspective
3.	Binish Maryam	21	NEP 2020: Optimising Tagore and Gandhian Idea of Education
4.	Vidhi & Mohammad Asjad Ansari	30	An Exposure of Spelling Variations to English as Second Language Learners in Multilingual Classrooms: A Review of Literature
5.	Shahla Naaz & Mehnaz Ansari	41	The Role of Intercultural Communication in the Emergence of Student's Self-Identity
6.	Divya Sharma	51	Optimising Learning in EVS Classrooms: Cultural diversity as a Resource
7.	Tawsheeba Nisar & Raisa Khan	66	Academic Stress and Mental Health: An Exploratory Study
8.	Madhurima Pal & Zahra Kazmi	78	Exploring Parental Involvement in K-12 Students' Online Learning: Insights and Obstacles
9.	Bichitra Choudhuri & Animesh	91	Optimizing Learning through Paradigm shift in Teacher Education
10.	Neeti Dutta & Indrajeet Dutta	99	NEP-2020 and Multilingualism: Building an Eco-System of Optimizing the Classroom Learning

11.	Shyda Rana & Pooja Chopra	110	Investigating Primary Teachers Awareness of NEP 2020 Vision in context of 50 hours Continuous Professional Development in CBSE Schools of Delhi
12.	Aamir Majeed & Syeda Fawzia Nadeem	119	An Analysis of ICT Enabled Teacher Education Program with Special Reference to Teacher Training Colleges of Jammu and Kashmir
13.	Munisha Thakur & Mohd Tariq	127	Pedagogical Approaches for Teaching Early Childhood Students
14.	Maheswararao Sureddi & N.Srinivasa Mohan	134	Teacher Efficiency in Relation to Emotional Intelligence and Institutional Maturity in B.Ed Trainees
15.	Tahira Akhtar & Mohammad Yusooof	147	Teacher Effectiveness among Secondary School Teachers in Relation to their Professional Commitment
16.	Urvashi Sachdeva & Sumati Tandon	157	Exploring the Educational Anxiety among Adolescent Students of South Delhi - A comparative Study of Private and Government Schools
17.	Latika Khullar	167	Unveiling the Delicate Balance: Evaluating the Merit Pay System Proposed in NEP 2020
18.	Anil Kumar & Ishita Chugh	174	An Exploration of Pedagogical Practices and Learning Environments of Pre-Schools
19.	Tanvi Pahwa & Mohd Fajjullah Khan	187	Exploring the Gap: Assessing Educators' Awareness of and Practices in Teaching Twice-Exceptional Learners
20.	Indrani Bhaduri, Alka Singh, Bency Joy & R K Singh	195	A Comparative Study of the National Achievement Survey Results of 2017 and 2021 in Andaman and Nicobar Islands
21.	Badri Sankar Das	206	A Study on Eradication of Social Inequality and Discrimination among Marginal Sections through Strengthening of Education: A Review
22.	Anju Sanwal	213	Designing a Course in the Discipline of Education to Improve Indian Student Teachers' Conceptions of Teaching
23.	Munisha Thakur & Mool Raj	223	A Study on Technological and Pedagogical Skills of Student-Teachers
24.	Khushnuda Bano & Jasim Ahmad	235	Cyber Safety and Security Awareness through Student Education on the Digital Frontier

25.	Tasneem Ahmad	248	Mitigation of Academic Anxiety: A Psycho-Social approach of Optimizing Learning
26.	Pradipta Panchadhyayee, Makhanlal Nanda Goswami, Rajib Pradhan & Syed Minhaz Hossain	255	Online Physics Practical Activities during the Covid-19 Pandemic - An Exemplar for Practices to be followed for Assessment
27.	Gagandeep Kaur, Ambica Kumari & Manjit Kaur	265	Well Being and Perceived Social Support among Students with Disabilities in Inclusive and Special Schools: A Comparative Study from Gender Perspective
28.	Gagandeep Kaur Manpreet Kour & Simarjeet Kaur	278	Academic Resilience among Secondary School Students in Relation to Academic Achievement and coping Strategies

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कुलपति

Professor Najma Akhtar

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پروفیسر نجمہ اختر

شیخ الجامعہ



Vice Chancellor's Message

Yet again the Faculty of Education is ready to bring forth its next issue of the prestigious Jamia Journal of Education. I feel proud of the editorial team's continuous dedication, who meticulously read and assess each article worthy of publication. They have upheld the values and high standards of Jamia Millia Islamia in the field of education. The academic inputs are a reflection of the confluence of tradition with modernity in that each issue that is published ensures that its papers are abreast of the newest developments in the thought and practice in the field of Teacher Education.

I have seen that the Jamia Journal of Education has always been particular about the quality of research and academic rigour that needs to go into each paper before it is selected for publication. I am pleased to say that this time too, the high standard has been maintained.

I wish to congratulate the Dean of the Faculty of Education, Prof. Sara Begum, and her editorial team on the publication of another issue of their Journal. I also congratulate all the authors and researchers whose work has found a place in this issue.

Congratulations and Best Wishes!

Najma Akhtar

(Prof. Najma Akhtar)

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Faculty of Education

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Prof. Sara Begum

Dean



From the Desk of Editor-In-Chief

NEP-2020 has opened the broader spectrum of education and the aspects related to education at various levels. Curriculum frameworks for various stages of school education have already been framed and issued in the light of NEP-2020. Various teacher education programmes as envisioned in the NEP-2020 have already been started by teacher education institutions and universities.

The rich, dynamic, inclusive and diverse tradition of the '*Ustadon Ka Madrasa*' now named as Faculty of Education has evolved as a response to the call of Gandhiji's Nai Taleem or Basic Education, will be carried forward by the NEP-2020 which promotes learner centred, skill based holistic and multi-disciplinary approach. It envisions a knowledge society to cater to the needs of the globalized, liberalized and privatized complex world of today through optimized learning environment. This will pave the way to construct knowledge, develop required competencies and skills to suit the needs of 21st century.

This issue of the JJE specifically focuses on different aspects of optimized learning along with the research papers and articles on other diverse topics related to the teaching learning processes, research and innovation, educational technology, language education, teacher education and different areas of school education.

At this juncture, I would like to congratulate all the authors who made a valuable and meaningful contribution in this issue of Jamia Journal of Education. I would also like to thank Reviewers for taking the necessary time & effort to review the manuscript, the editorial board and members of the language editing committee. I am also thankful to the staff members of my office who tirelessly worked in realizing the publication of the journal in present shape.

(Prof. Sara Begum)
Editor-In-Chief

EDITORIAL

Optimized Learning involves effective implementation of Policies and Practices in and outside classrooms for enhancing the learning processes and improving learning outcomes. To achieve optimized learning, Schools will have to identify and develop capabilities of the students and also enable the teachers to identify such capabilities. Normally teachers think that students who are lagging behind in academics have some learning disorders or learning difficulties but the problem may lie in the process of learning itself. This needs to be addressed by giving personalized help or changing the classroom practices for optimizing learning in the class room.

The process of optimization aims to lower the risk of errors, make students learn faster, learn more efficiently and consistently as this would help to develop higher-order skills among the students. The school system will have to revise their Teaching Learning Processes at regular intervals to optimize learning. NEP 2020 asserts that a comprehensive approach with relevant curriculum, quality pedagogies and adequate support for students would help in providing optimal Learning environment. It aims at promoting students centric, holistic and multi-disciplinary education system to achieve “optimal learning”. As per the policy teachers will play a pivotal role in promoting such learning environments for the students, along with promoting students Psycho-Social well-being. Optimized learning environments help students to develop skills for 21st century and prepare them for lifelong learning, make them socially aware and successful citizens having indigenous cultural values with modern scientific and technological knowledge.

The current issue of the journal broadly titled as ‘Optimizing learning: Policies and Practices’ is interdisciplinary in nature and attempts to cover the extensive ground with multiple perspectives. This edition has twenty-eight articles which differ in their concerns and yet are aligned with the theme. First paper by Sara Begum & Mumtaz Bano raise concerns regarding the mobility of visually impaired learners and Spatial Concept of learning for optimizing learning of Visually Impaired students’ vision. The abstract concepts like spatial/positional concepts are pre requisites for visually impaired child to move freely in his other environment without any hurdle. This work would help visually impaired children to know their own body in relation to their environment to navigate school or campus or any other areas in their surroundings independently. Sana Afreen & Jessy Abraham have studied the importance of language development in early childhood relating it to perspectives in N.E.P 2020. Child development has several aspects; language development is one of them which is crucial for proper development of his /her personality. Neglect of this crucial developmental domain in early childhood results in life-long deficiency in associated skills and behaviors which would adversely affect children’s performance in later years. Binish Maryam has delved into Tagore & Gandhi’s idea of Education who emphasized on Optimizing learning through skill development. The paper analyzes the philosophy, pedagogy and objectives of the National Education Policy 2020. The article looks into how the ideas of two great

philosophers and educationist Mahatma Gandhi and Rabindranath Tagore influences the NEP 2020. Vidhi & Mohammad Asjad Ansari reviewed spelling variants in English as a second language in Multilingual classroom. The majority of the error exhibited phonetic resemblance to the accurate spelling. This implies that the students transcribed words based on their auditory perception. They possess knowledge of English alphabets and associate them with certain sounds. Shahla Naaz & Mehnaz Ansari discuss the role of Intercultural communication in developing students' self-identity. This research paper examines the importance of intercultural communication in the construction of self-identity among young individuals. In the process of intercultural communication, individuals of diverse cultural backgrounds engage in negotiation and meaning-making by sharing their ideas with other cultural groups to construct their self-identity. Divya Sharma discusses the relevance of cultural diversity in Optimizing learning in EVS classrooms. Children in a mainstream school classroom may belong to the same age group but they differ a lot in their cognition, interests, abilities and social contexts. To ensure an optimized learning environment for learners in an Environmental Studies (EVS) classroom, it becomes necessary to connect pedagogy with their everyday knowledge and real-world experiences deeply rooted in their natural and socio-cultural environment. Tawsheeba Nisar & Raisa Khan studied the effect of Academic stress on the Mental health of the students. The study investigated the relationship between academic stress and mental health among secondary school students from Kashmir Valley. The objective of the study was to study academic stress and mental health among secondary school students and to study the difference in academic stress and mental health in relation to gender. Madhurima Pal & Zahra Kazmi explore the Parental Involvement in students online learning at all levels and challenges faced by them. The level of involvement that parents have in their children's education plays a significant role in determining both academic performance and their overall development, especially in the context of online learning. Bichitra Choudhuri & Animesh discussed how Paradigm shift in Teacher Education can optimize learning. Paper focuses on the reformation and advancement of teacher education as described in NEP 2020 and the steps that have been taken so far which includes Integrated Teacher Education Programme (ITEP), National Professional Standard for Teachers (NPST), National Mission for Mentoring (NMM) and how these programmes will help in restructuring teacher education. Neeti Dutta & Indrajeet Dutta discussed the role of Multilingualism as means to optimize classroom learning. Teachers who are multilingual will build a classroom eco-system which will facilitate not only learning but also help in building enhanced cognitive abilities, increased memory, better academic performance and more importantly giving opportunities to learners of different linguistic abilities to participate in the teaching learning process. Shyda Rana & Pooja Chopra emphasize on the In-service training of Teachers to make them aware of shift in Teacher Education. Continuous Professional Development (CPD) should aim to ensure teachers role, relevance, and responsibility as transformers for students' 21st Century life, learning and livelihood. Aamir Majeed & Syeda Fawzia Nadeem focus on importance of ICT in Teacher Education program and its implementation in Jammu & Kashmir. The study explores the integration

of Information and Communication Technology (ICT) in teacher education programs, focusing on its impact on pedagogy, curriculum design, and professional development. Munisha Thakur & Mohd Tariq discuss the use of Pedagogical approaches for Early Childhood students to optimize their learning. The initial purpose of the paper is to identify the various pedagogies now being used in the classroom. The learning and developmental successes early childhood, preschoolers have been linked closely to pedagogical practice. Mahesh wararao Sureddi & N.Srinivasa Mohan studied the emotional intelligence & maturity of B.Ed trainees in relation to Teacher efficiency. Schools and teachers were given more responsibility for shaping kids' personalities. The teacher was expected to fulfill a multifaceted role. As a result, a study was carried out to evaluate the impact of Emotional Intelligence on the Teacher Efficacy of B.Ed. interns. Tahira Akhtar & Mohammad Yusoof highlight the effectiveness and professional commitment of Secondary School Teachers. The objective of the present study was to study the relationship between teacher effectiveness and professional commitment of secondary school teachers, the difference in teacher effectiveness of male and female secondary school teachers and the difference in professional commitment of male and female secondary school teachers. Urvashi Sachdeva & Sumati Tandon explore the Educational Anxiety among Adolescent students. Adolescents' educational anxiety refers to the pressure related to their academics which includes preparing for exams and class tests, completing school work, homework, projectwork, comprehending new concepts & terms and also adjusting in a newsocial setting. Latika Kullar evaluates the proposed pay System in NEP 2020 and its delicate balance. The paper critically examines the concept of merit pay for teachers and its potential impact on the educational landscape, with a specific focus on India. While there is a growing emphasis on performance-based pay as a solution to improve the education system, historical experiences from various countries reveal significant flaws and challenges associated with its implementation. Anil Kumar and Ishita Chugh explored the pedagogical practices & learning environments of pre-Schools. Pre-schooling is of utmost importance for a child's holistic development as the initial experiences with school, its environment, its teachers and their teaching methods, and behaviors with children, leave many impressions on them. Positive impressions accelerate the process of holistic development among children. However, negative impressions may pose serious problems such as fear of teachers, lack of interest for formal schooling among children. Tanvi Pahwa & Mohd Faijjullah khan explored the Gap in Practices of Teaching Twice exceptional learners & their educators. Twice-exceptional (2E) learners possess both exceptional abilities and learning challenges, requiring tailored educational approaches to fully nurture their potential. The paper aims to assess the current state of awareness and instructional approaches for enhancing educational opportunities for 2E learners. Indrani Bhatari, Alka Singh et.al. compared the achievement result of 2017 & 2021 in Andaman and Nicobar Islands. The National Achievement Survey (NAS) is a national-wide competency-based assessment conducted by NCERT that provides information on the learning outcomes of school students. Andaman and Nicobar Islands do regularly participate in NAS. The primary goal of such assessments is to gauge the effectiveness of

school education and guidepolicy makers and planners in initiating appropriate educational reform measures. Badri Sankar Das studies the social inequality & discriminate among marginalized sections and its eradication through education. Education is important so that they can become aware of their rights and also understand the policies and rules given by the government which are made for their upliftment. This article will outline these topics. Also, in today's context, what will be the role of NEP-2020 in social upliftment; this article will focus on all these points. Anju Sanwal presents a design for a course in education to help pre-service teachers develop better conceptions of teaching. Teachers in universities and schools are seen adopting different conceptions ontheir teaching. These views about teaching affect the way the teacher believe, behave and use teaching strategies in the class A lot of literature in students' learning suggests that student teachers' conception of teaching can bechanged/improved when they experience student centred learning environment. Munisha Thakur &Mool Raj studied the student-Teachers' knowledge of Technology & their pedagogical Skills. For introducing teaching and learning activities in the classroom, teachers have to become techno-pedagogues. Teacher must be well versed with the technology, methods of teaching and content so that they can provide knowledge to the learners effectively and efficiently. Teachers with appropriate technological and pedagogical skills can make teaching a congenial experience. Khushnuda Bano & Jasim Ahmad studied the cyber safety and security awareness on Digital frontiers through education. This paper focuses on significance of educating students and other stake holders about cyber safety. It also provides knowledge for various initiatives and programs aimed at promoting cyber safety. Initiatives such as the Indian Cyber Crime Coordination Centre (I4C), G20-Stay Safe Online Campaign, Cyber Jaagrookta Diwas, provisions of students'rights and safety in NEP-2020, and Safer Internet Days and many more which aim at promoting cyber safety. Tasneem Ahmad studied Academic Anxiety and Psycho Social Approach as a means of Optimizing learning. Mitigation of anxiety and in result, optimizing the learning is not amechanical process. It has psycho-social orientation of teaching-learning. This paper highlights these teaching learning orientations for optimizing learning and mitigating the academic anxiety. Pradipta P, Makhanlal Nanda et.al, discuss online Physics practical activities during covid 19 as an example for Assessment. In the first phase of the pandemic situation, the teaching-learning process all over the country got impeded in confusion shrouding online education, butwith the passage of time there was some semblance of order in the process across the institutions. The pandemic inter alia provided an opportunity to rethink about thestrategies to be adopted for education dissemination, in particular, for laboratory-based subjects. Gagandeep Kaur, Ambica Kumari & Manjit Kaur studied social support among students with disabilities in inclusive & Special Schools from perspective of Gender. The main goal of the present study was to investigate the well-being and perceivedsocial support among students with disabilities concentrating on the differences between students who receive their education in inclusive settings and those who attend special schools. Gagandeep Kaur Manpreet Kaur & Simarjeet Kaur studied the Academic Resilience among Secondary School students in relation to their

coping strategies. Academic resilience is the student's capability to deal efficiently with academic setbacks, anxiety, and study pressure. In the present scenario, students are facing a lot of problems in schools as well as in society. If adequate steps are not taken to overcome these problems, it will create pressure and stress among students.

We hope that this issue highlights the concerns pertaining to "Optimizing learning" which will initiate further deliberation.

Editors

Optimising Spatial Concept Learning for Orientation & Mobility among Visually Impaired Learners

Sara Begum¹ & Mumtaz Bano²

Abstract

Spatial thinking or spatial reasoning concerns the position of any kind of objects, their shapes, their size, their spatial relation between them and their surrounded area where they can move or make any kind of movement in a particular time. Spatial concepts are related to the location or position of stationary objects in the particular environment. Understanding the actual position and meaning of many spatial concepts, inherit in general learning specially to travel safely around, which require a coordinated approach to assure the greatest level of mastery possible for a person in order to make them independent. Children primarily use the sense of sight to perceive their surrounding through their senses viz a viz seeing, smelling and hearing, but for visually impaired learner it was restricted somehow to gather information directly as their eye sight is fully gone or partially gone. So, in that situation, the teachers of students with visual impairment have many opportunities at school, in the classroom and during delivering the lesson or any other unplanned opportunities to help them with more verbal cues and to teach and reinforce these useful concepts through planning of different activities to prepare the visually impaired for independent mobility and independent living. In the context of visually impaired children, this pilot study has been conducted in order to develop special concept among them to develop spatial concepts which are included in their textbooks. With the view of perceiving the challenges that visually impaired faces in developing special concepts due to lack of vision. The abstract concepts like spatial/positional concepts are prerequisites for our visually impaired child to move freely in his or her environment without any hurdle. This work will help visually impaired children to know their own body in relation to their environment to navigate school or campus or any other areas in their surroundings independently.

Keywords: Spatial Concept Learning, Spatial Orientation, Visually arners, Orientation & Mobility, Play way method

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Introduction

Active young children cover a lot of space in their mind map within a few hours and they are not aware of doing so. In the view of Developmental Psychologist Jean Piaget 'spatial concept' develops slowly over the years. It involves understanding to one another and remembering the relative locations of a particular object in the mind, after that through imaging or visualising objects they are manipulated through mental movement or transformation to form new spatial relations within the particular situation by a person. Children primarily use the sense of sight to perceive their surrounding space and simultaneously the senses of smell and hearing also play very vital role in this task. Teachers can support development of spatial concept through planning of different activities in their classroom in order to help their young learners. Spatial concept is also called as 'Spatial thinking/Spatial reasoning', concerns the position of objects, their space their spatial relations to one another and the movement they make in their premises. In other words, spatial concepts define the relationship between us and objects as well as the relationships of objects to each other. As a child language begins to develop early spatial concepts such as In front of-behind, top-bottom, over-under, first-last-between, farthest-backward, in-on, right-left, here-there, etc, help them to understand directions more precisely for detailed questions and express their ideas to others.

To prepare the visually impaired learner for independent mobility and independent living spatial orientation skills needs to be developed as early as possible. Spatial orientation is a person's scale in using the information received through their senses to determine their position in their surrounding and their destination in relations to significant objects in the environment. In the context of visual impairment, this term refers more specifically to knowledge of distance and directions that relate to objects in the environment and have been observed or memorised, and the ability to commit this spatial relationship to memory when they change as the person proceeds. Spatial skills are certified by Putting in place and using spatial relations between a particular place and one self or between different places by a person. Concept development involves understanding the characteristics of an object and its spatial relationship with other objects. Students with visual impairment miss out on many opportunities to learn concepts incidentally as they may not be able to observe and effectively interact with their world due to loss of vision or limited vision. They need to be provided with meaningful experiences an interaction with real objects that they can touch, hear, smell and see (if they have partial vision) they need more verbal cues, more explanations and more time to observe, to make new knowledge by making relation with their environment.

In the present study investigator tried to assess the concept related to orientation & mobility by exploring the development of those concepts that helps visually impaired learners for understanding the environment, working upon it and moving around independently. The results of the pilot study were mostly focused on the students spatial understanding, being them able to understand these concepts in the classroom

situation with the help of concrete examples. But when they were asked to apply them in the surrounding environment, working in their classroom environment through different activities and independently mobility, Majority of the students were not able to follow the directions and do accordingly. Also, they were not able to move independently by follow the direction of the teachers and unable to participate in games and sports. In result of this their self-esteem lower down and lacking self-confidence among visually impaired learners, for that it was decided to develop some activities for them which teacher needs to understand. To solve this problem teachers, have to plan some activities on daily basis to enhance these concepts which hamper their spatial concept development. These activities were based on those spatial concepts that were chalk out after the thorough study and observations by the investigator, in which most of the visually impaired learners and blind students feel difficulties in perceiving them.

Rationale

- The development of orientation skills and the construction of a mental representation of the environment is related to various cognitive faculties such as attention capacity, language skills, short-term, long-term and topographic memory.
- At an integration level, mental representation of space involves localising the stimulus, spatial memory, inference skills, using symbolic representations and cognitive maps.
- Regarding what is observable a child with visual impairment should be able to describe the areas they are in, develop cognitive maps, follow route directions, demonstrate spatial actualisation skills and the ability to estimate a time & distance relationship by employing problem-solving strategies when they are disoriented or in a new place.
- Learners may also need guided exploration and explanations of what they are interacting with the use of remaining senses effectively.
- Clear explanation provides the learner vocabulary associated with the experience.
- Learners who may be given clear instruction with the use of hands-on experiences make sense of what they are feeling and make connections to their previous schema, which will help them to develop understanding of new concepts easily.
- By these strategies they develop their language easily and be motivated to explore their environment which will subsequently lead to their motor development and fine-motor development.

So, in the present study activities are planned in such a manner that visually impaired children develop the ability to travel and apply spatial concepts for locating various places in their daily life routine. The teachers may help the visually impaired students by giving clear instructions and other cues, whatever is helping the spatial awareness among children by understanding the placement arrangements and spacing of objects things and persons in relation to one another. Spatial concepts that were taken for the study will also help the visually impaired learners to understand lesson with regards to

map, diagram, space and directions. The activities that were selected by the investigator were discussed with the regular class teachers of the children and they suggest some useful materials that will be developed in order to make students to understand these spatial concepts which they can apply in their daily life later on.

Need of Spatial concept development among visually impaired learners for Orientation & Mobility

According to Berthold Lowenfeld¹, there are 3 primary limitations that students with visually impairment may face, these include:

- A loss in the range and variety of experiences,
- A loss or the restriction in the ability to get around,
- A loss of the control of the environment and the self in relation to it.

Orientation and mobility training helps a blind or visually impaired child knows where he is in space and where he wants to go (Orientation) and it also helps him be able to carry out a plan to get there (Mobility). Orientation and mobility skills should be begun to be developed in infancy starting with basic body awareness and movements, and continuing on into adulthood as the individual learns skills that allow him to navigate his world efficiently, effectively and safely. Orientation and mobility help to develop distance, size and directional concepts in children with visual impairment. At present time many potential employment opportunities are denied for visually impaired people because the job requires spatial actions which are (perceived to be) beyond the ability of a blind or severely impaired person. Because of the disabled person experience difficulties in travelling to the workplace leads to reduce independence and hinders in their activity spaces. Indeed, there is a persistent attitude among the population in general that disabled people, and people who are blind or severely visually impaired in particular must have little spatial ability or competency because of their lack of acute vision.

Objectives of the Research Paper

1. To explore the spatial concept of their textbook and chalkout the lack areas where learners need more instructions or remediation.
2. To develop spatial concept regarding their own body awareness in relation to their environment.
3. To provide remedial teaching to help the visually impaired learners by placement, arrangement and spacing between them and other things or another persons with the use of direct learning.

¹Berthold Lowenfeld, *Our Blind Children: Growing and Learning with Them*, 1977, Third Edition, Charles C. Thomas Publisher

4. To optimise Spatial learning ability among visually impaired learners so that they can navigate school/campus and any other surrounding area independently (Orientation & Mobility).
5. To develop the ability of safe travelling to a specific location and visually impaired learners will be able to apply these spatial awareness in their daily life routine.

Methodology

Experimental research was being conducted to optimise learning of spatial concept among Visually Impaired learners in order to enhance their orientation and Mobility. It was decided that for each spatial concept 5 activities will be worked out by the teacher and teacher need to train visually impaired children in those activities. In all total 20 concepts were identified that were find out during the pilot study, these concepts again revised and it was found that these have opposite concept also. So, it was further analysed to have $20 \times 2 = 40$ Concepts which was worked out during the study.

Population:

The students of MCD schools of Govt. of NCT Delhi had been taken as a sample of the present study.

Sample size:

A Sample size of about 50 students of class I to V is selected for conducting the study.

Sampling Procedure:

Subjects are selected by using Purposive Random Sampling Technique.

Tool:

The questionnaire, and observation checklist were made to know the lacking areas related to spatial concepts among visually impaired learners. After intervention through achievement test the enhancement/change in the behaviour of visually impaired learners noted by the investigator.

Intervention Program

Pre-school educators should begin teaching spatial concepts to children at a very early stage. At age 2 children they are already absorbing learning and rapidly developing their vocabularies. They are beginning to understand the concepts of space in their environment while they are moving, touching, talking and beginning to ask questions.

Strategy No.1

This is the perfect time to immerse them in language that fosters their understanding of spatial relationships between their bodies and the objects in their environment. For that we asked some interesting question to our toddlers like:

- Where is your nose?
- In the answer: they point to their nose.

Then we follow up with different concept phrases like:

- Your nose is on your face,
- Your nose is above your lips,
- Your nose is on the front of your head, etc.

This type of response embeds concept words expanding on and making them a regular part of language.

Strategy No.2

Using concepts in teachable movements help children understand and later generalise the concepts for further learning. For example: I spy and I see games (play way activity- where children can learn while playing and enjoying) that can use spatial concepts in a fun way. Like:

- I see a book. where is it?
- Can you saw it/find it?

Now, when the child finds or point to it (the book),the teacher response with adding some other relevant knowledge about it (the book) like:

- the book is on the shelf,
- the book is under the table,
- the book is by the bed,
- the book is above the table,
- the book is beside the chair,
- the book is under the bag,
- the book is in my hand and so on.

So, in just a few seconds this child must listen to over 10 concepts, make sense of them and then follow through with the directions, think of all the verbal directions. Then relate with the new knowledge with the past learning. This method will be used by teacher to provide learning without burden to each student in the classroom every day.

Results of the Study

S. No.	Selected Topics		Classroom	Before Remediation Results	After Remediation Results
1.	Top	Bottom	4	20%	40%
2.	First	Last	2	50%	80%
3.	Next to	Previous	3	10%	30%
4.	Nearby	Far	2	10%	30%
5.	Left	Right	1	50%	60%
6.	In front	Behind	2	20%	50%
7.	Clockwise	Anticlockwise	4	10%	40%
8.	North	South	5	0%	10%

9.	Up	Down	3	20%	50%
10.	Inward	Outward	1	0%	40%
11.	Wide	Narrow	4	10%	40%
12.	East	West	3	0%	20%
13.	Inside	Outside	4	20%	40%
14.	Horizontal	Vertical	5	20%	50%
15.	Straight	Round	1	20%	50%
16.	Direction of Sun: Morning	Direction of Sun: Evening	5	0%	20%
17.	Forward	Backward	1	20%	50%
18.	Under	Upon	2	20%	30%
19.	Besides	Apart	3	10%	30%
20.	Degrees:90°, 180°& 360°		5	0%	10%

N=10

Analysis

The observation from the above table clearly depicts that for all classes from 1st to 5th 4×2=8 concepts were worked out for each class students for the investigation, where no. of students is 10. It is clear from above table that almost for all the concepts except left & right and first & last less than 50% of the students were not able to perform these concepts even in the classroom situations before remediation and some concept like direction according to the sun in morning and in the evening, different degrees and east/west/north/south directions were not conceptualised by visually impaired learners at all. On the other hand, other concepts, it is observed that all the students were not able to understand and apply them in their daily classroom situations in different events. After providing remediation through different activities, they enhanced their conceptual clarity. High increase in results is shown related many concepts like: Top-bottom, Infront-Behind, Narrow-Wide, Beside-Apart and almost all the areas results show the positive response by the learners.

Discussion

Development of spatial awareness helps students to understand the placement arrangement and spacing of persons or things in relation to one another. Orientation and mobility specialist will play an important role in teaching spatial concepts to the students. Spatial awareness concepts apply not only to education but relate directly to travel. Spatial concepts include body awareness and spatial awareness as with other concepts. Direction experiences will help to students to learn the concept and physical experiences will help in laying the foundation for development. Once student has learned the concept using their own bodies, they can then develop concepts related to models and representations of maps etc.

Many students who are blind or visually impaired experience difficulties with creating a mental map of their environment in order to figure out which direction to go or how to find their way around. For catering this struggle to reach their goal by the visually

impaired, it is extremely important that they receive orientation and mobility training to develop concepts, skills and techniques as early as possible. Mobility skills involve the actual movement to our destination independently safely and with confidence for example it is students want to get from their classroom to the school office they need to be aware of the different views or landmarks that they can use to independently get their destination place. The point to keep in mind is that all of these skills will need to be directly thought to visually impaired learners. To travel safely, efficiently and independently in environment these spatial skills are very important in order to aware them about where they are in relation to the environment and the objects in it and how to find their way to the destination without any hurdle independently.

Suggestions

The investigator suggested some spatial concepts on the basis of the pilot study which needs to be developed during lower primary and upper primary stages as a pre-requisite for Orientation & Mobility and to enhance independent living skills among visually impaired learners. The concepts include direction related concepts (Right, left, up, down, Infront behind, north, south, east, west), position related concepts (nearby, far, first, last, next to, previous), other spatial concepts like Inward, outward, wide, narrow, inside, outside, straight, round (clockwise, anticlockwise, degrees), forward, backward, here, there, under, upon etc. For all suggested spatial concepts, the investigator suggests 5 activities per concept. The name of the activities is:

Right-Left

1. Sticking
2. Dressing-Undressing
3. Sorting
4. Perfumed Hand
5. Find the Object/Get the Toy

Up-Down

1. Playing with see-saw
2. Using staircases
3. Playing piano toy
4. Swinging
5. Flip Cup game

Infront-Behind

1. Making line
2. Positioning of classroom furniture
3. Hide & Seek
4. Positional Concepts
5. Using toys, clay, block games

East-West, North-South

1. Playing with magnet
2. Tactile diagram reading
3. Positioning fingers
4. Direction of your school/home
5. Dance & Direction

Nearby-Far

1. Changing the position
2. Passing the ball
3. Tracing the voice command (Echolocation)
4. Counting steps
5. Estimating distance between self and the object/place.

First-Last

1. Name of the Week Days
2. Standing in the queue
3. Arranging the blocks
4. Setting Numbers in Abacus
5. Clapping one-by-one

Next to- Previous

1. Making a line
2. Turning the page
3. Passing the parcel
4. Calling by name
5. Changing position of object

Straight-Round (Clockwise-anticlockwise, degrees)

1. Moving the minute hands in the clock
2. Opening the lock
3. Arranging the thali of food
4. Learning degrees using bangles, rulers and paper folding activity
5. Standing in the row for morning assembly

Inside-Outside

1. Putting letter into envelop
2. Putting pen/books/hanky inside the bag
3. Put off their shoes
4. Take books and other stationary outside the bag
5. Putting in/out the objects from box

Inward-Outward movement

1. Playing different games in the circle (like hanky game/buddy game)
2. Musical chair
3. Outing the bangle
4. Nature walk
5. Touch and follow game

Here is one activity is discussed with all their steps:

Find the Object/Get the Toy

- Firstly, put some toys/objects of child interest into a box
- Now make the child understand that his/her favourite toy/object is being kept somewhere near him/her.
- His/her task will be to find out where it is by following the instructions.
- Now ask the child to pick the particular object/toy by giving clear voice instructions.
- Teacher may use the right-left direction instruction to give them clue like move towards your left side five steps, now turn to your right side and walk for 3 step to find out the box.
- Now using your both hands find the toy/object
- After finding the particular toy/object say from which side you found it as well as in which hand you are holding it.
- The object maybe a toy, pencil box, lunch box, hanky, clay, book or any other item of child's interest.
- At last, ask the child to communicate about what he/she is doing to their other classmates.
- These may be repeated with other objects on one child or a group of children.



Conclusion

Spatial orientation skill is a person scale in using the information received through their senses to determine their position in space and their destination in relation to significant objects in the environment. The Spatial concepts along with other basic concepts are essential for success in school and performing daily activities by the visually impaired

learner. People with visual impairment faces many challenges in understanding of spatial concept related to orientation and mobility and it also might prevent them in travelling independently, using abstract concepts of mathematics and understanding the concept of geographical maps. Spatial concept is related to location or position of stationary and moving elements in the environment. Understanding and managing the many spatial concepts inherent in general learning and specific to travel require a coordinated approach to assuring the greatest level of mastery possible. So, for visually impaired people it becomes very important to train them in spatial concepts and facilitate their independent mobility. The implications of this work will help visually impaired learner if the teacher starts using the activities at the early stages like: lower primary and upper primary stages. This will help them in their abstract concept's development in relation to orientation & mobility and visually impaired students can learn to follow direction and move independently. Spatial orientation skills need to be developed to facilitate locomotor, affective and cognitive domains of visually impaired for their overall development.

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Language Development in Early Childhood: NEP 2020 Perspective

Sana Afreen¹ & Jessy Abraham²

Abstract

Early Childhood Care and Education (ECCE) is important for overall development of children. Child development has several aspects; language development is one of them which is crucial for proper development of his /her personality. Neglect of this crucial developmental domain in early childhood results in life-long deficiency in associated skills and behaviours which would adversely affect children's performance in later years. The National Education Policy (NEP) 2020, adopted in India, acknowledges the value of language learning and encourages multilingualism as a cornerstone for comprehensive education. This paper examines the NEP 2020's provisions and potential influence on language for very young children's outcomes in order to better understand how language development and the policy interact. To promote efficient language development, it also discusses the difficulties and opportunities posed by the implementation of the NEP 2020.

Key words: ECCE, Child Development, Language Development, National Education Policy (NEP) 2020, Language Learning Outcomes

Introduction

“Early childhood education is the first and fore-most step towards building a great nation”-Maria Montessori

Early childhood education is essential for childrens' growth throughout their lifetime. We must recognise that the early years of a child's life are crucial since development and growth occur at the fastest rate during this period. The habits and attitudes acquired in early childhood tend to be quite ingrained. Both curiosity and creativity are at their peak during this time. Early childhood education, a realm of games and frills for young children, lays a solid foundation for success in elementary and secondary school

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and also improve retention rate of children in primary grades (Kaul, Ramachandran, & Upadhyay, 1993).

Good pre-school programmes enhance social contact with others, foster inquisitiveness and creative thinking skills, and expand language as a means of communication. The goal of early childhood education is to stimulate and expose children to their environment so they can grow and develop in all areas in accordance with their stage of development (Paul & Singh, 2020).

Early childhood care and education refers to a group environment for children between the ages of 3 and 6 years that is intentionally meant to stimulate and promote their mental, physical, emotional, linguistic, and social development. Psychologists, educators, and policymakers have given it a variety of names, including Nursery, Kindergarten, Anganwadi, Play School, Montessori, and Pre-Primary Education.

Early childhood is an important phase for a child's development and for the educational process to take place. Because children's growth and development happen so swiftly during this time, childhood is the optimum time to maximize a child's potential. Children easily absorb anything from what they see and hear (Karakauki, 2021).

The most recent is NEP (National Education Policy) 2020 which identifies that over 85 percent of a child's brain develops by the age of six and emphasises on providing critical importance to appropriate care and stimulation of the brain in a child's early years for healthy brain development and growth.

Language development and Early Childhood Care and Education

Language development is among the fundamental aims of Education. Language is the ability to communicate with each other. It is the vehicle of forming personal relationship. It is not only the medium of communication but also in line with the overall growth of an individual. Language development is the process by which children come to understand and communicate language during early childhood. Recent policy on education NEP 2020 also emphasises on these aspects of ECCE. In the new 5+3+3+4 structure, a sturdy base of ECCE from age 3 is included to promote overall learning, development and wellbeing the 3 years of ECCE will be Balvatika or preparatory class. Medium of instruction until at least grade 5 but preferably till grade 8 and beyond will be home language/mother tongue/ regional language. Teachers will be encouraged to use bilingual approach including bilingual teaching learning materials with those students whose home language may be different from medium of instruction. One of the goals of NEP-2020 for the early childhood care and education is the development of communication and early language, literacy and numeracy (NEP 2020 Para 1.2). Language development begins from birth and children develop language skills more rapidly in early childhood i.e. from birth to six years. Research from neuroscience informs that 85% of brain development takes place by the age of six years indicating the critical importance of appropriate care and stimulation in child's early years to promote overall growth and development including language development. (NEP, 2020)

During early childhood (3-6 years) child's vocabulary, child's grammar, particularly syntax and morphology begins to develop followed by pragmatics. (That is the guidelines for engaging in appropriate and effective communication (Berk, 2013 as cited in Barber, 2017).

Research evidence clearly indicates that language development in early childhood help children to speak, express their feelings and thoughts, interact with other meaningfully and is important for cognitive development, social development, and emotional development (Shrimali, 2008). Language skills such as listening, speaking, reading, and writing skills are related to each other. Listening, comprehension and speaking skills are important for the development of pre-reading and pre-writing skills to prepare children for literacy and numeracy at pre-school (NIPUN Bharat Mission,2021).The development of language skills help children in improving memory, curiosity, thinking and reasoning skills.

Thus, proper development of language in a child is an important indicator of the overall development of his/her personality. The language difficulties that occur during early childhood are repetitions and stuttering. The child in early childhood faces difficulty in expressing what he wants to tell because of inadequate vocabulary (Sharma, 1991). A child needs to learn new words to express himself / herself.

NEP 2020 and Language Development

The Government of India's National Education Policy (NEP) 2020 acknowledges the critical part that language development plays in education. The policy makes a number of recommendations and regulations to encourage and promote learners' language development. The NEP 2020's main components in relation to language development are as follows:

Early Language Development: The NEP 2020 places a strong emphasis on the importance of a child's early language development. It emphasises the value of high-quality early childhood care and education (ECCE) for language enrichment and acknowledges the crucial time for language learning. To support vocabulary growth, phonological awareness, and language comprehension abilities, the policy suggests incorporating language development activities into the ECCE curriculum.

Integration of Language skills: The NEP 2020 promotes a holistic approach to language acquisition, where reading, writing, listening, and speaking abilities are all acquired simultaneously. It advocates a move away from memorization in favour of a competency-based approach that places an emphasis on linguistic abilities that support critical thinking, creativity, and successful communication. To improve language competency, the policy emphasises the need of chances for active engagement and experiential learning.

Language Proficiency and Multilingualism: The NEP 2020 strives to encourage language proficiency in addition to recognising the value of multilingualism. It emphasises that students have to have the freedom and option to study languages that interest them.

The policy encourages schools to provide education not just in the dominant language(s) of the area but also in regional languages, mother tongues, and local languages.

Teacher Training and Professional Development: To improve language instruction, the NEP 2020 emphasises the need of programmes for teacher training and professional development. It demands that instructors receive thorough training on language education, evaluation techniques, and methods to encourage multilingualism. To improve language teacher preparation programmes, the strategy also promotes partnership between teacher education institutions and language departments.

NIPUN Bharat Guidelines for Foundational Literacy:

The Ministry of Education have introduced the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) Bharat Scheme. The program's goal is to meet the educational needs of children between the ages of 3 and 9. As part of NEP 2020, this initiative is being launched. Through this policy, every sphere of education from, Pre-school to higher education systems is intended to undergo transformational reform in the country. This plan replaced the National Policy on Education (NPE), 1986, which had been in effect for 34 years. By 2026–2027, every child is aimed to acquire the necessary learning competencies in reading, writing, and mathematics by the end of third grade. This mission's goal is to establish an environment that supports universal acquisition of foundational literacy and numeracy. It will put an emphasis on giving children access to education and keeping them in it during their formative years, strengthening the skills of teachers, creating high-quality diversified learning materials for students and teachers, and monitoring how each child is performing with regard to achieving learning objectives.

Opportunities for Language Learning in ECCE

Children's language abilities and general development can be significantly impacted by opportunities and techniques for good language development in ECCE within the framework of the National Education Policy (NEP) 2020. The NEP 2020 places a strong emphasis on the use of mother tongues, regional languages, and the local language in ECCE as well as the promotion of multilingualism. This presents an opportunity to develop a rich language environment that encourages kids to learn other languages while also supporting their development of strong language abilities in their mother tongue. Activities as engaging in talks, storytelling, singing, and reading aloud in a range of languages, introduce children to a variety of linguistic experiences, there should be use of culturally relevant and age-appropriate resources in several languages.

ECCE provides a variety of possibilities for language development, with a particular emphasis on speaking, listening, reading, and writing abilities. The following are some specific learning opportunities for development of languages in ECCE:

- **Dramatic Play:** Children are able to use language creatively while simulating real-life events when they participate in role-playing and dramatic play scenarios.

Vocabulary, communication, and socioemotional growth are all enhanced by engaging children in dramatic play.

- **Family Involvement:** when children work with families it will strengthen language instruction at home, provided the parents are literate and have adequate vocabulary to promote their child's language development. Outside the ECCE environment, parents can use the different advices, tools, and activities. In the case of children from families where parents are not able to provide support, the ECCE classrooms are there to support them.
- **Language Games and Activities:** Playful and engaging language activities, such as word search, rhyme schemes, and crossword puzzles, can be included into daily routines to make language learning more fun.
- **Language through Art & Craft:** When language exercises are combined with arts and crafts, children may identify, describe, and talk about their products, which helps them to use language more creatively and expressively.
- **Multilingual Setting:** Children may be given the chance to learn various languages in multicultural ECCE environments. By increasing cognitive capacities and fostering cultural awareness, exposure to other languages is beneficial.
- **One-on-One Interaction:** Focused language learning chances are made possible by caregivers' or teachers' individualized attention, which is tailored to the student's individual language demands and difficulties.
- **Outdoor exploration:** Children can connect with friends and teachers while playing outside, and sharing their observations, learning, and experiences. This further improves their language development.
- **Rich Language Environment:** Children should be exposed to a wide variety of words, phrases, and sentences in ECCE settings that are language rich. When children are playing and doing activities, teachers and other adults can talk to them, read aloud from books, sing songs, and use descriptive language.
- **Show and Tell Sessions:** These sessions give a great opportunity for children to share their interests, experiences, and items. Language expression, listening comprehension, and speaking in front of an audience develop through this practice.
- **Songs and Rhymes:** Children can learn and practice language skills including vocabulary, phonics, and grammar through the use of songs and rhymes with repetitive lyrics.
- **Story telling and Reading:** Reading aloud to children and having story telling sessions are wonderful ways to introduce them to unfamiliar words, sentence structures, and linguistic patterns. To improve language comprehension and expression, encourage discussion, questioning, and active involvement must be encouraged.
- **Print Rich Environment:** -Many displays, written words and the pictorial representation provide opportunities to interact with different forms of print.
- **The Use of Technology:** by using age-appropriate educational apps, interactive learning games, and multimedia materials, language learning can be complemented, making it more participatory and engaging for young students.

- **Writing and Drawing:** Encourage children to use writing and drawing as a means of self-expression. Help children name their artwork, make simple sentences, and narrate stories to help them develop their language and early reading abilities.

NEP 2020 acknowledges the value of play, reading aloud and story telling. It emphasizes on family and parent participation in ECCE. Working with families to provide learning opportunities outside of the classroom can aid in language development, encourage frequent communication with parents, explaining the value of language development and offering ideas for language-rich activities to do at home. Encourage parents to share music, tales, and customs from their respective ethnic backgrounds in order to foster a multilingual atmosphere.

With these opportunities coming together in ECCE, a thorough approach to language development is created by the early childhood education institution. The nurturing of the young learners who are eloquent and self-assured and well-equipped for future academic achievement will be a reality as envisaged in the policy. Educators may unleash the full potential of language development in early infancy by recognizing and taking advantage of these opportunities, by building a solid foundation in language development for lifetime effective communication and learning.

Challenges in Implementing NEP 2020 for Language Development

The National Education Policy (NEP) 2020 is a comprehensive framework intended to improve the Indian educational system. The implementation of such a policy presents a number of difficulties, particularly with regard to language development. There are four language skills which are essential for language acquisition and proficiency. These skills are listening, speaking, reading and writing. These skills are interconnected and support each other in language development. The following are some of the difficulties experienced by various parties in the execution of NEP 2020 for language development:

Parents and Students: The Policy has given emphasis on using mother tongue in the early years. In this regard, parents and students could be reluctant to switch from one language to another when it comes to the medium of instruction. It is vital to address their worries and persuade them of the advantages of having mother tongue and introduce English later or along with mother tongue. Language preferences of parents and students can make it difficult to enforce a unified language policy in areas where there are multiple languages spoken in cosmopolitan cities.

Societal and Cultural Influences

Because of the close connection between language and culture, some cultural groups may be resistant to changes to the language policy. Language choices in education may be influenced by societal views regarding languages, and it can be challenging to depart from customary methods.

Teachers:

Teachers must be fluent in the languages they instruct. It might be challenging to locate teachers who are fluent in the local tongues in areas with a variety of languages. Teachers must be knowledgeable in language pedagogy, multilingualism, and the application of cutting-edge teaching techniques in order to deliver effective language training. However, there might not be enough qualified language teachers available, particularly for regional and indigenous languages. To meet this issue, continuous teacher training and professional development programmes that emphasise on pedagogical methods and language acquisition are required. Especially in rural and underprivileged regions, teachers may have trouble getting access to high-quality teaching aids and materials for language development.

Administrators and Educational Institutions:

It might be challenging to create a curriculum that meets the needs of varied learners while also conforming to the language development goals of NEP 2020. Up to Grade 5, NEP 2020 promotes using the mother tongue or local language as the medium of instruction. It can be difficult to strike a balance between this and the requirement for English proficiency and other languages at subsequent stages. In order to successfully apply the language development techniques specified in NEP 2020, schools and colleges must provide their instructors with the appropriate knowledge and training. It takes more infrastructure and funding to carry out the language development provisions of NEP 2020. Numerous schools, particularly those in rural and distant places, could not have the necessary amenities such language labs, libraries, and digital resources. effective language teaching may be hampered by lack of access to technology, publications, and teaching aids designed specifically for that language. For implementation to be successful, these infrastructure issues must be addressed, as well as an equal allocation of resources must be ensured.

Early Introduction of writing:

One of the major challenges in ECCE in the area of language development is early introduction of writing, without giving adequate attention to readiness to write. As children are not mentally prepared to do activities in which writing is required, it could affect their future learning prospects and also develop negative attitude towards schooling. NIPUN Bharat Guidelines have paid attention to this fact but the challenge is the parents expect their children to start writing from the age of three, from very first day of schooling. The theory "Learned helplessness" states if the initial experiences are not encouraged, child gets discouraged to attempt to write and it could lead to lack of interest in studies.

Policymakers and the Government:

Generally, NEP 2020 implementation demands a large financial investment because it means that every school need to have a nursery class attached to it. It can be difficult to secure enough financing for initiatives that promote language learning, teacher

development, and infrastructural upgrades. Anganwadis under the Ministry of Women and child Development and the education departments are involved in the ECCE and the implementation of NEP 2020. They need special training in the area of ECCE. It could be difficult to get various organizations to coordinate to ensure smooth implementation. India has a diverse linguistic population and many different languages are spoken. It can be difficult to choose a single language policy and protect regional languages at the same time. The pedagogy of language for ECCE is different from the higher class. Adequate training for the pedagogy from readiness to read and readiness to write need to be incorporated.

The NEP 2020 encourages the use of and adherence to local languages, mother tongues, and regional languages. However, multilingualism and the growth of regional languages are challenged by the widespread use of English in many educational institutions as a language of instruction and communication. It can be difficult to balance the use of regional languages and English competency while ensuring that all students have equal access to educational opportunities. This needs careful planning and the execution of policies. Parents, communities, and governments need to change their perspectives and attitudes in order to implement the NEP 2020 for language development. It may be difficult to address cultural attitudes that emphasise English proficiency over regional languages and to appreciate the value of multilingualism. Overcoming these socio-cultural barriers requires raising knowledge of the advantages of language development, promoting a pleasant language learning environment, and involving communities in the process. Students' language abilities and their capacity to use language in real-life circumstances may not be adequately assessed by traditional examination-oriented systems that emphasise rote memorization. For the policy to effectively measure language proficiency, performance-based assessments that are authentic and aligned with the policy's emphasis on competency-based learning are essential.

Conclusion

Researched in neuroscience, developmental psychology, and economics have demonstrated the benefits of holistic care for children in their most formative and vulnerable years for their cumulative development throughout their lifetime. These years are crucial for language development as well. Notably, India implemented one of the world's largest and most comprehensive ECCE programmes in the 1970s: the Integrated Child Development Scheme (ICDS). Despite improvements over the years, health, nutrition, and education-related indicators of child development for 0–6-year-olds remain far from satisfactory. Despite the universalization of the centrally sponsored ICDS programme, half of India's under-six population does not participate in any form of pre-primary education. Obviously the ICDS did not address its objective of Non-Formal Education effectively. Several government policies and frameworks have reaffirmed the commitment to ECCE services that are developmentally appropriate. The NEP 2020 focuses a lot of emphasis on language development as an essential part of a well-rounded education. The policy acknowledges the linguistic and cultural diversity of India by encouraging multilingualism. The NEP 2020's recommendations regarding language-

related elements, however, present a number of challenges that need for careful planning, resource allocation, and stakeholder involvement. The outcomes of language acquisition, cognitive development, social interaction, and emotional wellbeing among students can all be enhanced by addressing these issues and taking use of the chances. NIPUN Bharat Mission to implement NEP 2020 is a great step. Teacher training with focus on foundational literacy as envisaged in NIPUN Bharat Guidelines needs more attention. Present policy on education also emphasise on ECCE with restructuring whole education system and suggested interventions which need to be implemented honestly so that early interventions can result into several benefits for future generations.

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NEP 2020: Optimising Tagore and Gandhian Idea of Education

Binish Maryam¹

Abstract

The paper aims to analyse the philosophy, pedagogy and objective of the National Education Policy 2020. The article looks into how the ideas of two great philosophers and educationist Mahatma Gandhi and Rabindranath Tagore influences the NEP 2020. The National Education Policy aims to borrow from the existing Indian Knowledge System. The NEP 2020 is indigenous in character and rooted in the cultural epistemology of the rich Indian past. The rich heritage of ancient and eternal Indian knowledge and thought has been a guiding light for this Policy. The paper is divided into three parts, the first section makes a comparative analysis between Gandhi, Tagore on education and the NEP 2020. It draws a parallel between the ideology and beliefs of Tagore, Gandhi and the conviction of NEP 2020. The final section highlights the challenges and opportunities prevalent in the new draft on education policy in India.

Keywords: Progressive Education, Modernity, Aesthetic Education, Morality, Ethics

Introduction

The National Education Policy 2020 advocates the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities-both the 'foundational capacities' of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving – but also social, ethical, and emotional capacities and dispositions. The pursuit of knowledge (*Jnan*), wisdom (*Pragyaa*), and truth (*Satya*) was always considered in Indian thought and philosophy as the highest human goal. The aim of education in ancient India was not just the acquisition of knowledge as preparation for life in this world, or life beyond schooling, but for the complete realization and liberation of the self (National Education Policy, 2020).

The paper aims to analyse the philosophy, pedagogy and objective of the National Education Policy 2020. The article looks into how the ideas of two great philosophers and educationist Mahatma Gandhi and Rabindranath Tagore influences the NEP 2020.

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The National Education Policy aims to borrow from the existing Indian Knowledge System. The NEP 2020 is indigenous in character and rooted in the cultural epistemology of the rich Indian past. The rich heritage of ancient and eternal Indian knowledge and thought has been a guiding light for this policy. The paper is divided into three parts, the first section gives a brief overview of the Tagore and Gandhian philosophy on Education. The second section makes a comparative analysis between Gandhi and Tagore on education and the NEP 2020. It draws a parallel between the ideology and beliefs of Tagore, Gandhi and the conviction of NEP 2020. The final section concludes by highlighting the challenges and opportunities prevalent in the new draft on education policy in India.

Tagore and Gandhi: Pioneers of Education

It was no wonder that both Tagore and Gandhi had started their discourse on education with a critique of colonial system of education. An urge for building the national system led both of them to develop their educational ideals. This is quite evident in their early writings on education and society. Tagore's essay on 'Swadeshi Samaj' written on 1905 and Gandhi's '*Hind Swaraj*' written on 1908 may be referred in this connection. In both we find *an urge* for rejuvenising the self-sufficient village society. Both emphasised on 'atmashakti' as the essence of '*swaraj*'. Both of them discussed about the ill-effect of English education and the neglect of mother tongue. (Acharya, 1997)

According to Tagore, education cannot be universalised unless the mother tongue was the medium. He firmly believed that it was not possible through the medium of English. He was also against the examination-oriented bookish education, which encourages rote learning. According to him, there was hardly any difference between cramming and copying from books as crammers only reproduced whatever was in the books. (Acharya, 1997)

Tagore's educational experiment is just an echo of the educational movement that has central place in educative process and which is known as the Progressive Education. Undoubtedly, there are certain similarities between the Tagore's educational experiment and the Progressive Education. For instance, Tagore greatly emphasises child's individuality and regards freedom and happiness as basic to his education. These two things are also considered very important in the Progressive Education. He insists that education must inculcate social sense and community consciousness in children, while it endeavours to develop their individuality. In order to achieve this end he thinks it necessary to organise learning situations in an appropriate and systematic manner. Rugged individualism of the West which, in fact, is an outcome of a social order based on selfishness, greed, competition and conflict is not acceptable to Tagore (Salamatullah, 1961).

Tagore welcomed the study of the sciences physical and social, and their wide application to the raising of living standards in Indian villages. He encouraged his students to master science so that they might help India to stand on her own feet. But he insisted that with their material prosperity must go to search for a creative and

cultural life, through which the students might find an outlet for expressing their feeling and sensitivity so as to enrich their home life. Tagore felt that without the cultivation of free expression for dance, drama, music and poetry, purely material progress might prove incapable to release the spirit of joy and creativity. He pleaded that education in order to be interesting, living and creative should be broad-based and linked with the life of the community (Mukherjee, 1970).

Furthermore Tagore advised the students to acquire knowledge from direct sources rather than from notebooks. Independent research, he pointed out, would be lively and creative. His conviction was that a purely intellectual education was ineffective and dry because it ignored the joy of creation. Knowledge to him was not a mere acquisition of a number of facts stored up in the memory. If knowledge is to bring new ideas in life it must be an organic growth that has been assimilated and understood completely by the individual.(Mukherjee, 1970)

“The highest education is that which does not merely give us information but makes our life in harmony with all existence.”(Rabindranath Tagore)

Tagore, clearly set out his idea of a university. Any university should preserve and propagate the culture, tradition, thought and ideals of the people. The university should also be in living contact with the present and adaptive to the changing world so that it could be a centre of continuity between the past and the present. For full development of the individual, universities should become responsible for placing emphasis on moral and spiritual values. They should cultivate a sense of social and civic responsibility as well as appreciation for beauty in art, music and ethics. Their teachers should endeavour to develop an awareness of local problems, cultivate the capacity to analyse and seek solutions to problems, and help realize national ambition. Universities must assume a positive role in the improvement of the entire nation (Mukherjee, 1970).

Tagore's attitude toward institutionalized education, which he formed in school as a child, is reflected in this tale. He was always acutely aware of the alarming absence in contemporary educational institutions of an atmosphere conducive to the growth of intellectual and artistic abilities.

“Don't limit a child to your own learning, for she was born in another time.”
(Rabindranath Tagore)

The teacher, for Tagore, was the individual who breathes life into the entire educational system and gives it direction and energy. Tagore said *“ We must know that only he can teach who can love. The greatest teachers of men have been lovers of men. The real teaching is a gift; it is a sacrifice; it is not a manufactured article of routine work; and because it is a living thing, it is the fulfilment of knowledge for the teacher himself”*. He believed in the integrity and inviolability of the traditional Indian guru-shishya relationship, the almost spiritual tie between mentor and disciple. This reflects in Tagore's sense of aesthetic education that is value based and ethical (Lal,1984).

It may be noted that Gandhi also held similar views on most of the above points. He was also against the prevailing examination-oriented bookish education and condemned the cramming and rote learning. He advised not to prescribe too many books in our schools. He was of the opinion that in a poor country like ours, books should be prescribed judiciously and must be few in number; otherwise, poor children will be deprived of educational opportunities. Like Tagore, he was also of the opinion that medium of education up to highest level should necessarily be mother tongue (Acharya, 1997).

Gandhi's vision of education was born out of his criticism for the modern British education system that was utilitarian to generate English literate clerks and officers that can run the machinery of British colonialism. Moreover, this education degraded the indigenous cultural ethos of the people while culturizing them in Englishness, thereby developing a cultural taste for the colonial foreign while disassociating them from their roots. He conducted his own experiments with education in South Africa and later in 1937, propounded 'Buniyadi Talim' (Basic Education) and its extended form, 'Nayi Talim' (New Education) (Sykes, 1937).

In his book, *Hind Swaraj* Gandhi deconstructs the meta narrative based on modernity defined through western parameters. He was highly critical of the hegemony that was set up by the colonial rulers. The binary created in terms of West/East, tradition and modernity were not acceptable to Gandhian idea of *Swaraj*. He, therefore, in *Hind Swaraj* critiqued the western idea of modernity and coined a term 'alternative modernity', where the eastern culture, mother tongue and ethical value based teaching will be given precedence over English education and learning for commerce devoid of ethics and morals.

"By education I mean an all-round drawing out of the best in the child and man body mind and spirit." (Mahatma Gandhi)

Gandhi saw the purpose of education in its holistic sense that facilitates in all-round development of the individuals and the society at large, where positive character-building of the individuals can create a ripple of non-violent peaceful attitude, behaviour and values that leads to the making of the society and the country itself. (Allen, 2007)

"Education is the basic tool for the development of consciousness and the reconstitution of society." (Mahatma Gandhi)

Gandhi believed that existing system of education was defective in three important matters. First, it was based upon foreign culture to the almost entire exclusion of indigenous culture. Second, it ignores the culture of the heart and the hand, and confines itself simply to the head; and third, real education is impossible through a foreign medium. In 1921 he wrote in *Young India* that the scheme of education he envisaged would "fulfil three purposes: make education self-supporting, training the bodies of the children as well as their minds, and pave the way for a complete boycott of foreign yarn and cloth. Moreover, the children thus equipped will become self-reliant and independent (Acharya, 1997).

Unfortunately, the educational discourse in India was changed in the wake of (Nehru's) modernisation programme. Both Tagore and Gandhi lost their importance in the national discourse but were remembered more by street names and 'bhavan' names. In every city we have streets in the name of Gandhi and 'a Rabindra Bhavan'. The national system of education however, still remains the legacy of colonial system, turning more and more segregating and bookish (Mukherjee, 1970).

Linkages between Gandhi-Tagore and Philosophy of NEP 2020.

The fundamental principles of National Education Policy 2020 comes as a surprise. In spirit and essence it is based on Tagore and Gandhian beliefs on education. NEP 2020 aims for holistic development of learners. It largely adopts Tagore's and Gandhi's aesthetic, ethical, progressive, moral and indigenous approach towards education. The NEP 2020 document is a blueprint of the ideas and thought process of these two great luminaries. Education is not seen as a tool for economic and commercial purpose. Rather it is treated as a medium for character building and nation building. The NEP as inspired by the two philosophers thus fosters on the love for vernacular, indigenous knowledge system, developing student's ability to think independently and critically, focusing on all round development of individual and eliminating system of rote learning. There are five major aspects that draws a parallel between NEP 2020 and Tagore-Gandhian values on education. **a) Holistic development of learners b) Multilingualism and the Power of Language c) Reduce curriculum content to enhance essential learning and critical thinking d) Teaching in ethics and constitutional values e) Focus on rootedness and pride in India.** These are the core teachings of Gandhi-Tagore vision on education. The fundamental principles of this policy as discussed below highlights the linkages between Gandhi-Tagore and philosophy of NEP 2020.

- **The NEP aims at recognizing, identifying, and fostering the unique capabilities of each student,** by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres. There is **flexibility**, so that learners have the ability to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests. **No hard separations** between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between different areas of learning. **Multidisciplinary** and a **holistic education** across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order. The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.
- To ensure the unity and integrity of all knowledge; **emphasis on conceptual understanding** rather than rote learning and learning-for-exams; **creativity and critical thinking** to encourage logical decision-making and innovation. Curriculum content will be reduced in each subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based,

and analysis-based learning. Students will be given increased flexibility and choice of subjects to study, particularly in secondary school- including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. There will be no hard separation among ‘curricular’, ‘extracurricular’, or ‘co-curricular’, among ‘arts’, ‘humanities’, and ‘sciences’, or between ‘vocational’ or ‘academic’ streams. The **focus is on regular formative assessment for learning** rather than the summative assessment that encourages today’s ‘coaching culture’. **Life skills** such as communication, cooperation, teamwork, and resilience; **extensive use of technology** in teaching and learning, removing language barriers, increasing access for *Divyang* students, and educational planning and management.

- **The aim is to promote multilingualism and the power of language** in teaching and learning. For purposes of cultural enrichment as well as national integration, all young Indians should be aware of the rich and vast array of languages of their country, and the treasures that they and their literatures contain. More HEIs, and more programmes in higher education, will use the mother tongue/local language as a medium of instruction, and/or offer programmes bilingually, in order to increase access and GER and also to promote the strength, usage, and vibrancy of all Indian languages. Private HEIs too will be encouraged and incentivized to use Indian languages as medium of instruction and/or offer bilingual programmes. (NEP 2020)
- **Ethics and human & Constitutional values** like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice; Students will be taught at a young age the importance of “doing what's right”, and will be given a logical framework for making ethical decisions. As consequences of such basic ethical reasoning, traditional Indian values and all basic human and Constitutional values (such as *seva, ahimsa, swachchhata, satya, nishkam karma, shanti*, sacrifice, tolerance, diversity, pluralism, righteous conduct, gender sensitivity, respect for elders, respect for all people and their inherent capabilities regardless of background, respect for environment, helpfulness, courtesy, patience, forgiveness, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity) will be developed in all students.
- **Teachers and faculty as the heart of the learning process** – their recruitment, continuous professional development, positive working environments and service conditions. The quality of teacher education, recruitment, deployment, service conditions, and empowerment of teachers is not where it should be, and consequently the quality and motivation of teachers does not reach the desired standards. The high respect for teachers and the high status of the teaching profession must be restored so as to inspire the best to enter the teaching profession. The motivation and empowerment of teachers is required to ensure the best possible future for our children and our nation.

- **A rootedness and pride in India**, and its rich, diverse, ancient and modern culture and knowledge systems and traditions; **education is a public service**; access to quality education must be considered a basic right of every child; **substantial investment in a strong, vibrant public education system** as well as the encouragement and facilitation of true philanthropic private and community participation. Students will be sensitized through this new school culture, brought in by teachers, trained social workers and counsellors as well as through corresponding changes to bring in an inclusive school curriculum. The school curriculum will include, early on, material on human values such as respect for all persons, empathy, tolerance, human rights, gender equality, non-violence, global citizenship, inclusion, and equity. It would also include more detailed knowledge of various cultures, religions, languages, gender identities, etc. to sensitize and develop respect for diversity. Any biases and stereotypes in school curriculum will be removed, and more material will be included that is relevant and relatable to all communities.

The government illustrates and absorbs these philosophical nuances in the NEP 2020. It promises to create confident, creative, enlightened, virtuous and responsible citizen who would participate in the nation building project. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution. It largely aims to fulfil the dream of true *Swaraj* as envisioned by Gandhi and real freedom as illustrated by Tagore by transforming and mentoring young minds.

Conclusion

Optimising & Tagore's and Gandhian vision on education, the purpose of the NEP 2020 is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. The vision of the policy is to instil among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen (NEP,2020).

Effective implementation is the key to the success of any progressive education policy. For NEP 2020, implementation of the spirit and intent of the policy will be the most critical matter. The philosophy and pedagogy of Tagore and Gandhi that gets reflected in the NEP 2020, should not turn into mere rhetoric. Keeping in mind the spirit and purpose of these great educationist, the NEP 2020 must provide us with adoption of such ethical, moral and cultural values in the education system. Various education policy in the past have also intended to adopt the idealist socialist philosophy of inclusion and indignity but have failed to bring them in reality. Therefore comprehensiveness in implementation will be key; as this Policy is interconnected and holistic. Only a full-fledged implementation, and not a piecemeal one, will ensure that the desired

objectives are achieved. Lastly, since education is a concurrent subject, it will need careful planning, joint monitoring, and collaborative implementation between the Centre and States. Timely infusion of requisite resources - human, infrastructural, and financial - at the Central and State levels will be crucial for the satisfactory execution of the Policy (NEP, 2020).

The outlay for the education sector in the budget is looking up - increasing to Rs.1,12,899.47 crore for the next fiscal year from Rs.1,04,277.72 crore for fiscal 2023. Education minister Dharmendra Pradhan tweeted that the "highest ever allocation" to the education sector would pave the way to transform India into a "knowledge-based economy". Though still the total share of the education sector in the GDP remains stagnant at 2.9%. Whereas in the developed nations like USA and United Kingdom 6.0% and 6.1% respectively, which is still higher than Indian allocation of budget for education. Therefore giving shape to such an ambitious and all inclusive education policy will be an uphill task for the Government of India.

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An Exposure of Spelling Variations to English as Second Language Learners in Multilingual Classrooms: A Review of Literature

Vidhi¹ & Mohammad Asjad Ansari²

Abstract

The present study focuses on analysing spelling errors in English as second language acquisition occurring due to the influence of the exposure to the mother tongue or L1 among the students. Non-native learners have struggled with many of the same idiosyncrasies of second language spelling that cause difficulty for native speakers of other languages. The majority of the errors exhibited phonetic resemblance to the accurate spelling. This implies that the students transcribed words based on their auditory perception. They possess knowledge of English alphabets and associate them with certain sounds. While this connection is not entirely incorrect, it is essential to note that a strict one-to-one correspondence between these alphabets and the sounds does not consistently exist, revealing a gap in the learners' understanding of these associations. It has been observed that the students have not received sufficient attention on how spellings have been acquired in second language learning and whether unfamiliar L2 spellings contribute to the knowledge of a first language. The paper reviews qualitative and quantitative research papers, shedding light on strategies employed for spelling in writing. It is observed that students tend to rely on the phonetic aspects they perceive during speech when attempting to spell words.

Keywords: Spelling Errors, Error Analysis, Second Language Learning, Multilingual Classrooms

Introduction

Language is regarded as one of the most effective means of transmitting knowledge and information in the classroom. The two major roadblocks to school learning are the medium of classroom instructions and the textbooks used in the classes, particularly for

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students from marginalized communities who get exposure to the second language only in the formal classroom.

Fifty per cent of the world's out-of-school children live in communities where the language of schooling is rarely, if ever, used at home. This underscores the biggest challenge to achieving Education for all (EFA): A legacy of non-productive practices that lead to low levels of learning and high levels of dropouts and repetition. (In Their Own Language: Education For All (World Bank), 2005) [1]

The students are unable to speak or comprehend in the language classroom where the textbooks and teaching instructions are imparted in the second language. The consequences for many students are predictable and have been described in many types of research. Through the analysis of language policies and research literature, it is said that the classroom pedagogy excludes students' native language, and the monolingual policies in multilingual classrooms have been a focal reason for their failure and poor comprehension of the second language.

(NEP 2020) states that children pick up different languages early on from the foundational stage onwards, i.e., the age between 2 and 8. Multilingualism brings cognitive benefits to young students and children exposed to the different languages at an early stage. But, children are given exposure to language with a particular emphasis on the mother tongue. (4.12)

(NEP 2020) also stresses that all efforts will be made early on to ensure that any gaps that exist between the language spoken by the child and the medium of teaching are bridged. Teachers will be encouraged to use a bilingual approach, including bilingual teaching-learning materials, with those students whose home language may be different from the medium of instruction. (4.11)

(NEP 2020) expects to demonstrate basic proficiency in three languages by the end of secondary school. Languages should include one language of India at the literature level and two languages which can comprehend the two subjects in Home/ Mother Language and English respectively. (4.13, 4.14)

Therefore, one area of literacy development that has not received sufficient attention is learners' acquisition of spelling strategies. While research has explored how "invented" or approximate spelling development of native speakers, little is known about how ELLs use approximate spellings. The way they create spellings for unfamiliar words should contribute to their knowledge of English orthography and serve as a comparison to first language (L1) students' literacy development.

Non-native learners have struggled with many of the same idiosyncrasies of English spelling that cause difficulty for native speakers of other languages, but different phonology of their native language and second language led to the types of spelling errors. Students need to understand the spelling-meaning relationship among words so that they can learn how the spellings or structure of familiar words can be clues to the spelling and the meaning of both the words and vice versa. (Devika, August 2017)

Need of the Study

What the learners, especially rural students, really need is the problem area where the faults are traced, shared, and discussed to make it a real learning experience. Students need to be exposed to specific spelling errors where they can work to overcome that problem. Errors should be viewed as attempts or stages of learning the language. Hence, the study is of immense importance as it would try to uncover specific spelling errors in the English language and specific modules can be prepared so that the learning of the students can be strengthened.

Review of Related Literature

The study (*Ganesh, D, Charyulu, & Hussain, 2019*) in the context of the Indian education system highlighted the acquisition of the English language as a second language (L2) is an integral and unavoidable aspect alongside one's native language (L1). Effectively mastering a second language requires intellectual, physical, and emotional effort to successfully convey linguistic messages. In particular, engineering students from rural areas often resort to using their mother tongue (Telugu) as a means of communication in some engineering colleges. This preference stems from the challenges they encounter when attempting to communicate in English, the designated L2. This research aimed to delve into the factors, issues, and complexities faced by engineering students from rural backgrounds who were enrolled at VIIT College in Visakhapatnam, Andhra Pradesh. Data was gathered through a combination of questionnaires and semi-structured interviews involving 40 students, comprising 32 male and 8 female participants. The collected data underwent both statistical and graphical analyses. The findings of the analysis shed light on various reasons for students' struggles, including limited classroom time dedicated to English learning, insufficient support from teachers, family, and peers. Additionally, the study identified the use of a bilingual teaching approach and a delayed introduction to English-medium education in previous academic experiences as contributing factors to the difficulties.

The study (*Cordewener, Hasselman, Verhoeven, & Bosman, 2018*) examined the role of instruction in spelling performance and spelling consciousness in the Dutch Language. A sample of 115 third-grade spellers was assigned to a strategy-instruction, strategic-monitoring, self-monitoring, or control condition which showed the different types of metacognitive aspects. As per the results, the students in training sessions made more advanced movements in spelling performance and spelling consciousness than students in the control conditions. The students in the strategy-instruction condition were conscious of spelling and made significant improvements in the pre-test and post-test, hence there was significant progress in spelling performance on regular words than on loan words. The trained students were accurate in assessing their correct spellings in all four conditions whereas controlled students were overestimating their spelling ability frequently. Dutch spellers were given orientation toward words that are consistent in their phoneme-to-grapheme correspondences and those that are inconsistent. It has been reported that, with consistent words, they should learn the segmentation of

sounds into their constituent phonemes and assign a particular grapheme to each phoneme. For inconsistent words, they should cram their spellings keeping the orthographic rules in mind. It has been justified that children need to develop spelling consciousness for the rule-based spelling words which will enhance their spelling performance.

The study (*Martin, 2017*) talks about the crucial literacy skills which include the ability to learn, store and use information about the orthographic knowledge of words as stated in another study (*Stanovich & West, 1989*). It has been observed that orthographic awareness of the first language (L1) unknowingly impacts the orthographic awareness of the characteristics of the second language (L2). In this study, different L1 speakers (French, Hebrew, Mandarin Chinese) were chosen who were English language learners with some English native speaker participants. All were tested on their English spelling knowledge where one word-pseudo homophone discrimination task was performed targeting misspelling testing on vowels vs consonants. Consistent with previous research (*McBride-Chang, Bialystok, Cong, & Li, 2004*), it has been seen that Chinese speakers had the highest second language accuracy followed by Hebrew and French. Nevertheless, in this study, the non-alphabetic speaking language i.e. Chinese and Hebrew had received significantly lower accuracy on misspelt words involving vowels compared to consonants. There was a substantially varied accuracy difference in the vowel-consonant comparison across the L1 group. The results demonstrated that the existence of vowel-consonant graphemes of L1 impacted the orthographic knowledge of L2 development and sensitivity to different types of word misspellings.

The study conducted by *Lahiri (2015)* presents an exploration into English spelling errors made by native Hindi-speaking students. The research was conducted among fifth-grade students attending an English medium school in India. Students from similar socio-economic backgrounds, all from the same school, were engaged in diverse tasks designed to assess their proficiency in English spelling. The identified errors were categorized into five distinct groups. Notably, a prevalent trend emerged wherein a significant portion of the misspelled words exhibited phonological resemblance to the correct spelling. This phenomenon indicated that students transcribed words as they perceived them, drawing on their understanding of English alphabets and their corresponding sounds. This practice seemed to mirror the influence of their native language (L1), Hindi, where a direct correspondence existed between sounds and orthographic symbols. However, this phonological congruence does not hold true for English. Compounding the challenge, numerous English words incorporate silent letters, further contributing to spelling inaccuracies. Additionally, an incomplete grasp of correct English pronunciation compounded the frequency of spelling errors.

Ehri (2014) talks about Orthographic Mapping (OM) being enabled by phonemic awareness and grapheme-phoneme knowledge, which involves the letter-sound connection formation to relate the spellings, pronunciations, and building up the meanings of specific words in the memory. He regarded the development of OM from visual non-alphabetic to partial alphabetic, to full grapho-phonemic, to

consolidated grapho-syllabic and grapho-morphemic. The recent findings of the study indicate that OM supports sight word reading where beginners were oriented on articulatory phonemic features, grapheme-phoneme relationship with letter-embedded picture mnemonics. Read aloud strategy and silent reading helped in improving the pronunciation of the words and building their vocabulary respectively. The process of phonological constituents and word memory impacted the spelling-sound connections which were actually retained in the memory.

Doignon-Camus (2014) agrees that reading brings the establishment of letter to phoneme connection where in the beginning, the pre-readers do not have phonemic awareness. Thus, in the study, the syllabic bridge strategy has been recommended for French speakers to build the associations between letters and syllables precisely. In the experimental study, it has been observed that the statistical properties of letter co-occurrences are boosted by explicit instructions regarding the letter cluster and phonological syllable structure.

Fatima (2013) attempts to make a linguistic analysis of spelling mistakes in the writing of class V-VII students at Urdu medium schools in Aligarh. Through the error analysis, five types of spelling errors were found in the data i.e. substitution, addition, deletion, permutation and splitting and merging of the word boundaries. In the study, the error of substitution and addition formed 80 per cent of spelling errors in the total. The research outlined the features of the Urdu Writing System and its irregularities such as homophonous letters, and inconsistency between letter and sound. It was also reported that the effect of the sociolinguistic setting on the learner also impacted the language learning efficiency of children.

Dixon (2010) examined the influence of the first language (L1) orthography on bilingual children's spelling performance in their second language (L2) i.e. English by administering the subtests of spelling and letter-word identification from the Woodcock Proficiency Battery to a sample of 285 six-year-olds in Singapore. The "look-say" method in English was used for the orientation of the children as literacy instruction. As per the analyses of covariance, the results showed a statistically significant effect of L1 on conventional spelling but not specifically on phonological spelling, controlling for reading proficiency. The sample taken from the Chinese (morpho-syllabic) group not only scored higher than the sample of Malay speakers (alphabetic) and Tamil speakers (syllabic) overall but also Chinese speakers made more real-word substitution and transposition errors.

The study by *Singh (2006)* where he discussed that despite the remarkable linguistic diversity found in South Asia, there existed notable commonalities among South Asian languages. A prime example is the shared utilization of scripts rooted in the ancient Brahmi script by major Indian languages. These scripts exhibit a consistent arrangement of alphabetic characters, phonetic attributes, and a coherent structure. Leveraging this insight, researcher constructed a computational phonetic model centered on Brahmi-origin scripts. The core of this model encompassed phonological representation, incorporating select orthographic traits, unified through a common alphabet derived

from these scripts. Numerical values were attributed to these features, coupled with a stepped distance function (SDF) and a mechanism for aligning sequences of feature vectors. The SDF computed phonetic and orthographic likeness between two characters. This model holds promise for diverse applications, including spell checking, anticipatory spelling and dialectal analysis, text standardization, identification of rhyming words, and detection of cognate terms spanning different languages. Preliminary experiments exhibited promising outcomes.

The study by *Wiltshire, and Harnsberger, (2006)* delves into the disparities between two distinct groups, characterized by their native languages (Gujarati and Tamil), to assess the extent to which Indian English (IE) accents conform to a unified phonological-phonetic system (referred to as General Indian English) or are shaped by influences from the speakers' respective native languages. The analysis involved the examination of consonants, vowels, and intonation patterns exhibited by five Gujarati English (GE) and five Tamil English (TE) speakers within the context of IE. The transcriptions of speech were augmented by acoustic analysis in select cases.

The findings illuminate the presence of transfer effects in multiple dimensions. Specifically, transfer effects manifested in the back vowels of GE, the rhotics of TE, and the distribution of rising versus falling pitch accents in GE intonation. Moreover, the influence of the General Indian English model was evident in the front vowels of both GE and TE, as well as in the manifestation of initial voiced stops in TE. These resulted unveil the combined phonetic and phonological impacts of the native languages of IE speakers on their accent within the IE framework. Notably, these linguistic influences, which persist even among proficient speakers, appeared to override the norms of General Indian English. They manifested across both the discrete phonemic elements and the broader suprasegmental aspects of their spoken language. The evolution of English as a second language in India has given rise to distinct sound patterns encompassing both segmental and prosodic characteristics.

Results and Discussion

As per the analysis of the literature, it is stated that second language learners make certain spelling errors such as usage of faulty graphemes, ignorance of spelling rules, transfer of the L1 spelling system, mispronunciation, overgeneralization, and unfamiliarity with English pronunciation. The students, especially Hindi language speakers, seem to write the spellings only based on sounds they catch when they speak the word as most of the Hindi spellings correspond with their sounds. But in the case of the English language, there are only 26 letters corresponding to the 40 units of sounds (Treiman, 1993).

Students with excellent phonological awareness have a better chance of becoming good readers, whereas students with weak phonological awareness tend to make mistakes in reading. In other words, English language learners may exhibit English spellings according to their first language literacy experience (Kilpatrick, 2016).

Building on Read's (1975) research, Gentry (1982) describes five stages of spelling development: pre-communicative, semi-phonetic, phonetic, transitional, and correct. According to Gentry (1982), spelling is a linguistic activity which accommodates the competence of phonemes and letter patterns. It is essential to build the insight into sound-letter mapping, understanding of morphemes such as inflections and derivations of words, and historical words origins (Joshi, 2008).

As per the phonetic model of Indian languages given by *Singh (2006)*, the wide adoption of Brahmi-origin scripts across major Indian languages affirms their shared characteristics. In this paper, the author introduces a practical computational model for Brahmi scripts, which is well-suited for real-world natural language processing tasks. By incorporating articulatory and orthographic attributes to represent characters within a unified Brahmi alphabet, the model adeptly addresses spelling variations and regional nuances in word forms. It comprises a UTF-8 to ISCII code mapping, a comprehensive set of primarily phonetic features along with their corresponding codes and numerical values, a transformation from ISCII codes to feature vectors, an orthographic and phonetic similarity assessment through the stepped distance function (SDF), and an alignment algorithm employing dynamic time warping for sequence comparison. The research conducted experiments that demonstrate the model's utility in applications such as spell checking, text normalization, cross-language cognate word identification, prediction of spelling and regional variations, and rhyme discovery. Central to these applications is the calculation of orthographic and phonetic similarities across letters, words, and strings. While the results are promising, certain practical challenges, such as search efficiency, feature refinement, optimization of the SDF, and alignment algorithms for complex cases, merit further exploration. The model presented holds the potential for adaptation to other scripts and diverse linguistic contexts.

In Lahiri's study conducted in 2015, it was observed that Hindi spelling primarily adheres to phonetic principles, showcasing a direct correlation between phonemes and graphemes. In Standard Hindi, the presence of ten distinct vowel sounds corresponds to ten individual symbols, establishing a straightforward one-to-one relationship between sound and its written representation. This characteristic facilitates the anticipation of word spellings based on their pronunciation, which is common among native Hindi speakers. This predictability often leads to errors in English spelling, as the same predictability does not hold true for the intricacies of English phonetics and orthography.

For Hindi speakers, instances such as 'onec' (instead of 'once'), where 'one + c' is written to denote 'once', are prevalent due to the application of this predictable phonetic strategy, which is effective in Hindi but less so in English. This phenomenon extends to both vowels and consonants. Unlike English, where a single symbol may denote multiple sounds, and vice versa, this stark difference becomes a confounding factor for learners of English. This divergence in phonetic correspondence manifests in errors such as 'leafi' (instead of 'leafy') and 'vere' (instead of 'very'), where symbols like 'y,' 'i,' and 'e' are interchangeably used for the sound /i/. Moreover, the interchangeability of symbols

such as 's' and 'c' for the same sound contributes to errors like 'risite' (instead of 'recite').

Furthermore, the intricate nature of English spelling, characterized by silent letters, poses challenges for L2 English learners. The omission of silent letters at the end of words results in errors such as 'barbe' (instead of 'barber'), 'lisen' (instead of 'listen'), and 'becaus' (instead of 'because'). Notably, the study highlighted instances where students lacked awareness of English spelling rules. For instance, they substituted the past tense affix '-ed' with 'd' (e.g., 'askd' instead of 'asked'), showcasing a lack of familiarity with this grammatical convention.

Analogical reasoning was also evident in students' approach to spelling, leading them to add a silent 'e' at the end of words that do not follow this convention. For instance, in 'truthful,' students applied an analogy ('truth' + 'full') to create 'truthfull.' Doubling consonants in words typically spelled with a single consonant also emerged as a common pattern.

The study highlighted that a student's inability to accurately perceive or identify all the phonemes within spoken words significantly impacts their spelling proficiency. This deficiency appears closely linked to a student's English proficiency level, which may, in turn, stem from limited exposure to the language. The underpinning source of this issue appears to be a lack of sufficient language exposure and familiarity.

In *Fatima (2013)* study, emphasis is placed on Urdu encountering a challenge in effectively segmenting words. The spectrum of errors committed by learners during writing encompasses various categories. Some errors originate from the incorrect insertion of spaces, while others arise due to the omission of spaces. Notably, the occurrence of split errors is significantly more prevalent among learners in the fifth grade in comparison to those in the sixth and seventh grades. The learners' struggle with delineating appropriate spaces between words becomes evident through their written compositions. Instances where a single word is inadvertently separated into two distinct words abound, underscoring the difficulty posed by this aspect. It is noteworthy that the Urdu writing system places minimal emphasis on inter-word spacing conventions, thereby resulting in learners often neglecting to incorporate proper spacing between adjacent words

The investigation of (*Wiltshire & Harnsberger, 2006*) into Indian English accents in relation to native language backgrounds yielded compelling outcomes. The analysis unveiled distinct transfer effects, notably observed in the back vowels of Gujarati English (GE), the rhotics of Tamil English (TE), and the distribution of pitch accents in GE intonation patterns. Additionally, the imprint of the General Indian English (GIE) model was perceptible in the front vowels of both GE and TE, as well as in the occurrence of initial voiced stops in TE. In essence, the data underscore the intricate interplay of phonetic and phonological influences stemming from the native languages of Indian English speakers. Even in the case of highly proficient speakers, these influences tend to overshadow the prescribed norms of General Indian English, making their mark not only

on individual phonemes but also on the broader rhythmic and intonational features of their speech. This study underscores the multifaceted nature of accent formation in Indian English and sheds light on the nuanced interrelationship between linguistic backgrounds and spoken accents within the Indian English context

Conclusion and Implication of Study

In one of the first major studies of children's beginning attempts at learning to spell, (Read, 1975) examined the writing of thirty pre-schoolers who were able to identify and name the letters of the alphabet and relate the letter names to the sounds of words.

In the study by (Rueda & Windmueller, 2006), diagnosticians, and teachers may recognize patterns of spelling errors because of different influences such as first language literacy, difficulty in decoding or encoding the words, etc. This will help the teachers to filter out those students who indicate the need for Special Education Services.

<h2>Literature Review Analysis</h2>	
OUTCOME	
	• Letter- sound correspondence
	• Five stages of spelling development- precommunicative, semi-phonetic, phonetic, transitional, and correct.
	• Create spelling of unfamiliar English words to their knowledge of first language (L1).
	• Children may be diagnosed as having reading disorders due to difficulties in either decoding ("sounding out") or encoding (spelling) words due to the influence of L1 on English Language.
	• The graphemes of L1 impact the development of L2 orthographic knowledge in different types of word misspellings.
	• Five kinds of spelling errors are found in the data viz, substitution, addition, deletion, permutation and splitting and merging of the word boundaries
	• Syllabic Bridge more direct way of learning spelling-to-sound correspondences in French.
	• Spellers were given orientation toward words that are consistent in their phoneme-to-grapheme correspondences and those that are inconsistent.

Table 1: Literature Review Analysis of the second language spelling errors occurring due to the influence of the exposure to the mother tongue or L1 among the students.

Children usually contain their word representations with inaccurate or incomplete phonological and orthographical representations of certain letter constituent (Wang , Koda, & Perfetti, 2003). Monolingual children display a pattern of errors that reflect their movement through phases or stages of literacy development (Moats, 1995; Ehri, 1998). Bilingual, or multilingual children’s lexical representations follow a similar pattern with the addition that both, or all, languages, consecutively or simultaneously acquired, impact the representation in the other (August & Shanahan, 2006). Therefore, for children speaking more than one language who are learning to read, spell, and write in English, the orthography in LI must be taken into consideration when examining their

reading and spelling acquisition in English. With this, the spelling modules can be developed for students for acquiring the L2 spelling efficiently.

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The Role of Intercultural Communication in the Emergence of Student's Self-Identity

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Abstract

This research paper examines the importance of intercultural communication in the construction of self-identity among young individuals. In the process of intercultural communication, individuals of diverse cultural backgrounds engage in negotiation and meaning-making by sharing their ideas with other cultural groups to construct their self-identity. Self-identity construction in young people is influenced by their intercultural interactions with family, friends, and social media. The research highlights how intercultural communication within family, friends, and social media influences the construction of self-identity among young individuals. To achieve this, qualitative research was conducted on 40 higher-education students. The findings reveal that the students aspire to develop a positive and robust identity that can empower them and the society. Moreover, family and parental interactions are vital in identity formation. Contemporary youth consider identity as dynamic and dependent on the situation and time. While social media platforms shape their identities and expose students to fake identities, leading to skepticism towards such platforms. As a result, students prefer face-to-face interactions both in and out of the classroom.

Keywords: Intercultural Communication, Self-Identity, Offline and online interaction, Socialization, Higher Education

Introduction

Intercultural communication occurs when individuals influenced by different cultural communities negotiate shared meanings in interaction. Intercultural communication refers to communication among individuals from different cultures in interethnic,

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interreligious, and even interregional communication. Thus, when a Panjabi woman interacts with a Kerala man, intercultural communication takes place. (Rao & Thombre, 2015). This interaction occurs either through face-to-face or online communication. However, in the construction of self-identity, individuals create meaning through intercultural interaction, which helps to socialize their lives. The process of intercultural interaction and socialization occurs variedly online (formal and informal) and offline with family and friends. As children mature across the globe, they may encounter difficulty reconciling their desire for material possessions with adhering to customary values. However, it is widely believed that personal growth and development are of greater significance than accumulating worldly goods. This conflict enhances young adults already experiencing stress and strain due to the developmental challenge of identity formation during this stage. (Suchday, 2015). This paper attempts to explore the role of intercultural communication in the development of students' self-identity. The research focuses on the various integrated themes of intercultural communication: Acquisition of Identity, socialization with family, friends, and socialization through online learning.

Review of the related Literature

Individuals' identities are shaped by their intercultural interaction with different cultural groups (Samovar et al., 2015), such as gender, age, class, race, ethnicity and religious understanding and recognizing one's identity is essential for personal and professional growth (Jenkins, L. D., 2003). However, Identity formation is an absolutely critical period during which individuals must start introspecting, "Who am I?" It serves as a vital bridge between childhood and young adulthood, where cultural implications and social expectations begin to hold significant weight. (Erikson, 1963) The notion of "self" is deeply ingrained in physical and social identity, yet its interpretation differs across cultures and eras. Our society places high regard on personal accomplishments, which brings forth both prospects and hazards, akin to a precious yet perilous fish. (Baumeister, R. F., 1997). Identity formation is a lifelong process that starts in infancy. There are four identity statuses: Identity Achievement, Foreclosure, Identity Diffusion, and Moratorium. These are based on the presence or absence of a decision-making period (crisis) and the level of personal investment (commitment) in occupation and ideology. (Marcia, J. E., 1980). However, in one's life, an individual encounters numerous separations that ultimately shape their identity, foster personal growth, and facilitate integration. These identities are vital links connecting to society (Hall, 1976). There are numerous agencies of socialization. Parents shape their child's values and beliefs and should adjust their parenting style to their child's stage of development. The family is crucial for emotional and psychological growth, but too much emphasis on conformity can lead to rebellion and false self-identity (Bansal, 2013). The other mode of learning is Online socialization which involves replicating traditional face-to-face communication in online settings. Educators should guide online interactions and communication methods while exploring new styles of communication that blend academic and personal

discourses. This includes the emergence of hybrid and converging communication styles. (Nicol, Minty, & Sinclair, 2003).

Objectives of the Study

1. To understand how the concept of Identity is perceived by students
2. To analyze the student's intercultural relation with the family in the construction of an identity.
3. To find the effects of online intercultural interaction on students' self-identity
4. To explore social media's role in forming students' self-identity.

Research Questions

The present paper attempts to answer the following questions:

1. How are self-identities important to the students?
2. How interaction with the family helps in the understanding of various identities? (Good or bad).
3. How do formal and informal online interactions affect the student's self-identities?
4. What role does social media play in the formation of self-identities of the students?

Research Methodology

This study used qualitative data and thematic analysis techniques to analyze a questionnaire focused on intercultural communication and youth self-identity. The questionnaire had two sections, one for demographics and one with 12 open-ended items divided into three themes: acquisition of identity, family socialization, and online socialization. The sample of the data was collected through snowball sampling.

Gender-wise distribution of the sample

Out of a total sample of 40 students, 28 were female and 12 were male. The analysis of the quantitative element in the data is done by calculating percentages of respondents identifying with specific categories. Gender-wise varied representation of the sample is mentioned below:

Table 1: Gender-wise distribution of the sample

Sample of the study	No. of participants	Percentage
Female Students	28	70%
Male Students	12	30%
Total	40	40

The questionnaire was given to 40 students, including 12 male and 28 female students. In this research, only graduate students from different states were taken under 17 to 26 years. The findings of the demographic profile depict that all participants belonged to two large religious communities in India: Hinduism and Islam. Out of 40 participants, 13

girls and two boys were from Hinduism, and 15 girls and ten boys were from Islam. The participants were from various Delhi colleges in different states like UP, Delhi, Haryana, and Punjab.

The Distribution of Items in the Questionnaire

Distribution of Items

Total =12 items

Acquisition of Identity (4 items)	Family socialization (4 items)	Online socialization (4 items)
<ul style="list-style-type: none"> •Concept •Need •Locale 	<ul style="list-style-type: none"> •family culture •family relationship •family clash 	<ul style="list-style-type: none"> •Formal online learning •Informal online learning

The participants gave responses to these questions in three different ways:

Fig. 1

- Single response.
- Similar or multiple responses.
- Multiple responses, with each response being unique and distinct in itself

Findings and Interpretation

Theme 1: Acquisition of Identity

Under this theme, students were asked questions regarding the: importance of Identity in their life; the kind of person they want to be as an adult; whether they think that a person should retain the same Identity in personal and professional space; whether they think that Identity should be changed according to time, region, ethnicity, and age; and whether their identity changes with the change of educational institution, region, or another social environment.

Category 1: Concept of Identity

This question was asked to understand the concept of Identity in a student's life. The research aimed to acknowledge the reason why it is crucial to create an identity. Whether the concept of Identity is essential to the students or not? The responses received were that all students realized the importance of Identity in their life. Out of 40, 38 students were positive for identity formation, whereas two students agreed on the importance of identity formation and were on the negative side of Identity. Respondent No. 27, a Delhi University student from Uttar Pradesh, faced a family crisis. She believes mental health is more important than identity construction, as a disturbance to identity can cause negative behaviour.

Category 2: Need for Identity

During this research, we examined what kind of identity they want to construct. The results showed a range of responses. Out of the 28 students surveyed, only three

females expressed a desire to live stress-free lives, while the other 25 students aimed to develop positive traits such as kindness, helpfulness, confidence, responsibility, motivation, power, simplicity, independence, and social activist in their lives.

Category 3: Identity Locale

This theme aimed to explore the nature of identity concepts as uniform or diverse and to analyze the condition if they changed their Identity. Out of 40 students, 14 responded that Identity should not change in any situation. However, 28 students agree to change their Identity according to time and space. Responses from participants no: 1 and 27 are stated below;

"Changing an identity makes a person fake."

"Yes, it should change, but the core aspects to will remain the same regardless of the things mentioned earlier. Being a good human being should not be affected by anything."

The researcher discovered that Identity is important to people as it represents who they are to the world and strengthens character. However, becoming too engrossed in one's identity can lead to over thinking and impact mental health. It's important to understand someone's other identity rather than being ethnocentric.

From the above findings, the researcher found that most students rely on changing their Identity with the change of time and space. Change is vital in human life. Therefore, human nature brings changes and adjusts accordingly to environmental change. One of the students said that there are multiple identities of a person. *Identity* is a developing field that keeps on changing with the gain of experiences. Another student said that a change should not change a person as a good human being. However, some students prefer to stay the same according to time and space. According to them, a person works so hard to create an identity; therefore, one should not change their Identity in any situation because change will make a person fake.

Theme 2: Socialization with Family

The study focused on the relationship between students and their families and how it impacts their understanding of their identity. Participants were asked about their feelings towards their family's culture, their level of socialization with their family, and any potential identity conflicts. The theme emphasizes the crucial role of communication with family in shaping students' identities.

Family Culture

Interestingly, 57.5% of respondents preferred mixed culture, while 40% preferred their family's cultural patterns based on tradition and religion. Only 2.5% of students expressed a preference for Western culture. Most of the students follow mixed cultures in their life. Some follow their family culture, and very few prefer Western culture.

Relation with Family

Only 14 respondents feel that their parents understand them, while 26 respondents confide with their friends. Most students (55%) agree that parents significantly contribute to their identity development compared to 45% who rely on their friends.

According to the research, most students (92.9%) communicate daily with their families. However, a small percentage (6%) interact less frequently - 2% weekly, 2% monthly, and 1% occasionally. Notably, all students have some level of interaction with their families daily, and very few have limited interaction.

Conflict Issues

Out of 40 students, 24 have never experienced conflicts with family or friends, 3 cannot recall, and 13 admit to having experienced clashes with family and friends. The response of some of the respondents no:23 and 21 are stated as follows:

"We all go through such incidents once in our lives, and that is because of the generation gap. Sometimes what we think is all cool and okay is not cool for our family, and that is not their fault too because, at some time in their youth age, they were advised by their parents to be careful about new things of that old era which are totally common in the new era."

"Dressing senses, my father did not like short clothes."

Based on the findings, students clash with their family and friends over cultural identities. Research has shown that conflicts with parents and family members mostly stem from religious and cultural diversity in India. A respondent acknowledged that a generation gap was the root cause of their conflict with their family. Despite the progress in knowledge and education, female students still face disapproval from society for their clothing choices. One respondent was questioned for wearing Western attire deemed inappropriate according to her religion. Another respondent argued that clashes happen due to varying perspectives and understandings.

Theme 3: Online Socialization

The research thoroughly examines social media use among students, particularly their desired modes of interaction for both online and offline learning. Furthermore, it delves into social media's crucial role in identity development and the experiences related to identity issues on these platforms. Based on the findings, it is evident that 62.5% of students prefer face-to-face interaction, while 35% opt for a combination of online and offline interaction. A meager percentage of 2.5% prefer online learning exclusively. The findings are presented in the table below:

Purpose of Utilizing Social Media

The study also highlights the diverse purposes for which students utilize social media.

Table 2: Purpose of utilizing social media

Purpose	Total Students	No. of students
Knowledge/information	40	19
Education	40	5
Interaction	40	8
Presentation	40	1
Entertainment	40	19

According to the research, 60 % of students have mixed opinions about online learning, finding it suitable for learning at times but also harmful at other times. Meanwhile, 30 % of students believe online learning is always helpful, while 9.5% could not provide a definite answer. The research shed the opinion of students in the following table:

Online Learning

The students were asked about their preference for online learning. The responses received were as follows:

Table 3: Online learning

Online learning	Students
Always	24
Sometimes	12
Never	-
Cannot say	4
Total	40

In addition, the students were inquired about how they represent themselves online. Among the group of 40 students, 30 reported having a negative encounter when communicating online using a false identity at least once. The remaining students did not provide any feedback. Below is the statement of respondent no 16 regarding their experiences in online interaction:

"Yes, I do. I think it should be compulsory for everyone to show their Identity to build a good society. However, sometimes, you are forced to provide false information because you cannot believe anyone over the Internet; for example, you find an engagement advertising post and click it. Afterward, you went to the landing page, where they asked for your details and sent them to some marketing firms. Later on, you will get ads related to that website or work. Therefore, most of the time, online information is not trustworthy".

From the above findings, about 25 students prefer face-to-face interaction, and 14 like face-to-face and online interaction. And one of the students like only online interaction. Most students spend their time on social media watching movies, scrolling social sites,

and listening to music or web series. Others involve themselves in art and craft activities—some like reading, and very few like sleeping. All respondents concurred that they use social media. Most of them use it for entertainment and information. Others also use social media to learn and interact with friends and family. The research found that Students use social networking sites: Instagram, Facebook, WhatsApp, Twitter, Snapchat, and YouTube. However, they do not mindlessly believe in the information social media provides. Therefore, most of the Youth think that social media sometimes help in learning and sometimes gives fake knowledge. Hence, social media has made communication with other cultural backgrounds easy through interaction. Nevertheless, on the other side, our interaction shows virtual Identity in a dilemma. From the above responses, people fear losing their personal information, which either an agency or another anonymous person can further misuse. Today, most of the students face fake identities on social media.

Discussion

Self is highly valued in society, linked to success and individuality. This can lead to positive and negative motivations. People have different perceptions of their identity. Those with high self-esteem strive for excellence. (Baumeister, R. F., 1997). The finding reveals that students must establish their self-identity. Individuals who possess high self-esteem and a positive self-image hold virtues such as kindness, truthfulness, and independence in high regard. The ability to be accountable and successful is a key aspect of functioning effectively in society. However, certain students may choose to conceal their identity, which is indicative of a lack of confidence in themselves. Individuals who experience an identity crisis and struggle with occupational and ideological matters are at the Moratorium stage (James Marcia, 1980). Research has found that most students find navigating traditional and Western cultures challenging in today's higher education (Rao & Thombre, 2015). Adding new ideas to their family's tradition can lead to confusion and inner conflicts (Bansal, 2014). This cultural gap has caused difficulty in understanding and communication between generations and among people of the same culture (Chen, 2012).

The development of a student's sense of self is greatly influenced by the support and guidance of their loved ones, such as family and friends (Samovar et al., 2016). Friends play a significant role in shaping an individual's attitudes, behaviours, and characteristics during adolescence. Those who lack positive relationships with friends may experience conflicts and struggle with their identity formation (Deb et al., 2022). In this research, students faced conflict at least one time in their life. Conflict is a common experience for every student, and it can arise directly or indirectly depending on the nature and timing of the communication. Therefore, having positive relationships with friends, family, and society does not guarantee a conflict-free life. Conflict is primarily influenced by mental programming, shaped by the social environment one grows up in and their life experiences. This programming begins within the family and continues in the neighbourhood, school, youth groups, work, and the living community (Hofstede et al., 2010).

The findings reveal that students prefer face-to-face interaction more than online interaction. However, despite the fact that online learning can contribute to multiculturalism (Sadykova & Meskill, 2019), students still struggle with social interaction in academic discourse and social media. Even some students have abandoned online learning due to the lack of socialization in online discussions (Nicol et al., 2003). However, on the other side, Social media is a platform where cultural representations are abundant and can be utilized in diverse ways. (Croucher, Sommier, & Rah, 2015). Social media widen the boundaries of connection and provide low-cost social interaction without building and maintaining functional relationships with the same people in real life (Deb et al., 2022). However, the research findings also reveal that many students encounter fake identities online, leading to a loss of trust in interacting with online social identities. Therefore, Keeping good relationships instead of just stopping lousy behaviour in young people can be challenging.

Conclusion

To sum it up, Identity is undeniably a result of experiences and values, which are shaped through intercultural interactions in cognitive, affective, and behavioural activities. Identity is crucial for establishing oneself and society. Understanding others' identities helps individuals understand themselves and reduce ethno-centrism. Intercultural clashes regarding identity construction are common among students, whether with family, friends, or on social media. These clashes are related to globalization and technological advancement, which have opened up the world and resulting the enhancement of diversity. However, the negative outcomes increased comparison and differences among students, which caused trouble in their traditional way of thinking when compared to the Western way of thinking. Furthermore, their families may not accept the change they desire due to the generation gap and technological advancement. Today, many students aim to establish a strong, independent identity and value privacy in their personal lives. Excessive indulgence of anyone: family, friends, or relatives, in their private life, can lead to disruption and stress. However, socialization through family, friends, and social media is undoubtedly imperative in student's lives. On the other hand, the expanded access to education and knowledge that online socialization has facilitated cannot be ignored. However, it is important to acknowledge that online behaviour can have both positive and negative impacts, which poses a concern for Indian families and society regarding youth socialization.

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Optimising Learning in EVS Classrooms: Cultural diversity as a Resource

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Abstract

Children in a mainstream school classroom may belong to the same age group but they differ a lot in their cognition, interests, abilities and social contexts. To ensure an optimised learning environment for learners in an Environmental Studies (EVS) classroom, it becomes necessary to connect pedagogy with their everyday knowledge and real world experiences deeply rooted in their natural and socio-cultural environment. However, it is a common observation that learners' contextual knowledge and experiences do not get much recognition in the pedagogical process in most of the cases. Teachers are largely found to follow textbook reading and explaining as their major teaching strategy in EVS classrooms that does not resonate with the curricular objectives of the very subject. Author has shared a few instances from her classroom observations in this paper which indicate that although the learners' personal knowledge and socio-cultural experiences are being given space in the classrooms but they are neither much valued nor optimally assimilated within the 'official' knowledge for various reasons, including teachers' lack of knowledge about the nature of subject, its curricular basis and pedagogical demands as well as their own prejudices and unfavorable attitudes towards learners' socio-cultural contexts.

Keywords: Environmental Studies (EVS), Cultural diversity, School Knowledge, Teachers, Teaching

Introduction

A child learns everyday through the interaction with her natural and cultural environment. Environmental Studies (EVS) being an integrated subject for class III to V (NCERT, 2006) requires connecting with children's natural and socio cultural environments along with addressing critical issues of inequality, difference and injustice emanating from everyday life experiences. Environmental Studies (EVS) curriculum necessitates the use of children's everyday experiences embedded in their social and cultural milieu for making learning more authentic and contextual. The syllabus has been woven around broader themes like *food, shelter, water, travel, family and friends*

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that require moving beyond traditional disciplinary boundaries with a focus on children's understanding and experiences rooted in diverse cultural milieu (Rampal, 2009). Environmental Studies acts as a bridge between the school environment and the outside environment that requires a child's local knowledge to be related to the school knowledge (Sharma, 2020). EVS syllabus is framed within the social constructivist perspective of learning which requires children to construct their own understanding through appropriate questions and interventions, including discussions with adults in school, at home and also among themselves (NCERT, 2006). However, studies indicate that the majority of the primary school teachers still use traditional textbook reading methods for teaching EVS, probably being unaware of the unconventional approaches to textbook content, pictures, children's ideas and activities that underlies this integrated EVS curriculum (Kaur, 2016).

In the present EVS textbooks prescribed by NCERT, there is a conscious effort to break hegemonic hierarchies around epistemological discourse through diversifying the sources of knowledge; use of open-ended activities to allow for child's intuitive ideas/ alternative conceptions; use of dialogics to communicate with children; and presenting powerful role models from marginalized social groups (Sharma, 2020). However, many of our primary school teachers carry negative perceptions about these textbooks (Jyoti, 2019) and do not find these textbooks comfortable to teach with. It appears that the majority of our primary school teachers are unaware of the founding principles of curriculum and pedagogy of EVS. To facilitate an optimised teaching learning environment in an EVS classroom, it is important to engage learners in various hands-on skills and cognitive processes including observing, classifying, questioning, experimenting, analyzing and discussing around their own experiences.

It is not that our teachers are totally unaware of learner centric methods of teaching-learning. All our contemporary teacher education programmes, whether pre-service or in-service, provide them requisite knowledge and skills to facilitate learning through learner-centered strategies. However, we do not find much use of these strategies in actual classroom settings. There are many reasons for it. Some teachers would blame systemic issues like lack of resources, time, and support, while others would outrightly attribute the problem with their learners and their backgrounds. It is understandable that in our country all the schools are not equally resourceful and there are a number of constraints with the school system due to which teaching-learning processes are likely to suffer. But, what about the resources we would always find in a classroom, irrespective of any material resources? Even if we do not have any material aids for facilitating the teaching learning process in a classroom, we would always have the learners there. Their cultural knowledge and experiences are also indispensable resources for teaching-learning of EVS if thoughtfully weaved into the pedagogy by the teachers. Every classroom is a multicultural setting in its own ways which is diversified by the cultural differences among the teacher and learners. For this, the teachers would need to transform their pedagogy to be more responsive to their learners' contexts.

Glimpses from the EVS classrooms

To understand how the teaching-learning process of EVS usually unfolds in a multicultural classroom context, I observed primary school classrooms during my Ph.D. research. I conducted extensive classroom observations in grade 3, 4 and 5 in a government school situated in old Delhi, from July 2022 to March 2023. That school constituted an interesting amalgam of cultural diversity of teachers and students. In each of the classrooms, Muslim students were about 90%-95% of the class. The rest were Hindu students- mainly Dalits or from economically weaker sections. Though only two religious groups were represented in the chosen classrooms but I observed layers of diversity within.

It is a co-educational school receiving children from the families residing in nearby localities, including many recently migrated families. Their parental occupations also varied a lot, from daily wage laborers to the office clerks. Interestingly, teachers also reflected a cultural diversity of religious, linguistic and regional backgrounds. I specifically looked at EVS teaching-learning process in these classrooms and also interacted with the teachers to know more about their perceptions towards EVS curriculum and pedagogy. In all the observed classrooms, the preferred mode of teaching was textbook reading and explaining the chapter's content. However, the classroom discourse in each classroom had its own unique elements in relation to how the teacher was connecting students' everyday knowledge and contextual experiences with the given curriculum and learning. Next, in this article I have tried to reflect on the teaching- learning practices in EVS classrooms, based on my observation and interactions with teachers, under the themes evolving from the field notes.

Understanding of EVS curriculum and pedagogy

During the interaction with these teachers, I got to know that all of them have attended in-service training where they were made familiar with the 'activity-based teaching' and other child centred strategies related to constructivist pedagogy. However, their understanding of the subject pedagogy was not aligned with the nature and objectives of the subject. All of them regarded EVS as *Science* although the term EVS was being used in their time table and official lesson plans provided by the authorities. Most of them were not happy with the textbooks. They reported, "the chapters are lengthy which makes it boring for students to go through them". They also said, "in-text questions should not be there as they break flow of reading; exercises should be pushed to end of the chapters as is in the case of English or Hindi textbooks; children do not find it connected to their cultures as they include stories/ examples/ language etc. from other cultures". One of them said, "it seems to be connected more with South India". Thus, the teachers seemed unable to understand the nature of activities, exercises and multicultural perspective of these textbooks.

All of them knew that teaching learning of EVS requires a lot of hands-on experience through direct observations and experimentation. They also said that children's everyday experiences should be used in classroom processes for concept development.

Although, I did not see anything beyond textbook reading and notebook work being the major pedagogical practices, conforming to the “textbook culture” –a prominent feature of an ordinary Indian classroom (Kumar, 2004). I happened to visit some classes where pictures, real objects or even experiments were also conducted by the teachers, but even that did not shift the onus of learning to the learner. I did not find any single class where the teacher deliberately promoted or nurtured process skills among children or where the teacher attempted to challenge social or cultural stereotypes among children. Discussions around sensitive issues were being held but that was not rich enough to provide a space for critical reflection or empathy.

Personal Vs curricular knowledge

Teachers engaged children in discussions around in-text questions given within the chapters. There were instances where the teachers were apparently using learners’ cultural knowledge to facilitate learning in EVS by engaging them in discussions. Let us go through an excerpt from grade 3A, EVS classroom, where a discussion was being held about various leaves mentioned in the poem given in chapter titled *The Plant Fairy* –

Tr- Dekha hai tumne paan ka patta? Betel leaf?

St.1- Kadvi hoti hai ma’am wo.

Tr-(ignored his response and asked again)- Paan khatahai koi tumhare yaha? Wo bhi to patta hota hai na?

St.2- Ma’am wo kischeez ka hota hai?

Tr- Betel plant ka hota hai beta. Paan ka ped hota hai, uska patta. Tumne dekha nahi kisi ko paan khate?

St.3- Meri daadi khati hai

St.1- Mere naanu khate hai

St.4- Humne to chocolate paan khaya hua hai.

Tr-(with curiosity) Chocolate wala paan bhi hota hai? Mujhe nahi pata bhayi.

St.4- Ma’am hota hai, fire wala bhi hota hai, jelly wala bhi hota hai. Wo jo fire wala hota hai na behtareen hota hai!

St.5- Yes ma’am, hota hai maine bhi khaya tha ek baar.

Tr. Accha, kamala hai tumhe to bahut kuchh pata hai paan ke bare mein.

(The students appeared happy to be acknowledged by the teacher for their knowledge.)

Translation:

Tr- Have you seen a Betel leaf? A Betel leaf?

St.1- Ma’am, it is bitter in taste.

Tr- (ignored his response and asked again) - Is there someone at your place who chews betel leaves? That is also a leaf, right?

St.2- Ma’am, what does it belong to?

Tr- It is of the Betel plant. Leaf of a Betel plant. Haven’t you ever seen anyone chewing betel leaves?

St.3- My grandmother chews it.

St.1- My grandfather chews it,

St.4- I have chewed a chocolate flavoured betel leaf.

Tr-(with curiosity) Does chocolate flavoured betel leaf exists? I do not know about this.

St.4- It does exist ma'am, there even exists a fire betel leaf, and jelly betel leaf too. And that fire betel leaf is so wonderful!

St.5- Yes ma'am, I had also tasted it once.

Tr. Fine, it is quite amazing that you all know so much about betel leaves.

(The students appeared happy to be acknowledged by the teacher for their knowledge.)

Here, the teacher gave an opportunity to the students to share all they knew about Betel leaf and its use. The discussion led to the varieties of *Paan* that some of them were aware of due to their everyday experiences. There were many such episodes observed where responses were gathered from children during chapter reading and discussions. Although, when it was the time to do notebook work in the name of 'Question Answers' (textbook exercises only) or solving assessment worksheets, then the situation used to be very different. Such as, the same teacher was making children do chapter's question answers in notebook on some other day and the transaction was as follows;

Tr- Aap sabne kaun kaun se plants aur trees dekhe hain?

Students replied- Bargad, Neem, Peepal, Mango, Apple

She wrote all these names on board in English and Hindi so that students from both the sections (Due to combined class for this day) can note down answers from the board. She supervised kids by moving around rows to ensure that all of them were noting down the answers in their book. After around 10 minutes she moved ahead to the next question.

Tr- Ye sab trees to aapne naam bhi sune honge aur dekhe bhi honge kahi na kahi. Ab next question me ye poocha hai aise trees ke naam batao jo aapne dekhe hi nahi kabhi bus naam sune hai.

Student shared some names like – coconut, rubber, pineapple, lichi tree, grapes pear, alucha, orange etc.

Translation-

Tr- How many plants and trees have you seen?

Students replied- Banyan, Neem, Peepal, Mango, Apple

She wrote all these names on board in English and Hindi so that students from both the sections (due to combined class for this day) can note down answers from the board. She supervised kids by moving around rows to ensure that all of them were noting down the answers in their book. After around 10 minutes she moved ahead to the next question.

Tr- You must have heard the names of all these trees and might have seen them also sometime. Now, in the next question, you are asked to tell names of those trees which you have only heard of but never seen them.

Students shared some names like- coconut, rubber, pineapple, litchi tree, grapes, pear, alucha, orange etc.

Teacher listened to all of their responses but then she wrote different names on the board as answers to this question. She wrote- Oak, Pine, Fir, Coconut, Olive, Chestnut, Almond and

Pear tree. Maximum names in this list were not from those mentioned by students; rather she had consulted the internet for the answer key of NCERT textbooks to write these names.

At the outset, both these episodes reflect that children's personal experiences were being used by the teacher but these were accepted only for the verbal discussions. What went into their notebooks was the list of trees that was found in some answer key by the teacher on the internet. It might also be the case that the teacher herself was not very sure about the correctness of the answers given by students. She referred to google on all such occasions where she encountered any doubt while teaching. In fact, all the teachers were observed using such answer keys for all the notebook work / question-answers. The learners were supposed to memorize these answers for their periodic tests. This indicated that the school knowledge was synonymous with the content given in the textbook or reference books which was to be memorized and reproduced in the tests. Despite the fact that the EVS textbooks themselves encourage diversity of viewpoints, cultures and experiences to be taken in consideration while conceptualizing different curricular themes.

Resonating with the learners' cultural experiences

Every teacher displayed a different sense of concern or regard for the learners' diversity in her classroom. In fact, during all the discussions related to topics around culture, it was common to find that the comfort level of teachers was mainly with the children who shared their cultural background. 'Other' students were invited to participate in discussions but their responses were validated based on whether the teacher was familiar or not with the cultural practices. For instance, the chapter on Family was being taught in class 3A, where the teacher was explaining using examples from students' daily lives-

Tr- Jaise Surekha ki family me ye riwaj hai ki jooto chappal andar nahi le jaate waise hi hum bhi kayi cheezein karte hai apne ghar pe.... Jaise tumne dekha hoga jab koi pooja rakhwate hai ghar me to hum log bhi shoes bahar utarte hai. Ghar me, jaha mandir ho to hum shoes andar le kar nahi jaate. She then pointed out one hindu girl and asked- Ritika, tumhare yahan hota hai aisa? Koi pooja karwate honge tumhare yaha to shoes allowed hote hai andar le jana?

St1 (Ritika) - No ma'am. Jab Navratre pooja hoti hai ya koi aur bhi.... Toh hum shoes bahar hi utarte hai.

St2- Ma'am, hamare yaha bhi jab Quran Khaani huyi thi to usme bhi hum jooto chappal bahar hi utarte the.

St3- Hamare yaha bhi Quran Khaani me jooto andar le kar nahi jate ma'am. Other students also started adding to the response that they follow the same thing when they have any pooja or Quran Khwani at their home.

Tr- Haan pooja ho ya Quran Khaani sab ek hi hai. Then she took another example of family values and asked the next question from the textbook - Aur hum apne bado ko kaise jataate

hai ki hum unki respect karte hai?

St2- Ma'am jab wo aate hai to unko paani dete hai.

St 4 -Unko salam karke.

Tr- Haan unko salam karke, Namaste karke. Hai na! Koi apne ghar ka hi bahar se aata hai to usko kaise treat karte hai?

St3- Assalamualaikum karte hai.

St5 – Naashta pani pochote hai

St1 - Hum bhi Namaste karte hai.

Tr- Bilkul... to ye sab bhi hum apni family me seekhte hai ki kisi mehmaan ko ya ghar ke bade kaise respect karna chahiye.

Translation-

Tr- Like Surekha's family has this tradition of not taking footwear inside, similarly we also follow many things in our families.... Such as, you must have seen when you hold some worship ritual at our house then we also remove shoes outside. We do not take shoes inside where there is a temple in our house. She then pointed out one hindu girl and asked- Ritika, does it happen at your place too? Is it allowed to take shoes inside the house if you keep any worship ritual?

St1 (Ritika)- No ma'am. When we have the Navratri worship or any other ritual.... Then we remove our shoes outside only.

St2- Ma'am, in my home also we removed footwear outside only during the recitation of holy Quran.

St3- Ma'am, we also do not take shoes inside during the recitation of the holy Quran.

Other students also started adding to the response that they follow the same thing when they have any worship or Quran recitation at their home.

Tr- Yes, it is all same, whether it is a worship ritual or the recitation of the holy Quran.

Then she took another example of family values and asked the next question from the textbook – And, how do we pay respect to our elders?

St2- Ma'am, we offer them water when they come home.

St 4 – We greet them.

Tr- Yes, we greet them, right! How do we treat someone from our own family who comes home from outside?

St3- We greet (as per Islamic tradition) them.

St5 – By offering them water and snacks.

St1 – We also greet (as per Hindu tradition) them.

Tr- Sure, so we all learn this also in our families that how to pay respect to our guests or elders

in home.

Here, the teacher belonging to a Punjabi Hindu family started giving examples from her own familiar background and picked the girl of similar culture to validate the point. Then, other Muslim students also shared what they had seen being practiced in their families in similar situations. Teacher tried to make this conversation more inclusive by giving space to every child who wanted to share what he or she practices in his or her culture. Consider another teacher who was teaching grade 4A about the uses of flowers;

Tr- Accha Itr kab lagate hai?

St1-Ma'am, Jumme ko lagate hai. (Others also repeated this response)

St2- Party mein jate hai to lagate hai.

St-3 Ma'am hamare papa kaam pe jane ke time lagate hai.

Tr- Specially Jumme ko kyu lagate hai, dopahar me?

St1- Kyuki namaz ke liye jate hai

Tr- Haan Jumme ki namaz padhni hoti hai.. To uss se pehle jo namaz padhne jaate hai wo.....isliye jumme ke din to zarur lagaate hai. Sahi kah rahi hu na? (Many students agreed and nodded in response.)

Tr- Aur ye jo Itr hai wo kis se banta hai?

St- Some of them replied- Phoolon se

Tr- (validate the response)-Phoolon se.... Kya kisi aur cheez se banta hai?

St4- Ma'am chocolate..

Tr- Usme phoolon ka ras istemal nahi hota? Chocolate ka Itr dekha hai tumne kahi? (she was not sure if such perfume is also found).

St- Some of them responded together- yes ma'am hota hai.

Tr- Usme phir artificial wo dalte honge chocolate ka. Kyuki chocolate ka flower to nhi hota koi. Hota hai kya?

St2- nahi ma'am. Flower to nahi hota. Chocolate to khane ki cheez hoti hai.

Tr- Kya koi aisa phool dekha hai tumne jisme se chocolate ki smell aati ho.

St- replied in chorus- nahi dekha ma'am

Tr- Haan to iska matalab kisi flower ke Itr me wo chocolate ki khusboo dal dete honge. Accha ab ye

batao ki agar aapke yaha shaadi hoti hai koi, to dulha kya daal ke aata hai?

St5- Sherwani.... Mala.... Pagdi..

Tr- Ek awaz aayi pagdi, ek awaz aayi sherwani, ek aayi mala.... Aur kuchh? Phoolo ka kya hota hai?

St6- one girl replied- Ma'am, Sehra

Tr- Haan .. wo kis cheez se banta hai?

St- (collectively responded) Phoolon se

St2- *aur ma'am, wo Katthe bhi to hote hai phoolo se bante hai..*

Tr- *haan, katthe wohi to.. Usko hi to bolte hai na... kaun se phoolo ke bante hai*

St2- *rose*

Tr- *Rose ke.. Aur safed phool bhi to hote hai usme...*

St4- *Ma'am, tulip wale flower ke bhi (his response was ignored by the teacher)*

Tr- *haan wo safed wale flower kya kehte hai unko... chameli, beli kuchh kehte hai na unko.... To usme white aur red flower hote hai- red flower rose ke hote hai and white flowers hote hai wo Chameli ke, beli ke hote hai aur uski bhi bahot tez smell hoti hai... isliye sehre me, katthe me unko lagate hai.... Jab Haj karke aate hai tab bhi to daalte hai na?*

St2- *yes ma'am*

Tr- *To jab bhi kisi ka swagat karna hota hai to aise har dalte hai phoolon ke.*

Then she realized that few students (Hindu students) are hardly giving responses and she pointed out to them- *Kusum tum bhi bata do kuchh? Saurav tum bologe kuchh?*

Then she continued asking- *Mummy mandir jaati hai? (Kusum nodded in response).. To waha pe kya dekha hai tumne? Phool ka kuchh istemal dekha hai waha?*

Other students replied instead- *Ma'am ganesh ji ke gale me hoti hai.... Ma'am mata ji ke gale me hoti hai..*

Tr- *interacted with Saurav- mandir me bhi to log phool le ke jate hai na?*

St7- *Yes ma'am.*

Tr- *To Mandiro me phool chadhate hai. Gurudware me bhi le ke jate hai. Mazaron pe bhi chadar chadhti hai phoolon ki bani... hai na!*

Translation-

Tr- *Fine, when is the perfume used?*

St1-*Ma'am, it is used on Jumma (Friday of the Muslim week). (Others also repeated this response)*

St2- *It is used while going to a party.*

St-3 *Ma'am, my father applies it when he goes to his work*

Tr- *Why is it specially used on Friday afternoon?*

St1- *Because (people)go to the Friday prayer.*

Tr- *Yes, to offer Friday prayer. That is why, those who go for the Friday prayer.....they ofcourse use it on Friday for sure. Am I right? (Many students agreed and nodded in response.)*

Tr- *And, how is this perfume made?*

St- *Some of them replied- from flowers*

Tr- *(validate the response)-yes, from flowers.... Is it made from any other thing as well?*

St4 - *Ma'am, chocolate ..*

Tr- *Isn't the flower extract used in that? Have you ever seen a chocolate perfume? (she was not sure if such perfume is also found).*

St- *Some of them responded together- yes ma'am, it's there.*

Tr- *Then it must be having artificial (flavour) of chocolate in that. Because there is no*

chocolate flower. Is there any?

St2- No ma'am. There is no such flower. Chocolate is a thing to eat.

Tr- Have you ever seen any flower that has chocolate like fragrance?

St- replied in chorus- never seen ma'am

Tr- Yes, that means they must be adding fragrance of chocolate in the perfume of some flower. Now, tell me if you have any wedding in your house, then what would a groom wear?

St5- Sherwani (a knee-length coat).... garland.... turban..

Tr- One response was turban, another response is Sherwani, one is garland.... Anything else? What is made up of flowers?

St6- one girl replied- Ma'am, Sehra (a headdress of groom)

Tr- Yes, what is it made up of?

St- (collectively responded) of flowers

St2- And ma'am, katthe (headdress/garlands) are also made up of flowers.

Tr- yes, that's it.. isn't that called so? Of which flowers that is made up of?

St2- Rose

Tr- Of Rose ... and it has white flowers also.... Which one?

St4- Ma'am, they are of tulip flower as well (his response was ignored by the teacher)

Tr- Yes, what do we call those white flowers... they are called jasmine or mogra.... So that is having white or red flowers—red flower is the rose and white flowers are jasmine or mogra and that too has a strong smell... That is why they are put in the headdress of the groom.... And when people return from Haj (the pilgrimage) then also it is used?

St2- yes ma'am

Tr- So we use such flower garlands whenever we welcome someone.

Then she realized that few students (Hindu students) are hardly giving responses and she pointed out to them- Kusum, you should say something.... Saurav, would you also tell something?

Then she continued asking- (Your) mother goes to the temple? (Kusum nodded in response)..Then what have you seen there? Have you seen any use of flowers there?

Other students replied instead- Ma'am, it is there around Ganesha's (A Hindu God) neck... Ma'am it is there around the Goddess neck also.

Tr- interacted with Saurav- People also carry flowers to the temple as well?

St7- Yes ma'am.

Tr- Hence, flowers are offered in temples, and in Gurdwaras.... floral sheets are offered at shrines also... isn't it!

This teacher was a Muslim woman who could very easily connect with the majority of the students through discussions since she shared many cultural elements with them. Although, she also tried to include Hindu students (minority in the classroom) by asking their culture specific questions but those students were not much involved in the collective process of knowledge construction. One can realize by comparing both of these episodes that teachers were consciously trying to make their classroom

discussions inclusive enough by taking examples from different cultures, however, their interactions were reflecting their natural inclination towards similar cultural experiences shared with their students.

Negative attitudes towards learners' socio- cultural context

All the teachers I observed were teaching their class from the grade 1 level and they were quite familiar with children's socio-cultural backgrounds including, religion, region, class, caste, family members and family occupations, etc. Teachers were familiar with the locality and everyday affairs of the residents. They also carried some prejudices about learners' families and cultural contexts. That was reflected in the way they addressed learners while transacting the curriculum. Here is an episode from class 5A, where the teacher was teaching a chapter on animals. Teacher read about the sloth from the textbook and then interacted with children after completing the passage-

Tr- Accha ek din me kitne ghanta hote hai?

St- chaubis (24)

Tr- 24 ghante me tum log kitna ghanta sote ho?

Students responded in a variation.. 7... 8... 10.

Tr- Aise bacche bhi hai jo raat ko sote hi nahi hai. Hai na? TV dekhne baithte hai raat bhar. Subah aankh nahi khulti fir school nahi aate. Bolte hai hamara aankh nahi khula, hai na? (some students smiled at this comment by the teacher with their heads down as if it is being spoken about them only). Bolte hai humara mummy ka aankh nahi khula tha, papa ka aankh nahi khula tha, mera bhi aankh nahi khula tha kyuki sab raat bhar kya dekhte rehte hai? TV. Isliye 9 baje school me aate haiagle din. Baccho ko kam se kam 8 ghante to sona hi chahiye. Sote ho tum log? Majority of students replied - yes.

Teacher looked at them incredulously and continued reading further.

Translation-

Tr- How many hours are there in a day?

St- twenty four (24)

Tr-How many hours do you sleep, out of these 24 hours?

Students responded in a variation.. 7... 8... 10.

Tr- There are such students as well who don't sleep at all during the night. Isn't it? You keep watching TV the whole night. Then they are not able to wake up in the morning and they don't come to school then. They say that they could not wake up... isn't it? (some students smiled at this comment by the teacher with their heads down as if it is being spoken about them only). They say that my mother could not wake up, father could not wake up, I also could not wake up because everyone was watching TV the entire night. That is why they reach school the next day at 9am. Children should get a minimum of 8 hours sleep?

Majority of students replied –yes.

Teacher looked at them incredulously and continued reading further.

This teacher strongly believed that parents of the majority of her students are hardly concerned about their studies and school. She later shared with me that in *these* families' parents often stay awake till late nights and they get up late in mornings and that's why their children don't have early sleeping/waking habits. Another episode is being shared from class 4B where the teacher was very judgmental about the children due to their family backgrounds and economic conditions. She was discussing textbook questions with children and was telling them what to write in the answers. Students' voice was almost absent in her class as she was the one who was reading questions and telling answers (read from a guide kept in front of her besides the textbook). Students were only listening and nodding heads in response without speaking.

Tr- Kya in phool bechane walo ne guldaste banana aur phoolon ki chadar banana kisi se seekha hai?.....(She didn't wait for a response and stated the answer) Haan, phool bechne walo ne guldaste aur phoolon ki chadarein banana apne apne pita se seekha hai. Khandani kaam hota hai na....mali ka beta bhi mali ka kaam karta hai, karta hai na?

St- Some of them nodded their heads to agree.

Tr- Hai na jaise wo karega bacche bhi waise hi seekhte hai. Jaise tumhare ghar pe mummy papa bekar hai tum bhi bekar ho... (This comment led to a silence for a moment in class, no child responded).....Ho na bekar??... Sab apne parivaar se seekhte hai... Kis se seekhte hai?

St- some of them replied- Parivar

Translation-

Tr- Have these flower sellers learnt making flower bouquets and floral sheets from someone? (She didn't wait for a response and stated the answer) Yes, flower sellers have learnt making boquets and floral sheets from their fathers. It's the family occupation.... Gardener's son also becomes a gardener, isn't it?

St- Some of them nodded their heads to agree.

Tr- Isn't it like whatever he does, kids will also learn the same. Such as, at your homes, your parents are useless, so as you are. (this comment led to a silence for a moment in class, no child responded) Are not you useless??. All (of us) learn from our families only... From where do (we) learn?

St- some of them replied-Family

Among all the teachers I had observed in the school, she was the one who never involved students actively in her pedagogy. This teacher was a Hindu woman teaching in this school for the last 6 years since when she was transferred here. She had many negative beliefs about the students' backgrounds and their culture which was the reason for making such rude comments in the class as well as outside. She was not much fond of teaching these students as she considered the learners deficient in the basic skills and hence incapable of the studies. Many of her students were from a slum cluster where they lacked basic provisions like electricity or sanitation also. According to her, *these* children are not at all interested in learning and their parents also do not pay attention to it. In short, she considered her students to be 'unteachable' and she never

paid much attention to them while teaching. She was never seen taking concern of whether they are listening to her, or responding or reading in her class. Only one thing was ensured that the notebook work should be neatly copied from the board.

Classroom as space for construction of knowledge

While observing the classroom interactions and pedagogical process in each of these primary grades, I noted that the classrooms were merely reduced to the site of knowledge transmission instead of knowledge generation. Findings indicate that knowledge was still considered to be fixed in textbooks, instead of contextually situated across cultures and experiences of learners. This perception of valid curricular knowledge by these teachers is similar to what Prof. Sarangapani (2003) referred to as “ought to know” in her ethnographical study of a government school. Teachers asserted their authority over what their learners are expected to know or what will become part of their school knowledge (usually given in textbooks) through different techniques. For instance, class 5A teacher always instructed students to underline important sentences while chapter reading. She would also ask confirmatory factual questions to the students in between so that they could identify and remember what to write when a particular thing would be asked in their assessments. In all the observed classes, emphasis on notebook work and memorizing that for examinations was a common feature.

Framing of curricular knowledge

Each teacher had her own way of engaging learners in the teaching-learning process by inviting their home knowledge and cultural understanding in the formal classroom space. The degree of integrating out of school knowledge and school knowledge by these teachers can be understood using Bernstein’s concept of framing. The strength of frames corresponds to “the strength of boundary between educational knowledge and everyday community knowledge of teacher and taught” (Bernstein, 2003; p.81). I found *strong framing* of curricular knowledge in these EVS classrooms. For instance, in class 4B and 5A, where the teachers were more restrictive and rigid in their pedagogy. They hardly allowed or accepted children’s cultural and home experiences in their classroom. They were always bothered about teaching textbook chapters, finishing question answers and worksheets for assessments. On the other hand, in class 3A and 4A, the framing appears to be comparatively weaker as there were more opportunities for the learners to be able to use their cultural frames of references for responding to the teachers during discussions. Although, on a deeper analysis it was apparent that the control of classroom discourse was still lying in the hands of the teacher. They were controlling and navigating the discussions, and deciding what should be going into the notebooks and in the assessment worksheets. Hence, every classroom had strong framing, but up to varying degrees.

Teachers’ authority and control

I found that in each classroom, learners were able to share their cultural experiences and knowledge but the extent of their participation was determined by the authority or

agency of the teacher; her control on classroom processes; and her cultural beliefs about the learners. It hardly made a difference whether the teacher appeared permissive and flexible allowing children to speak and share what they know or think majorly in response to the textbook questions (such as class 3A and 4A) or she was restrictive and rigid ensuring that children just follow what is given in textbooks (such as class 5A and 4B). Teachers always exercised their “epistemic authority” (Sarangapani, 2003) in each of the observed classrooms. Students were merely responding to the chapters’ questions in most of the cases which was a sort of confirmation to the teacher that they are following what she intended to. They had no agency in the pedagogical process and their role was to only conform to the textbook content or what has been dictated by the teachers.

Need for a culturally responsive pedagogy

So far, it is apparent that the teachers find it difficult to accord value to children’s contextual knowledge in the classroom. Even if they incorporate their everyday knowledge in classroom discussion, they don’t consider it worthy of being officially documented or assessed. All the teachers were mainly using textbooks as the major pedagogical tool but the multicultural nature of EVS textbooks was not understood by them. Findings also indicate that the teachers were preferring the use of experiences of children belonging to their own culture over ‘others’ despite the fact that their experiences were equally relevant and noteworthy. Each classroom had a meager possibility of embracing multiple experiences, viewpoints and cultural contexts with the curriculum, although this must be the core of EVS pedagogy. In addition to this, negative attitudes of certain teachers towards children’s contexts made the classroom a space for alienation for some children instead of providing them a democratic setup where their contextual experiences are recognized and acknowledged as invaluable learning resources.

Hence, the teachers are required to be able to use the diverse experiences of their learners optimally and consciously, while identifying and overcoming their own prejudices and negative beliefs towards their learners. Teachers may be familiar about their students’ cultural contexts and family backgrounds but that doesn’t mean that they are cognizant of how to use that knowledge optimally as a pedagogical resource. Moreover, they need to be sensitive as well as respectful towards the cultural contexts of their students. It requires that the teachers must be familiar with the “culturally responsive teaching” (Gay, 2002) to deal effectively with a multicultural classroom setting and its implications for learning EVS. Our teacher education programmes should focus on enabling teachers to be knowledgeable, caring, unbiased, reflective and responsive towards the learners’ diversity in their classrooms and must equip them with the suitable pedagogical strategies aligned with the curricular expectations and learners’ experiences. Eventually, teachers need to learn to perceive diversity as a strength instead of a limitation in their classroom.

Conclusion

In this paper, I have tried to briefly portray what I had observed and learnt about the teaching-learning of EVS in the multicultural classrooms of a government primary school in Delhi. It is generally understood that a deeper understanding of the nature and pedagogical concerns of a subject among the teachers is necessary for optimising learning among the learners. The study highlighted the limitations with teachers' abilities to use culturally diverse experiences of students as a rich learning resource. It suggested that it was not just the understanding of the nature and founding principles of the curriculum of EVS which influenced a teacher's pedagogy in her classroom. Rather, teachers' own cultural dispositions, prejudices and negative attitudes about the learners' background also contributed largely to the way classroom discourse was shaped up. Strong framing in these classrooms also do not allow learners' contextual knowledge and cultural experiences to become part of the school knowledge. Hence, the role of teachers becomes very crucial here, who are required to be culturally responsive and sensitive towards their learners' contexts. Then only the teachers will be able to perceive classroom diversity as an important resource for constructing curricular knowledge of EVS among their learners.

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Academic Stress and Mental Health: An Exploratory Study

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Abstract

Educated citizens play an important role in the development and prosperity of a nation which in turn depends on positive mental health. People may face mental health issues in all stages of life but mental health issues are more likely to occur in the adolescence stage that may cause academic stress among students. Thus, the present study investigated the relationship between academic stress and mental health among secondary school students from Kashmir Valley. The objective of the study was to study academic stress and mental health among secondary school students and to study the difference in academic stress and mental health in relation to gender. The sample of this study comprises of 229 students; 73 males and 156 females. The participants completed the measures of academic stress and mental health. Results revealed a negative relationship between academic stress and students' mental health, indicating that higher levels of academic stress were associated with poorer mental health outcomes. However, no significant gender differences were found in mental health levels among the participants. Interestingly, the study found a significant difference in academic stress levels between males and females. These findings contribute to the existing literature by emphasizing the detrimental impact of academic stress on the mental health of secondary school students. Furthermore, the study highlights the need for targeted interventions and support systems to alleviate academic stress and promote mental well being in educational settings.

Keywords: Academic Stress, Mental Health, Secondary Students

Introduction

Positive mental health is a crucial factor in the development and prosperity of a nation as it directly impacts the contributions of educated citizens. The well being of individuals greatly influences their ability to actively participate and contribute to society; leading to overall societal growth and advancement. People may face mental health issues in all stages of life, but mental health issues are more likely to occur in the adolescence stage. Adolescence is a transformative phase characterized by profound physiological and

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psychological changes accompanied by increased stress levels. This phenomenon is particularly prevalent among secondary school students (Saleh et al., 2017). There are various reasons for mental illness. One of them is in the realm of parenthood. The desire for children to succeed fuels high expectations. However, these expectations can burden children physically and mentally. Parents' aspirations intertwine with a child's life; leading to increased pressure and a relentless pursuit of academic excellence.

Secondly, in today's education system, teachers are expected to go beyond their traditional roles and act as guides, friends, and philosophers for students, particularly when parents are illiterate or involved in manual work. However, many teachers are not fully aware of their responsibilities and fail to fulfil their duties with commitment and devotion. This results in a lack of guidance for adolescents; leading to increased stress levels among students. Teachers have a unique opportunity to provide knowledge, encouragement, and emotional support to students. They should foster a safe and welcoming environment, build trust based relationships, and inculcate values and critical thinking skills. Unfortunately, some teachers are unaware of these obligations due to factors like insufficient training or personal disengagement, leading to a scarcity of proper guidance. This lack of guidance negatively impacts students, causing academic underperformance, mental health issues and disengagement from learning. To address this issue, awareness and professional development for teachers are crucial along with promoting collaboration between schools, parents and communities. It is essential to recognize the significance of teachers' roles and support them in fulfilling their obligations, as the well being and future success of students depend on it.

Mental Health

Mental health encompasses the complex interplay of various aspects of individual well being. It is a holistic combination of physical, emotional, moral, spiritual and social health. The physical dimension focuses on maintaining a healthy body through lifestyle choices. Emotional health involves understanding and managing emotions effectively. Moral health pertains to aligning actions with personal beliefs and fostering self respect. Spiritual health involves finding meaning and connection beyond oneself. Social health refers to building and maintaining meaningful relationships. These dimensions are interconnected and contribute to overall mental well being. Taking a balanced approach and addressing each aspect can lead to resilience, fulfilment and thriving mental health

Research indicates that stressors encountered during college years can serve as predictors of mental health disorders. In fact, numerous mental health conditions often originate during this crucial period which includes anxiety, drug abuse, depression etc. (Shankar & Park, 2016). The experience of stress by students is multifaceted and can be attributed to various contributing factors (Mulvenon et al., 2005). An expanding body of evidence suggests that stress related to academics significantly deteriorates the mental well being of students globally. In addition to academic pressures, students encounter a range of stressors and challenges including social isolation, financial difficulties and personal issues; all of which can have a profound impact on their mental health.

According to World Health Organization (2014), mental health is viewed as “a state of well-being in which individuals realize their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and are able to make a contribution to community”. According to Galderisi et al. (2015), mental health can be understood as a constantly changing condition of inner balance that allows individuals to effectively utilize their abilities while aligning with the core values of society. It encompasses fundamental cognitive and social skills such as the capacity to identify, express and regulate one's emotions along with the ability to empathize with others. Additionally, mental health entails adaptability and resilience in the face of challenging life events as well as the capacity to fulfill social roles. Lastly, the harmonious interplay between the mind and body is considered a crucial aspect of mental health; all of which collectively contribute to achieving and maintaining an internal state of equilibrium.

Extensive research has demonstrated the profound impact of mental health problems or disorders during this particular stage of life (Kosky & Hardy, 1992). Surprisingly, even mild mental health issues can bring about substantial changes in one's social, emotional and cognitive well being that may persist into adulthood. Just as studies conducted on the general population have revealed, certain subgroups within the college community exhibit a higher prevalence of mental health problems (Hasin et al., 2007). Specifically, while male undergraduates face a greater risk of suicide (Hasin et al., 2007), female students are more prone to screen positive for major depression and anxiety disorders. Furthermore, students from lower socioeconomic backgrounds are particularly susceptible to experiencing depressive and anxiety symptoms (Weitzman, 2004).

It is important for students to prioritize their own mental health and this can involve reaching out for help when needed practicing self-care and seeking support from friends and family members. By prioritizing mental health, students can better cope with the challenges of academic life and improve their overall well being. Schools and universities play a crucial role in prioritizing mental health and ensuring students have access to necessary resources and support. This can be achieved through various means including offering readily available counseling services, conducting mental health screenings and facilitating support groups. In addition, promoting and encouraging healthy habits like regular exercise, nutritious eating and stress management techniques can contribute significantly to maintaining good mental well being among students. By proactively addressing mental health concerns and fostering a supportive environment, educational institutions can greatly contribute to the overall wellness of their students.

Academic Stress

Academic stress refers to the high level of anxiety and pressure that stem from the pursuit of education and the demands of schooling. It encompasses various factors such as difficulty in studying, assignments, exams, labs, reading and quizzes. Students, especially those away from home, face the challenge of balancing their time and finding space for extracurricular activities. Academic stress is unique as it is directly linked to the quest for knowledge and personal growth, subjecting individuals to expectations and performance standards that create overwhelming pressure. It extends beyond

workload to impact individuals emotionally and psychologically; leading to fear of failure, perfectionism and burnout. Addressing academic stress involves recognizing its signs and implementing strategies like open communication, support systems, self-care and stress management techniques. Extensive research has identified various stressors contributing to academic stress among students. These include overwhelming assignments, intense competition with peers, fear of failure and challenging relationships with peers or lecturers. The burden of numerous assignments leads to feelings of pressure and time constraints. Competition generates stress as students fear falling behind and strive to excel. Failures in exams or assignments cause disappointment and self doubt, impacting overall well being. Poor relationships with peers or lecturers disrupt the learning environment and contribute to stress. Additionally, students feel the pressure of a vast knowledge base and limited time to develop it. Understanding these stressors is crucial for educators and institutions to provide interventions and resources; creating a healthier academic environment that promotes student success and well being. Adolescence is a transformative phase characterized by profound physiological and psychological changes, accompanied by increased stress levels. This phenomenon is particularly prevalent among secondary school students (Saleh et al., 2017).

In recent years, the relationship between academic stress and mental health has gained significant attention in the field of education and psychology. Research has shown that academic stress, defined as the experience of high levels of pressure, anxiety, and dissatisfaction related to academic performance, can have detrimental effects on students' mental health. Numerous studies have examined this relationship among various student populations, highlighting the negative impact of academic stress on mental health outcomes including symptoms of anxiety, depression and stress (Subramani et al., 2017). Academic stress can have a significant impact on a student's academic performance and coping strategies ultimately affecting their overall well being and mental health (Al-Sowaygh, 2013). Students who experience academic stress may struggle with motivation, concentration and may experience feelings of hopelessness and helplessness. Studies indicated that academic stress leads to stress, anxiety and depressive symptoms in students. When students are stressed, they may feel demotivated to study and perform well. This can lead to a lack of interest in their academic work, which can ultimately lead to poor performance. It has been found that students experiencing distress find it difficult to manage their time effectively. This often leads to procrastination, missed deadlines and poor performance on exams and assignments.

Academic stress has also been shown to impair a student's cognitive functioning including their memory, attention and problem solving skills. This can make it difficult for them to retain information and perform well on exams. Academic stress which refers to the perception of internal or external factors that hinder one's likelihood of completing college along with its negative impact on academic progress is frequently investigated in national public health surveys focusing on college students (Healthy Minds Network, 2020). Numerous studies have consistently emphasized the connection

between mental health problems and academic stress among college students overall (Bedewy & Gabriel, 2015). Extensive research conducted worldwide has extensively examined the detrimental impact of prevalent mental health issues on academic performance (Mahdavi et al., 2021). While there is a growing body of research on academic stress and mental health, there is a need for further investigation specifically focusing on secondary students. This period is characterized by unique challenges, such as increased academic workload, intense competition for college admissions and the pressure to perform well in board examinations. Understanding the specific experiences and challenges faced by secondary school students is crucial for developing targeted interventions and support systems. This study aims to examine the relationship between academic stress and mental health among secondary school students. By exploring the prevalence of academic stress and its impact on mental health outcomes, such as symptoms of anxiety and depression, this research will contribute to a deeper understanding of the unique challenges faced by secondary school students and their implications for mental well-being. By identifying the role of academic stress as a potential factor for mental health conditions, the study aims to provide insights into potential areas of intervention and support that can alleviate academic stress and promote better mental health outcomes. In conclusion, the transition to secondary education poses specific challenges that can significantly impact the mental well-being of students. Understanding the relationship between academic stress and mental health among secondary students is crucial for developing effective strategies to support their well-being. By exploring the prevalence, impact and contributing factors of academic stress, this study aims to provide valuable insights that can inform educational institutions, policymakers and mental health professionals in promoting the mental well-being of secondary students.

Review of the Related Literature

Several studies have investigated the expansion of mental health issues among university students, emphasizing the need for comprehensive intervention to support their well-being.

Kessler et al., (2005) revealed that students are more vulnerable to developing mental health disorders and their well-being is significantly influenced by academic institutional elements. Academic pressure, social dynamics and access to support services within the academic environment were identified as important factors affecting students' mental well-being.

Subramani et al., (2017) conducted a study to examine academic stress and students' mental health. The study included a sample of 190 students. The results revealed a positive relationship between academic stress and psychiatric issues. The study argued that asserting that academic stress stands as a significant factor that significantly impacts students' mental health.

Amir et al., (2012) recognized the crucial role of students' physical and mental health in societal growth and dynamics. Their study focused on first-year university students and

found that thirty two per cent of participants exhibited signs of mental illness. The researchers explored the relationship between coping mechanisms, mental health factors and the rate of suicidal tendencies. This study emphasized the necessity of comprehensive interventions that consider coping mechanisms and the interplay between mental health factors to support the well being of first year university students.

Mostafaei (2012) examined the relationship between academic stress and mental health. The study revealed an inverse relationship between stress and students' mental health, with those in the science field displaying better mental health compared to those in the humanities. Furthermore, no significant correlations were found between gender or age and mental health among university students.

Pozos et al.,(2014) conducted a study involving 527 university students, exploring the predictors of chronic stress and its relationship with age and gender. They found that factors such as classroom involvement, obligatory work and semester examinations significantly contributed to high levels of chronic stress among students. Female students and those aged 18-25 reported higher stress levels. The study indicated that 35.3% of students experienced elevated levels of chronic stress, while 44.8% had moderate levels and 19.9% had low levels.

Sharma (2014) investigated the role of peer group influence and academic stress on teenagers' depression, emphasizing the need to address and mitigate academic related pressures for promoting mental well being. However, the findings suggested that peer group influence may not exert a substantial influence on levels of depression experienced by adolescents. These contrasting results contribute to the understanding of the complex dynamics between academic stress, peer group influence and depression among teenagers, emphasizing the importance of further research and targeted interventions to support the mental health needs of this vulnerable population.

Javeth (2018) examined the association between academic stress and students' mental health. The study involved 150 randomly selected participants. The findings revealed an inverse relationship between academic stress and students' mental health. The results indicated that higher levels of academic stress have a significant impact on student's overall mental well being, subsequently influencing their academic performance.

Barbayannis et al., (2022) investigated the association between academic stress levels and students' mental health in a sample of 843 college students. The results indicated a significant relationship between academic stress and psychological well being. Moreover, the study found significant gender differences with respect to academic stress in which women reported increased levels of stress as compared to men

Need of the Study

This study aims to examine the relationship between academic stress and mental health among secondary school students. By exploring the prevalence of academic stress and its impact on mental health outcomes, such as symptoms of anxiety and depression, this

research will contribute to a deeper understanding of the unique challenges faced by secondary school students and their implications for mental well being. By identifying the role of academic stress as a potential factor for mental health conditions, the study aims to provide insights into potential areas of intervention and support that can alleviate academic stress and promote better mental health outcomes. In conclusion, the transition to secondary education poses specific challenges that can significantly impact the mental well being of students. Understanding the relationship between academic stress and mental health among secondary school students is crucial for developing effective strategies to support their well-being. By exploring the prevalence, impact, and contributing factors of academic stress, this study aims to provide valuable insights that can inform educational institutions, policymakers, and mental health professionals in promoting the mental well being of secondary school students.

Objective of the study

1. To study the level of academic stress among secondary school students.
2. To study the level of mental health among secondary students.
3. To study the relationship between academic stress and mental health.
4. To study the difference in mental health in relation to gender.
5. To study the difference in academic stress in relation to gender

Hypothesis:

H₀1: There is no significant relationship between Academic stress and students' mental health.

H₀2: There is no significant difference in mental health between male and female students.

H₀3: There is no significant difference in academic stress between male and female students.

Methodology:

This section outlines the research methodology employed in the study, focusing on study design, data collection and sampling technique. It is a descriptive survey and correlation study.

Population:

The population of the study comprises all the students studying at the secondary school level in Kashmir Valley.

Sample:

The sample of the study comprises of total 229 students 73 male and 156 female selected through the random sampling method.

Tools:

The data was collected by using the following enlisted tools:

Academic stress scale:

Academic stress is measured by employing the Perception of Academic Stress Scale which consists of 18 items. This scale was specifically designed to assess individuals' perceptions of academic stress (Bedewy & Gabriel, 2015).

Mental Health Inventory-5 (MHI-5)

The present study employed the shorter version of the MHI, known as the MHI-5 (Berwick et al., 1991), to measure students' mental health. The MHI-5 comprises only five items but retains its reliability and validity for assessing mental health (Berwick et al., 1991; Ratings were given on a 6-point Likert-type scale, ranging from 0 (none of the time) to 5 (all of the time).

Analysis and Interpretation of data:

Descriptive and correlational analysis was done. The data was analysed quantitatively. Some statistical techniques were used to quantify the data. SPSS (Version 24) was used to analyze the collected data. Data analysis was conducted in multiple steps. Initially, the data was analyzed to examine the reliability and normality of all the measures used. Second, the descriptive analysis (mean and Standard deviation) and correlational analyses of academic stress and mental health were conducted. Third, an independent t-test was conducted to analyze the differences in academic stress and mental health with respect to gender.

Objective: 1 To study the level of academic stress among secondary school students.

Table 1 Frequency Distribution of the sample group with respect to Academic stress

Construct	<i>f</i> (low)	%	<i>f</i> (Average)	%	<i>f</i> (High)	%
Academic stress	34	14.8	174	76.0	21	9.2

Finding 1: Table 1 reports the results of the frequency distribution of the sample group with respect to academic stress. Descriptive analyses like means, standard deviations and frequencies were conducted to assess the levels of academic stress. The entire sample group was categorized into three levels based on mean and standard deviation. The results indicated that 14.8% of participants reflected lower levels of academic stress, 76% of participants reflected average levels of academic stress, and 9.2% of participants reflected higher levels of academic stress.

Objective 2: To study the level of mental health among secondary school students.

Table 2 Frequency Distribution of the sample group with respect to mental health

Construct	<i>f</i> (low)	%	<i>f</i> (Average)	%	<i>f</i> (High)	%
Mental health	28	12.2	168	73.4	33	14.4

Finding 2: Table 2 reports the results of the frequency distribution of the sample group with respect to mental health. Descriptive analyses like means, standard deviations and frequencies were conducted to assess the levels of students' mental health. The entire sample group was categorized into three levels based on mean and standard deviation. The results revealed that 12.2% of participants reflected lower levels of mental health, 73.4% of participants reflected moderate levels of mental health, and 14.4 % of participants reflected higher levels of mental health.

Objective: 3 To study the relationship between academic stress and mental health.

Table3: Descriptive statistics and correlations for all measures (N=229).

	Means	SD	Cronbach's alpha	1	2	3
1) Academic stress	44.5	11.18	0.72	1.00		
2) Mental health	19.16	3.25	0.82	-.228 **	1.00	

Correlation is significant at a 0.01level(2-tailed).

Finding 3: The results of descriptive statistics along with Pearson's correlations between academic stress and mental health are presented in Table3. Results revealed that academic stress ($r = -.228^{**}$, $p < 0.01$) is significantly and negatively correlated with mental health, thus the null hypothesis H_{o1} "There is no significant relationship between Academic stress and students' mental health. "Is rejected.

Table 4: Mean differences in mental health with respect to gender

Variables	Gender	N	Mean	df	t-value	Sig
Mental health	Male	73	19.50	227	1.099	0.273
	Female	156	19.00			

Objective: 4. To study the difference in mental health in relation to gender

Finding 4: An interdependent group test was conducted to analyze the mean differences in mental health with respect to gender. Results revealed that the calculated t-value for mental health ($t=1.099$) is insignificant at 0.05 level, suggesting that there is no significant difference in the levels of mental health, thus the null hypothesis H_{o2} "There is no significant difference in mental health between male and female students" is accepted at 0.05 level of significance.

Table 5: Mean differences in academic stresswith respect to gender

Variables	Gender	N	Mean	df	t-value	Sig
Academic stress	Male	73	41.75	227	-2.668	0.008
	Female	156	45.92			

Objective 5: To study the difference in academic stress in relation to gender.

Finding 5: An interdependent group test was conducted to analyze the mean differences in academic stress with respect to gender. The results indicated that the calculated t-value for academic stress ($t=-2.668$) is significant at the 0.05 level, suggesting that there is a significant difference in levels of academic stress among males and females thus the null hypothesis H_0 "There is no significant difference in academic between male and female students" is rejected

Conclusion

Our research aimed to investigate the relationship between academic stress and secondary students' mental health. The results of our study provide important insights into the impact of academic stress on students' mental well being. Firstly, we found a significant negative relationship between academic stress and students' mental health. This means that as academic stress increases, students' mental health tends to decline. Our findings contribute to this existing body of research, reinforcing the notion that academic stress is indeed a significant factor impacting students' mental well-being. Secondly, our study found no significant difference in the levels of mental health between male and female secondary school students. This suggests that gender does not play a significant role in determining the mental health outcomes of students in this age group. These results align with several previous studies that have also reported no gender differences in mental health among adolescents and young adults (Boyd et al., 2015; Pattyn et al., 2015). Lastly, our research revealed a significant difference in the levels of academic stress between male and female secondary students. This indicates that males and females experience academic stress to varying degrees. While our study does not provide specific reasons for this difference, it is consistent with previous research that has also reported gender differences in academic stress levels (Shekhar & Kumar, 2016). Previous studies have suggested various reasons for these gender differences in academic stress, including differences in coping mechanisms, social expectations, and self-perception (Kania, 2014). Thus it can be concluded that the variable mental health is not affected only by academic stress but could also be caused by non academic factors, those factors are needed to be studied. The variable help seeking behaviour could be also included in a future study.

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Exploring Parental Involvement in K-12 Students' Online Learning: Insights and Obstacles

Madhurima Pal¹ & Zahra Kazmi²

Abstract

The level of involvement that parents have in their children's education plays a significant role in determining both academic performance and their overall development, especially in the context of online learning. Understanding the extent to which parents are involved in their children's online learning has become an increasingly relevant topic in light of the rapid advancements in technology and the shift towards education delivered remotely. This research article aims to assess parental involvement in K-12 students' online learning. A survey was conducted, and 30 parents participated in the study. The results of this study indicate that parental involvement in children's online learning was more prevalent during the foundational, preparatory, and middle stages, in comparison to children studying at the secondary stage. A significant proportion of parents reported that their children had access to technological devices such as smartphones, laptops, the internet, and headphones at home. The challenges encountered by parents that emerged as prominent in the present study encompass a range of issues, including a notable communication gap experienced with teachers and school authorities, issues pertaining to internet connectivity, as well as time constraints.

Keywords: Online Learning, ICT, Parental Involvement, K-12 Students, Remote Learning

Introduction

Education has been considerably impacted by the coronavirus disease-2019 (COVID-19) pandemic. All the schools and universities were bound to provide online education to the students. It was in a way both boon and a curse to the students as many students, parents, and school authorities were confused about how to cope with the changes and the challenges which came with the technological change which was brought up by the

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COVID-19 pandemic. This was a time when students needed guidance, motivation, and physical and emotional support the most. This could be provided by primarily the parents or the guardians. Thus, it becomes the responsibility of the parents to provide the necessary guidance as well as fulfil the needs of their children so that they can indulge in studies without any problems. For this, parental involvement during online learning of children becomes important.

Support and Guidance

The studies found that learning participation and parental involvement acted an important and affirmative or positive role in the commitment of adolescents with regard to online learning (Al-Abdullatif & Aladsani, 2022; Garen et al., 2021; Hasler-Waters et al., 2014; Healy, 2022; Lawrence & Fakuade, 2021; Olmstead et al., 2013; Rousoulioti et al., 2022; Sari & Maningtyas, 2020). Parents play an active role by guiding the children using teaching materials or materials that are prepared for students through learning media (Situmorang & Purba, 2018). Few of the studies which were reviewed showed a negative impact on the students' academic achievement due to parental involvement (Hernández-Vergel et al., 2020; Qasim, 2021). It was found that parent involvement and family interaction have been affected both positively and negatively by using technology (Patrikakou, 2016; Ribeiro et al., 2021). The parents had to accept all technology-based resources and electronic gadgets, which was seen as a barrier at times; now it cannot be viewed as restricting or banning them.

Competency or Ability of Parents

It was found that the level of education the parents had affects the continuity of children's education and it also influences the educational orientation and mindset given to their children (Hernández-Vergel et al., 2020; Sari & Maningtyas, 2020). Parents having higher the education, the more open they thought about education and how to educate their children. It was suggested that parents must well understand the learning material from schools so that education implementation at home can be done successfully (Sari & Maningtyas, 2020; Situmorang & Purba, 2018). It was found in a study that parents were less interested if they perceive the technical tools to be difficult or beyond their knowledge or abilities (Osorio-Saez et al., 2021).

Collaboration with School Communities

Studies suggested that schools should be in a position to play a crucial role such that they can assist parents in navigating and enhancing the use of media and technology (Al-Abdullatif & Aladsani, 2022; Garen et al., 2021; Healy, 2022; Hernández-Vergel et al., 2020; Osorio-Saez et al., 2021; Patrikakou, 2016; Perera & Wedasinghe, 2015; Wen et al., 2021). Data collected indicated that the parents were engaged more in children's learning when technological tools were suggested or provided by schools and when they were influenced socially by various opinions of other parents, teachers, relatives, children, the general public, etc (Osorio-Saez et al., 2021).

Challenges

Online education become a substantial burden on parents and they end up becoming the primary educator of their children. This results in increased workload and need assistance from the teaching community (Alharthi, 2022; Knopik et al., 2021; Rousoulioti et al., 2022; Sharmacharya, n.d.). From the review of various studies, the major challenges faced by parents during involvement with students in online education are economic problems (Qasim, 2021), communication with teachers, health and work, attitudes of administrators and teachers, culture and language, lack of access to types of communication, abilities and attitudes of parents (Riddle, 2018), technological illiteracy (Hernández-Vergel et al., 2020), etc.

Significance of the Study

The past decade has come across a significant move towards online education, especially after the emergence of the COVID-19 pandemic. Conventional on-premises education abruptly changed to modern online education. This pandemic impacted every student and every stakeholder in education greatly. Many researches were conducted on education during COVID times where students and teachers participated in various studies. Since, this has become a new normal, online education is continued and it will persist in the future as blended or online mode of education, parental involvement becomes important as a field of research. Very few locally conducted studies are there on parental involvement (Sharmacharya, n.d.) in online education of school students. Given these concerns, this research study tried to assess parental involvement in K-12 students' online learning.

Objectives of the study

1. To study whether and how parents are involved in providing support and guidance to their children during online learning.
2. To investigate the ability or competency of parents for guiding their children during online learning.
3. To inquire about the status of the collaboration of parents with school communities.
4. To study the challenges faced by parents during online learning.

Operational Definitions

K-12 students: K-12 students are students studying in primary and secondary grades, starting from Kindergarten to 12th grade of school.

Parental involvement: Parental involvement is the participation of parents in their children's online learning using two-way and meaningful communication.

Methods and Materials

The quantitative research design was used to conduct this study. The population consisted of all the parents of k-12 students of Delhi/NCR schools and the sample of the

present study included 30 parents of k-12 students of Delhi/NCR. The sample was selected using a purposive sampling technique. A self-constructed questionnaire was used to collect data from the parents. Some of the items in the questionnaire were adapted from Sari &Maningtyas (2020) and Azubuike &Aina (2020). The gathered data was first transferred to MS Excel sheet and then it was analyzed by calculating the frequency and percentage for each item.

Results

The parents were asked about their highest qualification. The findings are given in Table 1.

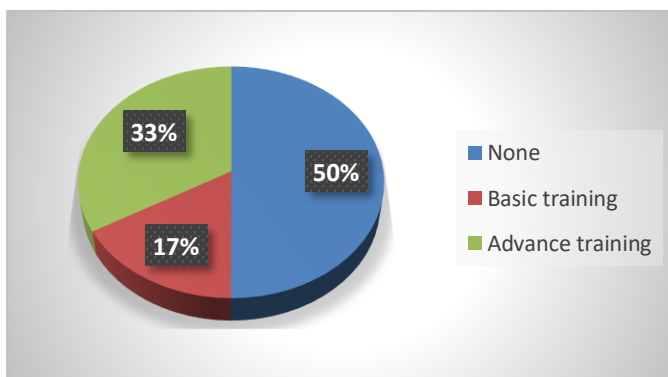
Table 1: Highest Qualification of K-12 Students’ Parents

Highest Qualification of the parents	Frequency	Percentage
No Formal Education	1	3.3%
Intermediate (12 th)	3	10%
Graduate	6	20%
Post-graduate	15	50%
M.Phil	1	3.3%
Doctorate	4	13.3%

Findings from Table 1 revealed that the majority of the parents (70%) were either graduates or post-graduates. Some of them (13.3%) had doctorate degree and 13.3% had M.Phil degrees. Ten percent of the parents were 12th pass and 3.3% indicated that they received no formal education.

The parents were asked if they had undergone any training related to computer/technology. Their responses were categorised into Basic training, Advance training and None. The findings are depicted in Figure 1.

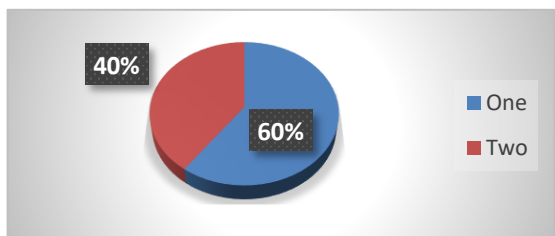
Figure 1: Level of training the parents received related to computer/technology



Findings indicated that 17% of the parents had basic training and 33% had advanced training related to technology. Whereas half of the parents had never undergone any training related to computer/technology.

The parents were asked to indicate the number of school-going students they have. The findings are shown in Figure 2.

Figure 2: Number of school-going children



Findings given in Figure 2 revealed that 60% of the parents have two school-going children whereas 40% have only one school-going child.

The parents indicated the grades in which their child/children were studying at. Their responses are given in Table 2.

Table 2: Level of education of k-12 students

Stages of schooling (according to NEP-2020)	Frequency	Percentage
Foundational Stage (Pre-school to Class 2 nd)	16	53.3%
Preparator Stage (Class 3 rd -5 th)	12	40%
Middle Stage (Class 6 th -8 th)	8	26.6%
Secondary Stage (Class 9 th -12 ^h)	12	40%

Most of the children (53.3%) were studying at Foundational Stage i.e., from Pre-school to Class 2nd, as reported by the parents. Forty per cent of students were in the Preparatory Stage i.e., from Class 3rd-5th, 40% in the Secondary stage and 26.6% of students were studying in the Middle Stage i.e., from Class 6th-8th.

The parents were asked to indicate to what extent they know how to use certain tools. The findings are given in Table 3.

Table 3: Parents’ response to the statement “I know how to use the given ICT tools”

Statement: I know how to use the following	Responses		
	Yes, to a large extent	Yes, to some extent	No, I don’t know how to use it

Tools	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Smartphone	25	83.3%	5	16.6%	0	0
Laptop	22	73.3%	5	16.6%	3	10%
Computer	21	70%	5	16.6%	4	13.3%
Tablet/Ipad	18	60%	8	26.6%	4	13.3%
Software Packages such as MS Office	20	66.6%	7	23.3%	3	10%

It was found that majority of the parents (83.3%) indicated that they know how to use a smartphone to a large extent and rest of the 16.6% indicated that they know how to use a smartphone to some extent. Interestingly, no one reported that they do not know how to use a smartphone. The parents of k-12 students revealed that they know how to use a laptop to a large extent (73.3%). Those of them who know how to use a laptop to some extent constituted 16.6% of the sample. However, 10% of parents revealed that they do not know how to use a laptop.

As far as knowledge about using computers was concerned, 70% of parents indicated that they know how to operate a computer to a large extent. Some parents (16.6%) reported that they know how to use a computer to some extent whereas 13.3% reported that they do not know how to use it. Sixty per cent of parents revealed that they know how to use tablets/Ipad. Around 27% indicated that they know how to use a tablet or an Ipad to some extent however, 13.3% of parents indicated that they do not know how to use a tablet/Ipad.

With respect to knowing how to use software packages, many parents (66.6%) reported that they know how to use software packages such as MS Office to a large extent. Around 23% revealed that they know how to use such applications to some extent. Ten percent of parents indicated that they do not know how to use the software packages such as MS Office.

The parents were asked to indicate what all ICT tools were accessible to their children at home. The findings are given below in Table 4.

Table 4: Accessibility of ICT tools for k-12 students at home

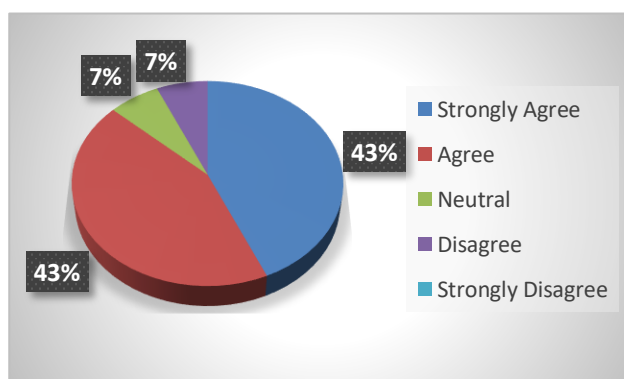
ICT tools accessibility	Frequency	Percentage
Smartphone	28	93.3%
Laptop	26	86.6%
Tablet/Ipad	16	53.3%
Personal Computer	10	33.3%
Kindle	7	23.3%

Printer	14	46.6%
Microphone	14	46.6%
Speakers	18	60%
Headphones	23	76.6%
Internet	28	93.3%
MS Office Applications	20	66.6%

It was found that Smartphones (93.3%), Internet (93.3%), Laptop (86.6%) and Headphones (76.6%) were some of the most accessible ICT tools for k-12 students, as indicated by their parents. Other ICT tools were found to be less accessible than previously mentioned tools such as Tablet/Ipad (53.3%), Personal Computers (33.3%), Kindle (23.3%), Printers (46.6%), Microphone (46.6%), Speakers (60%) and MS Office Applications (66.6%).

The parents were asked if they understand the learning materials provided by the school. The findings are illustrated in Figure 3.

Figure 3: Parents’ response to the statement “I understand the learning materials provided by the school”



The findings revealed that the majority of the parents (86%) either agreed or strongly agreed that they understand the learning materials provided by the school. Seven per cent of parents were neutral about this statement whereas, the rest of the 7% parents disagreed with the statement.

They were further asked to indicate how they support their child’s learning. The findings are given in Table 5.

Table 5: Parents’ response on how they support their child’s learning

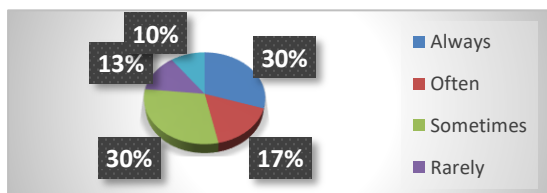
How do you support your child’s learning?	Frequency	Percentage
Teaching them by myself	18	60%
Children do self-study	16	53.3%
Siblings teach each other	5	16.6%

Teaching through textbooks	16	53.3%
Follow-up by school	5	16.6%
Tuition or coaching	13	43.3%
Monitoring or guiding the children during their online classes	14	46.6%
Teaching through self-prepared teaching-learning materials	7	23.3%

The findings given in Table 5 revealed that 60% parents teach their children by themselves, 53.3% teach through textbooks, 53.3% indicated that their children do self-study, 43.3% reported that they send their children to tuition or coaching, 23.3% revealed that they prepare teaching-learning materials themselves and then teach their children using those TLMs, 16.6% parents take follow-up by school regarding their child’s progress and 16.6% parents revealed that the siblings teach each other. Around 47% of parents reported that they monitor or guide their children during their online classes.

Furthermore, the parents were asked how often they help or guide their children with their online learning. The findings are depicted in Figure 4 given below.

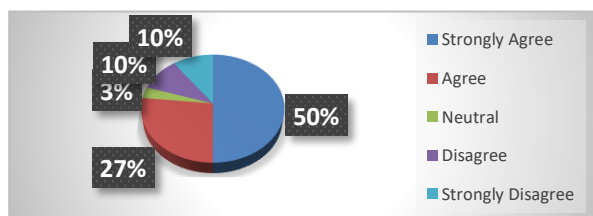
Figure 4: Parents’ response on how often they help/guide their children with their online learning



It was found that 30% of parents indicated that they always help or guide their children with their online learning, 17% reported that they often help their children during online classes, 30% indicated that they help/guide their children sometimes and 13% parents rarely help/guide their children with their online learning. The rest of the 10% of parents revealed that they never help or guide their children with their online learning.

The parents were asked if they are able to provide their children with the support they need for successful online learning. Their responses are depicted in Figure 5.

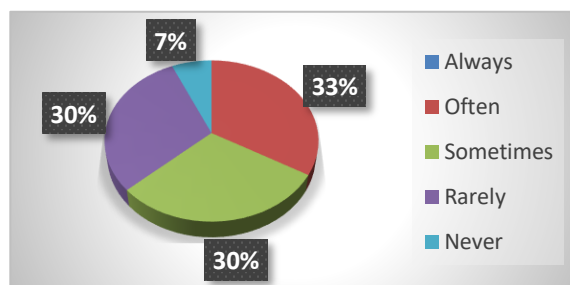
Figure 5: Parents’ response to the statement “I am able to provide my children with the support they need for successful online learning”



The findings revealed that the majority of the parents (77%) either agreed or strongly agreed that they are able to provide the support their children need for their successful online learning. Three per cent of parents were neutral about this statement, whereas 20% of parents either disagreed or strongly disagreed with the statement.

The parents were asked to indicate how frequently they communicate with school teachers or authorities. The findings are illustrated in Figure 6.

Figure 6: Parents’ response on how frequently they communicate with school teachers or authorities



With respect to their frequency of communication with school teachers or authorities, 33% of parents indicated that they communicate with school teachers or authorities often. Thirty per cent of parents indicated that they sometimes communicate with them, and 30% of parents rarely communicate with the school teacher or authorities. The rest of the 7% of parents revealed that they never communicate with school teachers or authorities.

In addition, they were asked how they communicate with the school teachers or authorities. The findings are given in Table 6.

Table 6: Parents’ response on how they communicate with the school teachers or authorities

How do you communicate with the school teachers or authorities?	Frequency	Percentage
Through Parent-teacher meeting (PTM)	27	90%
Through Learning Management System (LMS)	0	0
Through phone call	12	40%
Through WhatsApp/Telegram/ Google Meet/Zoom/Other social media	10	33.3%
No contact	2	6.6%

Findings revealed that majority of the parents (90%) communicate through school teachers through Parent-teacher meetings, 40% parents communicate through phone call, 33.3% through WhatsApp/Telegram/ Google Meet/Zoom/Other social media whereas, 6.6% revealed that they were not in contact with the school teachers or

authorities and none of them were using LMS to be in touch with the school teachers or authorities.

Lastly, they were asked about the challenges they face when they guide their children during their online classes. The findings are given in Table 7.

Table 7: Parents' response on the challenges they face when they guide their children during online classes

What all challenges do you face when you guide your children during their online classes?	Frequency	Percentage
Language barrier	5	16.6%
Communication gap with teachers/school/authorities	14	46.6%
Lack of technological resources	4	13.3%
Technical issues	11	36.6%
Internet connectivity issues	17	56.6%
Lack of technological skills	9	30%
Time constraints	13	43.3%
Cost of equipments required for online learning	4	13.3%
No direct interaction with teachers and peers	1	3.3%
It's impact on the child's mental, physical health	1	3.3%
Child finds it difficult to focus on online class because of distractions	1	3.3%
None	1	3.3%

The findings revealed that Internet connectivity issues (56.6%), Communication gap with teachers/school/authorities (46.6%) and Time constraints (43.3%) were some of the most faced challenges that the parents of k-12 students encounter while guiding their children in online learning. Other challenges included Technical issues (36.6%), Lack of technological skills (30%), Language barrier (16.6%), Lack of technological resources (13.3%), Cost of equipments required for online learning (13.3%), No direct interaction with teachers and peers (3.3%), online learning impact on the child's mental, physical health (3.3%) and children finding it difficult to focus on online class because of distractions (3.3%). Around 3% indicated that they face no challenges while guiding their children during online classes.

Discussion and Conclusion

The results of this study indicated that most of the parents were involved in guiding students during their online learning while only 10% of parents revealed that they never helped or guided their children. This can be seen in sync with the studies which found that learning participation and parental involvement acted an important and positive role in the commitment of adolescent learners towards online learning (Al-Abdullatif & Aladsani, 2022; Garen et al., 2021; Hasler-Waters et al., 2014; Healy, 2022; Lawrence

&Fakuade, 2021; Olmstead et al., 2013; Rousoulioti et al., 2022; Sari &Maningtyas, 2020).

As it was found in the studies that parent's educational level affects the continuity of children's education and parents having higher the education, the more open they thought about education and how to educate their children (Hernández-Vergel et al., 2020; Sari &Maningtyas, 2020). Thus, parents' ability or competency to guide their children during their online class becomes important and it reflected in the current study as well. The parents who had higher educational qualifications were able to understand the learning materials more and guide their children accordingly. There was more parental involvement in children's online learning at the foundational, preparatory, and middle stages i.e., from pre-school to class 8th, as compared to children who were studying at the secondary stage.

Most of the parents reported that they understand the learning materials provided by the school, and are able to provide their children with the support they need for successful online learning however, not even half of the parents indicated that they help or guide their children with their online learning often or always. Notably, 10% indicated that they never help or guide their children with their online learning. These findings suggest that although a significant number of parents demonstrate an understanding of the educational resources and possess the capacity to aid their children in online learning, there exists a number of parents who do not consistently engage actively in directing or aiding their children in their academic endeavours. Promoting increased parental involvement in their children's online learning has the potential to yield favourable outcomes in terms of academic achievement and overall educational engagement.

Studies suggested that schools should play a crucial role in assisting parents in navigating and enhancing the use of media and technology (Al-Abdullatif &Aladsani, 2022; Garen et al., 2021; Healy, 2022; Hernández-Vergel et al., 2020; Osorio-Saez et al., 2021; Patrikakou, 2016; Perera&Wedasinghe, 2015; Wen et al., 2021). Here in this study, parents can be seen interacting with the school teachers as except for 7% of parents, all the parents communicate with the school teachers. Out of these parents, 90% of the responses showed that they communicate with school teachers or authorities using Parent-Teacher Meetings (PTM). Hence, collaboration of parents with school communities is an important aspect in students' online learning.

The challenges faced by parents that were dominant in this study are communication gaps with teachers/school/authorities, internet connectivity issues, time constraints, etc. Other challenges that were persisting are Technical issues, Lack of technological skills, Language barrier, Lack of technological resources, Cost of equipments required for online learning, etc.

Therefore, considering all these aspects it can be concluded that parents' active involvement, their technological skills and accessibility of required ICT tools can play a crucial role for successful online learning of k-12 students and better learning outcomes

can be achieved. Hence it is important to work on the challenges that hinder the parents' involvement in their child's learning.

Recommendations for further research

Since the sample size of this study was small, similar studies can be conducted on a larger sample so that the findings can be generalized. Along with the quantitative data collection, the data can be collected qualitatively as well to triangulate the data collected from the parents of K-12 students.

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Optimizing Learning through Paradigm shift in Teacher Education

Bichitra Choudhuri¹ & Animesh²

Abstract

Optimizing learning involves effective implementation of policies and practices that will enhance the learning process and hence improve the educational outcomes. For optimizing learning, there is need to identify and develop the unique capabilities of the learner by preparing such teachers who can identify and develop the unique capabilities of the learners. With this objective of optimizing learning National Education Policy 2020 has been formulated by taking into the account that teacher is the centre of the significant changes to the any educational system. To improve the learning outcomes and to achieve the goal of making India the super power of knowledge there is a need to focus on recommendation of the policy at operational levels by developing and maintaining teachers' capacity. To ensure that all students get fair access to the best possible education, it is required that they are taught by different teachers who are enthusiastic, motivated, highly qualified, properly trained, and equipped to teach all pupils all levels of schooling. To achieve this goal there is need to restructure Teacher education in India. Many as recommended by NEP 2020. This paper focuses on the reformation and advancement of teacher education as described in NEP 2020 and the steps that have been taken so far which includes Integrated Teacher Education Programme (ITEP), National Professional Standard for Teachers (NPST), National Mission for Mentoring (NMM). How these programmes will help in restructuring teacher education in order to produce quality competent teachers who will optimize the learning process and contribute in the development of India as a global knowledge superpower.

Keywords: Restructuring Teacher Education, National Education Policy 2020, NPST (National Professional Standard for Teachers), NMM (National Mission for Mentoring), ITEP (Integrated Teacher Education Programme), Optimize Learning

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Introduction

“The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in critical measure upon the quality of their education, the quality of their education depends more than upon any single factor, upon the quality of their teacher.” The American Commission on Teacher Education

Education is one of the most significant global issues, and regardless of who we are or what jobs we hold, we all have something to say about it. We remark on new educational systems around the world, make suggestions for improved teaching and learning methods, and critique the current educational systems in the nations where we reside. There is no denying that education has a positive impact, but there is also a significant issue with the teachers in these educational systems. Any educational system can be strong, effective and successful with efficient and motivated teachers and educational administrators who work in these fields. The teachers have a profound impact on the lives of students, they can develop leadership in the classroom thus quality of the teacher is one of the most important influencing factor for optimizing learning of the students apart of other school-related factors.

At the policy and operational levels, there is an urgent need to focus on developing and maintaining teacher capacity. Pre-service and in-service teacher education are the two main divisions of teacher education in India. Education experts and practitioners on the ground have criticised both of these models for their conception and execution. Even though the education sector receives about 3% of the GDP the majority of which goes toward teacher wages and training, there are still glaring gaps in the knowledge and disposition of instructors that need to be filled. Need of upgradation is required for in-service and pre-service teacher preparation for educational reforms & optimizing learning at school level. To prepare proficient and competent future teachers, effective teacher education programme, curriculum and training is required. To be able to enhance their programmes and the calibre of the teaching and learning process, teachers and schools must stay abreast of contemporary advancements in the field of teacher education and training. This paper focuses on what NEP 2020 says about advancement and reformation in Teacher Education and what steps have been taken so far in restructuring Teacher Education to produce quality competent teacher who will improve the school education by optimizing learning which in turn will help in making India a global knowledge superpower.

NEP 2020 recommendations for Teacher Education and Teacher

1. By 2030, only educationally sound, multidisciplinary, and integrated teacher education programmes shall be in force.
2. By 2030 three types of Teacher Education Programmes will exist:
 - 4 year Integrated B.Ed.(ITEP) for grade XII pass out
 - 2 year B.Ed. for Bachelor’s Degree holders

- 1year B.Ed for those who have completed the equivalent of 4-year multidisciplinary Bachelor's degree or have obtained a Master's degree in a specialty
- 1. The 4-year integrated B.Ed. offered by such multidisciplinary institute will, become the minimal degree qualification for school teachers by 2030.
- 2. All Teacher Education programmes to be conducted within composite multidisciplinary institutions
- 3. Multidisciplinary higher education institutions offering the 4-year in class integrated B.Ed. Programme can also provide blended and ODL, mode of teaching to students in remote areas.
- 4. All B.Ed. Programmes will include training in time tested techniques in pedagogy, multi-level teaching and evaluation, teaching children with disabilities, teaching children with special interests or talents, use of educational technology, and learner-centred and collaborative learning.
- 5. Shorter local teacher education programmes to be available at BITEs, DIETs, or at school complexes for eminent local persons who can be hired to teach at schools as 'master instructors' for promoting local professions, knowledge, and skills, e.g. local art, music, agriculture, business, sports, carpentry, and other vocational crafts.
- 6. Formulation of new and comprehensive National Curriculum Framework for Teacher Education
- 7. The admission to pre-service teacher preparation programmes shall be through suitable subject and aptitude tests conducted by the National Testing Agency.
- 8. Scholarships for meritorious students will be established for the purpose of attracting outstanding candidates to the 4-year, 2-year, and 1-year B.Ed. programmes.
- 9. Stringent action should be taken against substandard stand-alone Teacher Education Institutions (TEIs).
- 10. A National Mission for Mentoring shall be established, with a large pool of outstanding senior/retired faculty – including those with the ability to teach in Indian languages – who would be willing to provide short and long-term mentoring/professional support to university/college teachers.
- 11. A common guiding set of National Professional Standards for Teacher will be developed by NCTE which would cover expectations of the role of the teacher at different levels of expertise/ stage and the competencies required for that stage. It will also comprise standards for performance appraisal, for each stage. The NPST will also inform the design of pre-service teacher education programmes.
- 12. National Council for Teacher Education will be restructured as Professional Standard Setting Body (PSSB) under General Education Council (GEC).

13. National Higher Education Regulatory Council (NHERC) to function as a single point regulator for higher education sector including teacher education.

Steps Taken to Restructure Teacher Education for Optimizing Learning

As per the recommendations of NEP 2020, and mandate of Ministry of Education (MoE) in reimagining Teacher Education, many tasks have been assigned to National Council for Teacher Education which are as follows

1. **Integrated Teacher Education Programme (ITEP):** It is a 4 year B.Ed. Programme which will prepare teachers for Foundational, Preparatory, Middle and Secondary stages as per the new school structure of NEP2020. A student undergoing this course will be grounded in Indian values, languages, knowledge, ethos, tribal tradition and also well versed in latest advances in education and pedagogy. This course caters to the need of 21st Century skills.
2. **National Mission for Mentoring (NMM):** It is a creation of a large pool of outstanding senior/retired professional willing to provide mentoring to the ones seeking guidance and help. These potential mentors regardless of the age or position of the mentor and mentee will contribute towards realising 21st century developmental goals of our nation.
3. **National Professional Standards for Teachers (NPST):** It is a statement of quality and defines competencies of teachers at different stages/levels. It will govern the teaching profession in the country in relation to its professional role. It will improve the teachers' personal and professional development by providing them an understanding of what is expected in terms of their performance and what needs to be done to enhance the same.
4. **2 Year B.Ed Programme:** As per the recommendation of NEP 2020 for teacher education curriculum. NCTE is redesigning and developing Curriculum Framework for 2 year B.Ed Programme for bachelor degree holders.
5. **1 Year B.Ed. Programme:** Redesigning and developing Curriculum Framework for 1 Year B.Ed Programme for those who have 4-year multidisciplinary Bachelor's degree or have obtained a Master's degree in a specialty.
6. **Certificate Courses:** Short Certificate courses will be created and made available to teachers who wish to move into more specialised areas of teaching like teaching students with disabilities or leadership and management programme or want to move from one stage to another i.e foundational, preparatory, middle and secondary stages.
7. **Teacher Eligibility Test (TET):** Strengthening of TET for all levels of teachers as per new school structure i.e 5+3+3+4
8. **4 Year Bachelor Degree for Art Education:** Designing of programme 4 year art education programme for those who want to become teacher of art education.
9. **4 Year Bachelor Degree for Physical Education:** Designing and development Curriculum Framework for 4 year ITEP with specialisation of physical education.

- 10. **National Curriculum Framework for Teacher Education (NCFTE):** Based on the principles of NEP 2020 new and comprehensive National Curriculum Framework for Teacher Education will be formulated by NCTE in consultation with NCERT.
- 11. **Transformation of TEIs:** Regulatory efforts need to be taken to transform stand alone TEIs into multidisciplinary institutions by 2030 and stringent action need to be taken against substandard and dysfunctional TEIs.
- 12. **Professional Standard Setting Body (PSSB):** Restructuring NCTE as PSSB where they will lay down academic standard and coordinate between teaching, research and extension of teacher education as a member of GEC.

As per the above mentioned tasks assigned to NCTE as the mandate of NEP 2020. NCTE has initiated the process by formulating various committees as per the tasks assigned. NCTE has conceptualised the action plan and are going to start pilot study of ITEP in academic year 2023. As part of pilot launch of ITEP, NCTE by doing rigorous research has come up with field trail version of NPST and NMM and has started with the pilot study of NPST and NMM.

How it will bring reformation and optimize the learning process

After 34 years India has received its new education policy as NEP 2020 with many recommendations which will reform Teacher education and teacher in India in the following way

- 1. So far at bachelor level eleven Teacher Education Programmes are running as per NEP2020 after 2030 only three teacher education programme will be run throughout the country which will prepare teacher of all school levels with competency of 21st century skill.

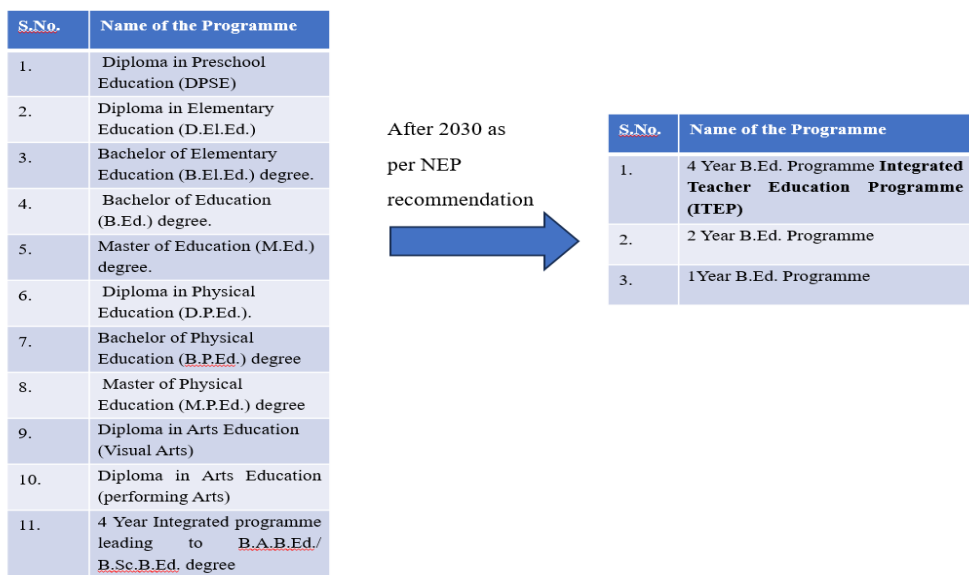


Figure1: Types of teacher education programme as per pre and post NEP 2020

2. As per the norms and standards every university has their own procedure of admission in different teacher education programmes run by them, it is either entrance test or merit-based admission. But after the implementation of NEP 2020, admission in all the three types of Teacher Programme will be through Common Entrance Test conducted by National Testing Agency and this will allow only talented students to enter into the profession.
3. The four-year ITEP will be available for all students after secondary who choose teaching as a profession by choice not by chance.
4. The establishment of scholarships for deserving students will help draw top applicants to the 4-year, 2-year, and 1-year B.Ed. programmes.
5. Curriculum designing is one the important factor for optimize learning because of which there is redesigning of curriculum and the course structure of all teacher education programme as per the need of 21st Century. So, the prospective teachers passing out of this course will be grounded in Indian values and traditions, instilled with the needs of 21st century on global standards, and therefore will be largely helpful in shaping the future of New India.
6. **NPST:** Before NEP 2020 as such there is no written Professional Standards, available for teacher. The Professional Standards for Teachers is a guiding document which would cover expectations and the competencies required from a teacher at different levels of expertise and/or experience at various stages of career. It will ensure that all students at all levels of school education are taught by passionate, motivated, highly qualified, professionally trained, and well-equipped teachers. NPST will also help in determining all aspects of teacher career management, including tenure, professional development efforts, salary increases, promotions, and other recognitions. For example, career advancements and salary increments will not only occur based on the length of tenure or seniority but shall be based on such appraisal.
7. **NMM:** Different researches and studies found that competency of teachers is one of the biggest challenges in the education. It is because there are the gaps in accessing expertise, continuous professional development, connecting with peers from similar contexts and the absence of a platform to leverage cross-learning. National mission of mentoring is a structured mentoring programme which will offer a solution to address the existing gaps in a more decentralised manner. It will offer individuals to engage in the processes of learning under an experienced professional. The different ways of engaging in mentor-mentee interactions can enable skill and capacity building for teachers, school leaders and professionals. Mentoring has an opportunity to soften the boundaries of hierarchies and bring a fundamental paradigm shift. It will optimize learning by making learning more peer and community-led. It will also make learning more personalised and continuous.

Impact and Challenges of ITEP

The ITEP aims to provide a comprehensive and multidisciplinary teacher education programme that will develop qualified, professionally trained, and well-equipped teachers who can then design and deliver developmentally appropriate learning experiences for student teachers that will aid in the holistic development of all human capacities, including intellectual, aesthetic, social, physical, emotional, and moral one in an integrated manner.

- a. Integrated Teacher Education Programme will bring reform in Teacher education programme because through this single teacher education programme, teachers' of all level as per NEP i.e Foundational, Preparatory, Middle and Secondary will get prepared. As ITEP will provide specialization in the Pedagogy of School Subjects as well as specialization in the Pedagogy of School Stage. ITEP will definitely bring quality as only meritorious students who have the passion of teaching will enter in this field. Through National level entrance exam to get enrolled in the course.
- b. As per the NEP 2020 by 2030 three Teacher Education Programmes will run as per the qualification i.e ITEP for class XII passed out, 2 Year B.Ed for Graduate and 1 year B.Ed for Master Degree holders. Initially it will not affect the present running 2 year B.Ed programme but yes there are certain chances that in long run it may dilute the 2 year B.Ed programme because in ITEP as compare to 2 Year B.Ed programme the students' one year will be saved and because ITEP is a dual bachelor degree so after completing ITEP student can go for master degree either in their discipline or education.
- c. Along with reform the biggest challenge lies with ITEP is in its execution. It has been recommended that this programme will be run only by multidisciplinary higher education institutions because good teacher education requires expertise across all areas connected to education. So institutions that can provide for faculty across disciplines and offer different programmes besides teacher education are best suited to run such a teacher education programme. With this object NCTE is going to start the pilot study of ITEP in 57 institutes which comes under the Institute of Eminence and time has been given to other Teacher Education institutions to transform themselves into multidisciplinary education institutions for maintaining the quality of teacher education.

Conclusion

For optimizing the learning process there is an overall and urgent demand for upgradation of the process of teacher preparation and training. Taking into account the complexity and importance, it is essential that the entire process of teaching is viewed as a professional practise. To fulfil this demand many recommendations have been given in NEP 2020 and as per mandates of NEP 2020 many steps have been taken by National Council for Teacher Education, the regulatory body for Teacher Education in India and is still working in this direction which will reform the image of Teacher Education and Teacher in India. Integrated Teacher education Programme (ITEP), National Professional

Standards for Teachers (NPST) and National Mission for Mentoring (NMM) are the major steps taken by NCTE and they have started with pilot study of these programmes. The common objective of all these programmes is to ensure that all students at different levels/stages of school education are taught by passionate, motivated, highly qualified, professionally trained, and well-equipped teachers. These steps will ensure that teacher education remains relevant and responsive to the needs of society which in turn will optimize the learning process thus improving the educational outcomes.

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NEP-2020 and Multilingualism: Building an Eco-System of Optimizing the Classroom Learning

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Abstract

Multilingualism has been recognized as the global phenomenon. As the child comes into the world, one of the common developments is language development. Initially, it started with mother tongue and later with passage of time, child learns or acquire many more languages. According to researches when the child enters school, child is equipped with more than one language. The language facilitates the child to communicate, express or share his or her ideas. Often the language is verbal and most of the time it is expressed in mother tongue. Recognizing the power of language and how it facilitates communication and expression, major policy documents recommended learning of more than one language in school education. The three-language formula which come in late 1960s is still being followed in school education system. The National Education Policy-2020 emphasizes on the three-language formula as envisaged in NPE-1968 but is more focused on learning of local languages rather than stringent bifurcation of language learning policy. Today, language learning in school education has changed especially with the change in the diversity of the classrooms. Today classrooms are more diverse linguistically so following the pattern of language learning as per three language formula would not suffice. Child must communicate locally and globally, therefore apart from learning global languages as envisaged in NEP-2020, child must learn local languages (other than mother tongues). In such case teachers have to be proficient multilingually to serve the purpose. Teachers who are multilingual will build a classroom eco-system which will facilitate not only learning but also help in building enhanced cognitive abilities, increased memory, better academic performance and more importantly giving opportunities to learners of different linguistic abilities to participate in the teaching learning process.

Keywords: Multilingualism, teacher, curriculum, teacher education institution.

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Introduction

According to UNESCO (2023): *Multilingual education is a treasure filled with culture, history, values, and knowledge and is essential for transforming education.*

UGC Chairperson in its recent letters to all vice chancellors has directed the higher education institutions to allow the students to write their exams in local languages as well as using local languages in teaching and learning apart from translation of good work in local languages. This is in consonance with NEP-2020 recommendation to promote regular use of local languages. In the recent years, UNESCO has started to celebrate International Mother language Day in the month of February. The reasons behind celebrating International Mother Language Day is; firstly, that many languages are on the brink of extinction which means the indigenous knowledge associated with these languages will vanish out which may probably lead to many more global problems and challenges that can be solved if one can use the indigenous knowledge, secondly nearly 40% of the global population do not have access to education in native language which indeed is a big threat for achieving SDG and finally multilingualism will lead to greater social inclusion in the society.

India's cultural heritage is almost 5000 years old. The unique feature of Indian culture is assimilation and accommodation of other culture that originate in other parts of the world but gleefully accepted, cultivated, and prospered in India. This culturally diverse heritage has led to thriving of linguistically diverse people in India. So, one can say multilingualism has been part and parcel of common Indian life. Normally, each Indian speaks more than one language. As life goes on, apart from mother tongue, an average Indian acquires one or two additional languages in journey of their life. According to 2011 census, there are 270 mother tongues (123 grouped under scheduled and 147 under non-scheduled languages-spoken by more than 10000 people). The People linguistic Survey (2010-2012), reported India has 780 languages including scheduled and non-scheduled (Cited in Jolad & Aggarwal, 2021). The linguistic diversity in India subsumes many of the variation (dialect) into one or other language, for example, there are almost 57 variations of Hindi spoken as mother tongues like Bhojpuri, Rajasthani and Chhattisgarhi etc. by several lakhs but all of them have been subsumed under Hindi language.

What should be the official language of India has always been the bone of contention for the policy makers. Initially, Hindi is made official language and English become the link languages between the states as well as between union and states as an agreement made by the Union government in early 60's, till such time Hindi becomes the language of communication and connectivity among people. Later, under the Official Language Act 1963(amended 1967), Hindi was made an official language in the country. But sooner, union and states agreed upon three language policy (as suggested by Kothari Commission and NPE, 1968) and gave state the freedom to opt for the three languages from the existing permutation and combination of languages spoken in their state. But slowly, English become the de-facto official language of India. It created a particular type of social class in the society often referred as elitists. Meanwhile, English based

education was made superior than any other Indian language-based education as it fetches white collar job. Viewing the advantage English language held in the employment and in society, many states introduced English both as subject and language of communication in the early stages of education. Though, researches have proven that education in mother tongue not only helps the students to comprehend the subject matter easily but also helps the child to express it with clarity. In addition to it, it facilitates in learning of other languages including foreign language like English.

The scope of multilingualism is created over the years because of the vast segment of population migration from one region to another region within a country especially in urban areas due to employment, education (Rajan and Sivakumar, 2018) and due to increase in intra- and inter-cultural female marriages (Rajan and Neetha, 2018). Though, it is true that major contribution to internal migration is from rural to rural (62%), followed by rural to urban migration (20%) and urban to urban (13%) (Rajan and Bhagat, 2021), but in all cases, it results into enculturation of the families which in turn lead to new language acquisition. In such a context, sometimes school teachers are bewildered with linguistic diversity classroom they have, and follow only textbook language or their own language which may not be understood by many of the students as it does not resonate with child’s language. NPE-2020 highlighted the importance of learning through mother emphasized tongue at least till the elementary grade but it has equally on teaching-learning through bilingual approach for students where mother tongue is different from medium of instruction (p.13). Thus multilingualism approach of teaching has too many implications in school education system.

Status of Indian Languages: The Indian constitution has given the right to protect and promote linguistic diversity in the country be it a part on the individual (Article 29) or State (article 350A) or any religious minority (article 30). Al though, constitution and social system tries to uphold the linguistic diversity and provides freedom to express themselves in their own language, but it is equally true that despite having freedom of using one’s own language for communication and expression, it has been the practice that few scheduled spoken languages are used for official communication (oral or written) and rest of other languages are marginalized. As a result, many of the Indian languages (dialect) are either extinct or in endangered position. In one of the articles, published in Economic Times dated 13th August, 2017 it was reported that in India 197 languages are in endangered position by far the most in the world.

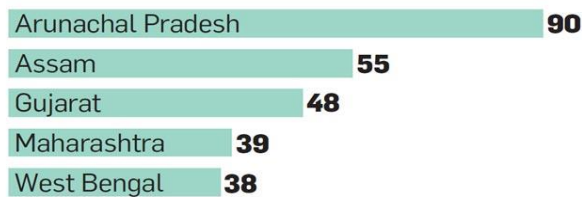


Source: Seetharaman, G. (ET, 13th August, 2017)

Similar article was published in 2020 that reported another 150 languages would become extinct in coming five decades. Linguistic expert Devy highlighted almost 400 languages are at the risk of dying (Mohanty, 2020). In most of the cases, it is indigenous languages (tribal) as the number of speakers are decreasing day by day and they are not part of the mainstream society where they can promote language through various platforms. By the loss of language, India is losing huge human capital, cultural diversity, and knowledge system as these languages are the great repository of flora, fauna, and medicinal plants. If we look at the some of the Indian states where language diversity is high are:

Arunachal is India's linguistically most diverse state

Number of languages spoken:



Source: Seetharaman, G. (ET, 13th August, 2017)

Odisha, a tribal dominated state, speaks around 21 tribal languages and 74 dialects. Only Santhali is included in VIII schedule. To conserve and protect the language, state government has started Multi-lingual Education (MLE) in tribal areas so that tribal languages are not extinct, language can pass on to successive generations, also the knowledge system can be utilized for the benefit of human kind. John Daniel-tribal expert, practitioner, and Srinibas Das-professional working with tribal community for large number of years have pointed out that MLE has failed due to poor language training to teachers and non-availability of teaching-learning material. Jyotsna et al (2017), Xaxa Committee (2014), Nambissan (1994), have highlighted that teachers in tribal schools have non-familiarity with language and culture, they seldom understood their educational needs. Tribal students have their own cultural capital (Bordieu, 1973) therefore, teachers need to be trained to deal with multicultural classrooms having tribal children (Pagan, 2017). In this context, NEP-2020 talked about multilingualism as a power of classroom practice for children coming from different socio-cultural and linguistic groups have their own cultural capital and teachers need to be sensitive and linguistically diverse to understand and communicate with them. So, it needs to be understood that these non-scheduled languages (dialects) must be made part of the classroom educational process and practices to reduce marginalization, exclusion, disparities, and inequities inside the classroom but also help them to be a part of larger process of social and cultural acculturation which also benefits 'others' in terms of richness in language, culture, tradition, knowledge, and skills.

Endangered Indian languages and Dominance of English language

English is one of the established languages of communication in most parts of the world including India is overriding over other languages of communication. According to National Curriculum Framework (2005) “English in India is a global language in a multilingual country. A variety and range of English teaching situation prevail here owing to the twin factors of teacher proficiency in English and pupils’ exposure to English outside schools” (NCERT, p. 38). In many of the state’s curriculum, English has been taught as first, second or third language rather than Indian scheduled languages. Presently, school, and higher education focuses on acquiring proficiency in English language rather than on his/her own mother tongue or native languages. English symbolizes in “Indians’ minds better education, better culture and higher intellect” (Daniel, 2000). In recently held NEET exams almost 20 lakhs students appeared but high percentage of students opted for English as medium of question paper (Source: Press Release NTA 13th June, 2023). Over the years society has failed to give importance to Indian languages. In fact, English as a language has not deeply penetrated in average Indian lives. It is still the language of elites. But, inspite of rich Indian linguistic diversity, people who are speaking English systematically make it pervasive part of education system and environment. In many of the states, it has been observed that English as medium of instruction has been used or discouraged owing to political interferences for example West Bengal, Uttar Pradesh, Madhya Pradesh. It is not that one may be apathetic towards learning English language but it is equally important to learn indigenous languages. One should not forget that countries like China, German, France are developed not because of using English as language instead, they worked on their own native language and create an eco-system wherein ‘knowledge’ is generated and disseminated in native languages, so that common people could easily access, read, and understand it, and utilize it for common interest of people. They even translated best of the knowledges available in different languages to their native languages for the benefit of their society.

Next to home, school is the first place where cultural and language diversity gets exchanged among children, they are cognitively enriched by this exchange. Indian school education completely ignore it and they are stifled between languages (three language policy).

So, in the name of globalization and marketization, indigenous languages are marginalized and are now part of endangered languages. The present policy has taken a comprehensive view with regard to protection and promotion of indigenous languages by bringing them back into the classrooms, textbooks, digital and various other platforms due to growing multiculturalism and multilingualism in India.

Classroom Eco-System, Multilingualism and Optimal Learning

Eco-system is a term obtained from biology/environment wherein it describes the interaction of the different species living in a shared environment. From the point of view of education, eco-system refers to the interaction among different biotic and

abiotic components of education system like interactions among teacher, students (biotic), content, teaching material, technological resources (abiotic) etc. When the eco-system of school/classroom components are interacted with each other, it creates psycho-social-cultural environment within the class which influences child development and learning. Bronfenbrenner's ecological system theory points out that there are several layers in this eco-system and the most immediate eco-system called micro-system consists of school, family and peer group that are influential factors in child development. Presently, school act as predominant factor in the child development, as schools of today are culturally and linguistically diverse because children are coming from different strata of society, so it has created schools and classroom that are multicultural and multilingual. In past, teachers felt that multicultural and multilingual classrooms make classroom eco-system more heterogeneous and difficult to educate (Pai, 2005), but recent researchers have proved that multilingual classroom eco-system is normally an asset to classroom learning (Scanlan, 2007). Multiculturalism and multilingualism is considered as big resource as it provides access to reservoir of body of knowledge, skills, experiences, wisdom, which are inherited in the various indigenous languages. Children coming from the varied background bring with themselves repositories of local/regional knowledge and experiences which may help the learners to get benefitted from each other when they interact in the classrooms. Many times, these interactions help the learner to understand as well as internalize subject matter in a much better way than the textbook or teacher can do and thus contribute in the academic performance of the students than their usual textbook or classroom lecture would do. For example, it has been observed in researches done on schools where children from different linguistic background took admissions and become part of the classroom get benefitted as it creates a classroom eco-system of intellectual flexibility, superior lateral thinking, greater social adaptability, better thinking, and reasoning skills are better, and they have enhanced cognitive abilities which ultimately lead to enhanced academic performance (Okal, 2014 cited from King, 2007).

NEP-2020 Suggestions on Multilingualism and Its Implications

The policy understands the growing diversity of children in the classroom and acknowledge that diversity not only work in the direction of social-cohesion among learners but also enhances the academic culture of the classrooms. But, to foster the academic culture of the classrooms and promote the power of intellectual discourse among the learners, the languages of the learners must be given space within the classroom. Multilingualism in the classroom needs to accepted and promoted. The NEP-2020 suggested the following recommendations for promotion of multilingualism in India:

1. Multilingualism needs to be promoted at different stages of education;
2. The usage of mother tongue/home language/ local language/regional language in the initial formative years of schooling (elementary) and beyond it introduces many languages (classical, foreign, local languages) as per the interest of the child;

3. Language of instruction may or may not be same with home language in that case bilingual approach is adopted (one will be home language);
4. A language does not need to be medium of instruction which needs to be learned or taught, it implicitly promotes multilingualism;
5. Central-state, state-state must enter into bilateral agreements to provide teachers(appoint) for mother tongue of child/local languages/regional languages to satisfy three language formula as well as encourage children to learn other languages of India.
6. Choice of the language should be left to the child and child must learn at least two (native) of the three languages and change in language should be done either at class 6 or 7 but child must demonstrate proficiency in one Indian language.
7. Textbook will be prepared bilingually one in English and other in mother tongue/regional language;
8. All classical, scheduled languages, non-scheduled languages and foreign languages will be offered to children at various stages of school education to understand the rich cultural heritage and knowledge of the past;
9. Indian sign language will be standardized and it will be taught across the country;

Implications of NEP-2020 and Suggestions Regarding Multilingualism

The policy of multilingualism suggested by NEP-2020 has far more classroom implications rather than just language learning and understanding. More important with fact that it will help in optimizing learning which results into better learning outcomes. How will it happen is discussed below:

1. **Enhances the Cognitive abilities of the Children:** It has been researched through brain imaging technique that those people who are multilingual have increased cognitive flexibility and enhanced memory (Chung, Lo, Mar, 2023). This increased cognitive ability will help the learners in grasping and understanding the contents in the classroom which many times is not possible for many of the learners coming from different linguistic background. Multilingual classrooms not only give the opportunity to learners to interact with their peer and teachers easily, but also facilitates in understanding the content which optimizes the learning.
2. **Increased Academic Performance:** As already stated that, multilingual classrooms help in gaining understanding of the knowledge in different subject matters but it also helps the learner to perform better in their academics. It has been the case in Indian classrooms in school or universities, that students who have studied in their mother tongue or regional languages, they normally struggle in academics if it is given in different languages other than their spoken or written languages. But if

they continue their education in their own language or multilingual classrooms they perform better (Rutgers et al. 2021).

3. **Subject/Discipline Wise Text Books in Regional Languages:** Textbooks are the main source of knowledge for learners. In fact, for many of the learners, it is the only source of authentic and reliable of knowledge. But, most of the textbooks are written in state languages or official language or English. The students belonging to different linguistic background who are not aware with state language or official language or English can hardly read it. In many of the ASER reports it has been reported that students of standard V could not read standard II books. One of the primary reasons is that students are not able to learn or understand the language i.e., read and write as it is a foreign language for many of the students. This hampers their learning and their academic performance. The textbooks written in local languages or regional languages will help the students to learn and understand the subject matter. This will facilitate the learning of the students.
4. **Acquisition of Multiple Languages:** As already stated the multilingual classrooms not only enhances the cognitive abilities but also it helps in acquisition of multiple languages this acquisition of multiple languages facilitates learning and its process within and outside the classroom. This facilitation often leads to better performance of the students. It also increases the peer interaction and teacher-student interaction. Multilingual education not only builds the proficiency in language acquisition and better communication but also makes the learning experiences enjoyable and meaningful.
5. **Participatory and Meaningful Learning in Local Language:** It is often found that learners are often scared to participate in the learning process even though enough opportunities are provided to them, the reason is language that act as a barrier for them. They are not able to express themselves in the language of the classrooms. So, to make the learning participative, meaningful, and enjoyable, it is necessary as far as possible to be provided learning process in learners' language as it helps them to understand better and communicate better.

Apart from these benefits, multilingual education also enhances memory, builds empathetic relationship among peer groups, develops greater social-cohesion among children, recognizes the unique cultural identity, facilitates teachers for culture responsive teaching etc.

Teacher's Role in Utilizing Multilingualism for Optimizing Classroom Learning

Teacher is the epicenter of classroom process and practices. Instructional process is generally designed, organized, and implemented by the teachers. Therefore, teacher must take utmost care while designing the instructional process. Instructional process may be child centric and based on their socio-cultural context. It has been found out,

teachers organize child-centric instructional process but they are suited to one or at most two categories of learners especially in context to language. But it has been observed that a classroom containing multilingual learners are seldom being addressed. Teachers either follow the language of the textbook or uses has own language, both are different from the languages spoken by children belonging to different regions, culture, social background etc. this creates a wall of alienation among the learners of minority culture. As already stated above, multilingual classrooms are asset and it enhances intellectual flexibility, lateral thinking, reasoning, and cognitive capacities (Okala, 2014) and thus it gives enough opportunities for the teachers give voice to the left-out learners and make them participative in the classroom processes. Studies done in India on tribal children and their schooling have reported that these children when part of a normal classroom, they often get marginalized in their classroom process by their teacher and they drop-out of the school without completing it (Jojo, 2013; Sujatha, 1990; Nambissan, 1994, CBPS, 2017). The reason cited is that them tribal children do not understand the language of the teachers. Similar, is the case of EWS students who are enrolled in private schools, the drop out or struggle to cope . As a teacher only speaks language of the textbook, or their own language (often English). In schools where teachers use child's language, they actively participate in classroom process, they learn and enjoy.

Conclusion

The recommendation of NEP-2020 for multilingual education is based on the premise that learners belonging to local or regional languages often feel left out of classrooms as the language spoken in the class neither helps them to understand the content spoken in the class nor it makes the learning meaningful and enjoyable. Moreover, cultural identity of the learners gets marginalized in the class. To reinforce diversity in the classroom, NEP suggested to have multilingual classrooms from class VI onwards as it helps the learner to enhance the cognitive abilities, much better acquisition of knowledge, learning will be more meaningful, learning would be participatory in nature, this would enable the entire classrooms and learners to have enhanced level of learning.

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Investigating Primary Teachers Awareness of NEP 2020 Vision in context of 50 hours Continuous Professional Development in CBSE Schools of Delhi.

Shyda Rana¹ & Pooja Chopra²

Abstract

The NEP- 2020's vision for teachers' participation in 50 hours Continuous Professional Development mandates providing teachers' opportunities for strengthening their professional competencies. It becomes imperative to explore teachers' awareness of 50 hours Continuous Professional Development in context of NEP 2020. The objective of this survey was to investigate Primary Teachers' awareness about the vision of 50-hour Continuous professional development (CPD). This survey was conducted on 65 Primary teachers teaching in 2 CBSE affiliated schools located in Southwest Delhi. To conduct the survey a self-developed questionnaire was designed. The tool was validated by experts and improvised. Primary data analysis shows a response distribution into a three - fraction segmentation as 28% teachers with excellent understanding, another 28 % teachers demonstrating very good understanding and 44 % having a good understanding of NEP 2020 vision awareness. In establishing a relation between teaching experience in years and the maximum scores obtained, teachers with teaching experiences between 11 to 20 years scored the maximum scores demonstrating a high understanding of 50 hours CPD mandated in NEP 2020 . Thus, it can be concluded while sixty percent of the primary teachers are highly aware of the NEP 2020 vision, another 40 percent teachers need enhanced policy document awareness to ensure seamless and effective NEP 2020 vision implementation. An imperative need calls for comprehensive, continuous professional development programmes to enhance capacity and prevent risk mitigation by avoiding misinterpretation or inadequate understanding of NEP 2020 vision, germinated from intermittent and sporadic capacity building investment.

Keywords: NEP 2020, Continuous Professional Development, NEP 2020, Primary Teachers

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Introduction

The National Education Policy 2020 (NEP 2020) envisions a holistic transformation in the Indian Education system by guiding an approach that blends ancient wisdom and modernistic paradigms as it enshrines rootedness in values, culture, strength of knowledge and skills. It is modern to integrate Sustainable Development Goals (SDG) for futuristically preparing students for 21st Century global competencies. In its implementation NEP 2020 envisions building exemplar schools of excellence across the nation. It takes cognisance of achieving excellence in education through a multidimensional strategy of teachers' "Continuous Professional Development", "Re-engineering Curriculum Reforms" and "Creating Schools of Excellence" across the nation. Quality, access, equity, and inclusion for a transformed education is inevitably the NEP 2020 way forward.

Continuous Professional Development and its Significance.

The importance of the Teacher and the need for their continuous knowledge and skills upgradation has been clearly mentioned in National Policy of Education 1968, 1986 and National Educational policy 2020. The importance of "continuity" in continuum of learning through multiple modes (online and offline) for 50-hour Continuous Professional Development programs is strongly advocated by the NEP 2020. It is an educational armour for teachers in the advent of change calling for innovation in pedagogies, assessment, use of technology in education, supporting students learning needs and meeting stakeholders' aspirations towards a 21st Century livelihood. Keeping the momentum of learning "Continuing and relevant" is the NEP 2020 core vision for Teachers to engage in 50 hours Continuous Professional development programs.

The Terms In-service training and Professional Development are quite often interchangeably used while the difference between the two terms has distinct meanings and implications. Continuous Professional Development is a continued and comprehensive continuum of the Teachers Education through various modes of learning for enhancing professional competence. In-Service Training is a part of that continuum, a component of the Professional Development.

Reimer. Villegas, (2003) clearly explains, "in-service training" as a short duration course under "Staff development" compared to Professional development as courses that are systematically organised and planned for longer duration with clear goals for growth and development in a profession.

In-Service Training

In understanding the term In Service Training (INSET) the mostly accepted understanding is acquiring or upgrading skills as required during the tenure of service. S. Veenman, M. Van Tulder, and M. Voeten, (1994), highlights a tri dimensional purpose for In-service training as training for Professional competence stimulation and development, training for school improvement and training for innovation in practices. The UNESCO glossary explains In-service training as a training concurrent to official

teaching responsibilities. According to Khosla.(1998), “in-service teacher education refers to a recurrent, organized and need based continuing education of teachers already on the job (p 8)

Central Board of Secondary Education

The Central Board of Secondary Education (CBSE) is an autonomous body under the department of school education and literacy, Government of India. It is remarkable in its history of educational endeavours for its role of ensuring quality, excellence, equity, and access to students across the country, especially for parents with transferable jobs. The major areas of CBSE are affiliation of institutions for examination, award to qualifying certificates at end of class X and class XII, examination processes and conduct, standardization, setting benchmarks, teachers’ empowerment, monitoring, and evaluation for quality and holistic education. Data from the CBSE dashboard states affiliation of 28887 schools from across the country, with 14,09515 teachers and 26615267 students. Of the total number of teachers 26.8 % are primary teachers, [CBSE - Central Board of Secondary Education \(cbseit.in\)](http://cbseit.in)

Objective of the Study

To investigate **NEP 2020 vision awareness** of Primary Teachers in context of 50 hours Continuous Professional Development in CBSE schools of Delhi.

Teachers Continuous Professional Development trends at National Level.

Adopting transformational reform needs a track, divergent from the present educational practices and teachers indeed need equal competence to adopt practices for developing experiential and holistic systems in the interest of student and national development. The NEP 2020 vision for 50 hours Continuous Professional Development is a mandate to provide teachers’ opportunities for learning new skill sets and innovative practices through multiple modes. Lalitlansangi, et.al.(2023), reflect that the NEP 2020 vision on Continuous Professional Development will lead teachers to be “best version of themselves” in the interest of nation’s development.

Literature Review

Misra and Tyagi(2021), gave an historical summation of educational policy perspectives and the informed decision of the NEP 2020 to exercise the term Continuous Professional Development against the widely and interchangeably used term of “Inservice Training.” They signify, “mechanism for motivation and incentivization” as CPD outcomes.

The NEP 2020 states the participation of Teachers in 50 hours Continuous Professional Development. Yearly through multiple mediums both offline and online at local, national and international levels.

One of the critical observations emphasized by Smitha (2020) on the challenges and opportunities of the NEP 2020, is the absence of teachers teaching skills enhancement at the pre-service stage. This may lead to the need for teachers’ Continuous Professional development to endorse training programs on skills formastering teaching competence.

Bhattacharya, et.al. (2021), discusses 18 different strategies for Continuous professional development implementation as per NEP 2020 highlighting strategies of opportunities, online learning, recognition of exemplary teaching with career progression linkages and academic leadership.

Laltlansangi, et.al. (2023), in their reflections on 50 hours Continuous Professional development, reflect that teachers in this course will have the opportunity to develop skills for future ambitions keeping abreast scientific and technological advancements. They reflect that Continuous Professional development outcomes will lead to performance enhancement, knowledge and skills development and ability to timely assess their need for a particular skill enhancement.

Sudhagar & Binu (2022) in a survey with sample of 1510, responses show that the awareness level on NEP 2020 is moderate. They recommended structured trainings and awareness building activities key to build positive perception towards NEP 2020 implementation.

Methodology

The survey for this study was conducted on two CBSE affiliated schools from Southwest Delhi region. The select group for the survey was Primary teachers. **65 Primary teachers** participated in the survey. The teaching experience of the teachers varied from a range of one year to more than twenty years of teaching experience.

Sample size

The population sample comprised of 65 Primary Teachers from CBSE affiliated schools from Southwest Delhi. Purposive sampling was used for sampling technique.

Source of Data

Primary Data was collected from the 65 teacher participants through a self-developed questionnaire.

Development of Tool for Data collection

Data was collected through a self-constructed questionnaire tool. The construct investigated was on Teacher's awareness of 50 hours Continuous Professional Development in context of NEP 2020. The content construct of the tool was designed on the following framework:

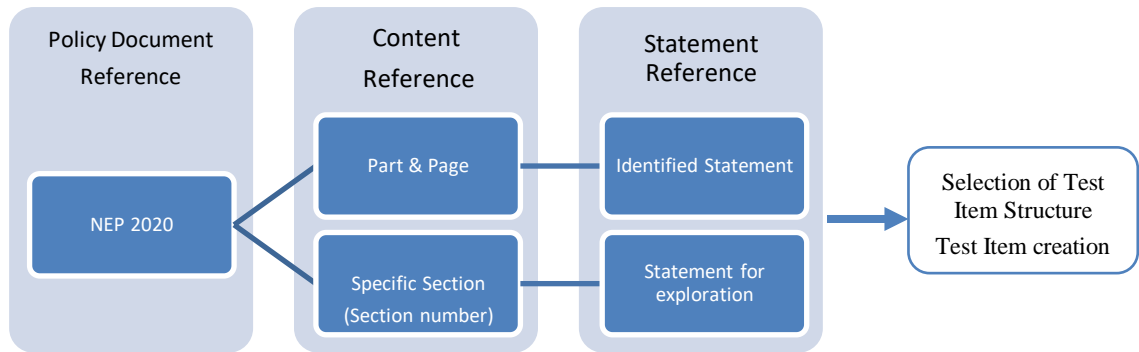


Figure 1. Framework for constructing the Survey Questionnaire on 50 hours Continuous Professional Development in context of NEP 2020

Stage1- The items draft underwent number of changes before it was finalised. The initial draft for this construct comprised of 45 Multiple Choice questions. The measurement used was based on a 5-point Likert scale. In order to understand the NEP 20 awareness, the construct was subdivided into 4 sub constructs. Each sub construct had a minimum of 10 questions.

The tool designed in the first draft underwent a three-stage change based on experts advise to the present form. The sub constructs had to be focused as they were diverse and divergent. Since the first draft had a diverse construct and it covered a limited content of the construct under study the tool was revised. In stage 2, the questions were reframed from conceptual questions to statement-oriented questions. In stage 3, tools were reframed to assess specific construct of 50 hours CPD in NEP 20 context. The structure of the questions was designed on a multiple-choice option. The tool was validated by a team of experts. In stage 4, the suggested advice was incorporated, and some questions reframed. Each item was structured on multiple-choice option with only one correct option. Each tested item had one key and three to four distractors in the options. The marking scheme adopted was awarded 1 Mark to the correct answer and zero mark to the incorrect answer. After final approval the tool was administered to 65 Primary teachers in the two CBSE schools of Delhi.

The key constructs of the five questions to understand the Primary Teachers awareness of 50 hours Continuous Professional Development in context of NEP 2020 were based on the 50 hours Continuous Professional Development given in NEP 2020 in para 5.15, page 22. The questions were framed to investigate the following domains:

- i) Primary teachers' awareness of 50 hours Continuous Professional Development mandate as per NEP 2020 policy.
- ii) Primary teachers' awareness of time duration to complete 50 hours Continuous Professional Development as stated in NEP 2020
- iii) Primary Teachers awareness of NEP 2020 expectations for "Teachers Self-improvement", for 50 hours Continuous Professional Development.

- iv) Primary teachers’ awareness of 50 hours Continuous Professional Development. Programs through multiple modes suggested by NEP 2020
- v) Primary Teachers awareness of topics suggested in NEP 2020 for 50 hours Continuous Professional Development. Programs.

Finding and Analysis

Finding 1.Primary Teachers awareness in context of 50 hours Continuous Professional Development in context of NEP 2020.

Overall Findings show that 28 % of Primary teachers had an excellent awareness and another 28 % of Primary Teachers had a very good awareness of 50 hours Continuous Professional Development as envisioned in NEP 2020. Of the sample population ,44 % Primary teachers demonstrated a good awareness of NEP 2020 vision. No teacher had a poor or fair awareness.

Rank	Score	Count
Excellent	5	18
Very Good	4	18
Good	3	29
Fair	2	0
less satisfactory	1	0
Poor	0	0

Table 1. Scoring Scheme with Counts per score

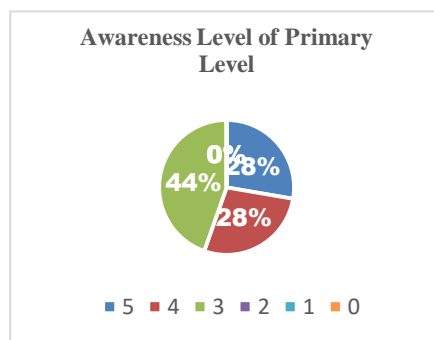


Figure 2. Primary Teachers NEP 2020 Vision awareness level in context of NEP 2020

NEP 20 awareness based on five domains:

- i) All 65 correct responses (100 %) were marked by Primary teachers demonstrating their awareness of 50 hours Continuous Professional Development mandate as per NEP 2020 policy.
- ii) All 65 correct responses (100%) showed Primary teachers are aware of one year time duration to complete 50 hours Continuous Professional Development programs as stated in NEP 2020
- iii) In response to awareness of NEP 2020 expectations for “Teachers Self-improvement” in latest innovations and advances in profession for 50 hours Continuous Professional Development programs,50.7% (33) Primary Teachers marked correct responses in comparison to 48.5 % (32) incorrect responses
- iv) 98 % (64) correct responses were marked by Primary teachers ‘to state their awareness of multiple modes suggested by NEP 2020 for 50 hours Continuous Professional Development Programs.

v) Out of 65 Primary Teachers, only 22 (33.8%) Primary Teachers marked correct response to “topics awareness”, for 50 hours Continuous Professional Development Programs suggested by NEP 2020. Of the sample population, 64.6 % (42) Teachers marked incorrect responses.

Finding 2: Maximum Scores achieved by Primary Teachers based on Teaching Experience

The teaching experience of Primary teachers were taken as a variable to understand whether teachers with greater number of experiences scored maximum marks to demonstrate excellent awareness of 50 hours CPD mandate or teachers with lesser teaching experience scored higher scores based on being current with the educational policy trends. Primary teachers with teaching experience between 16 to 20 years scored maximum number of the top score 5 as compared to primary teachers from any other range. Primary teachers having teaching experience varying between 11 to 15 years scored maximum number of the score 4, while teachers with teaching experience in the range 6 to 10 years scored maximum number of 3 scores.

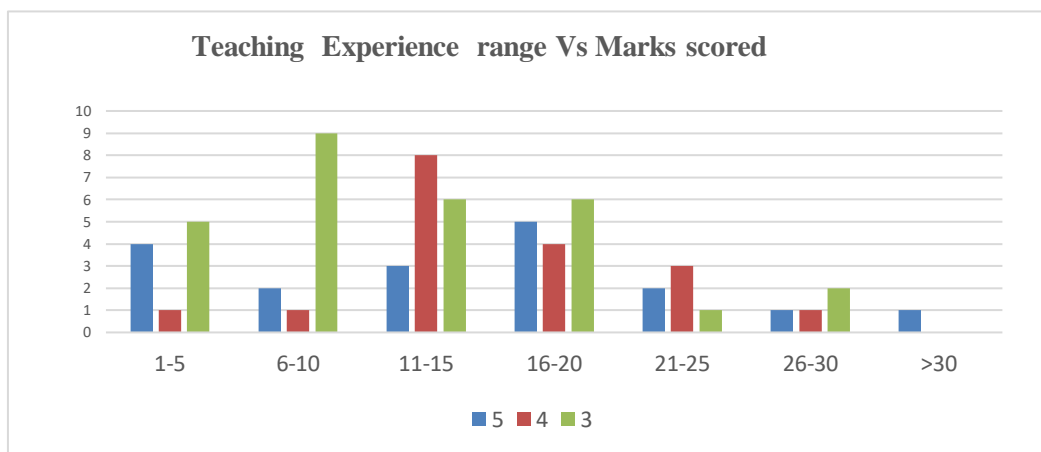


Figure3. Teaching Experience Vs Scores obtained.

Figure 3. Data interprets that primary teacher having teaching experience between 11 to 15 years and 16-20 years scored the maximum scores. 31 % Primary teachers with 11-15 years’ experience scored above 4 and 25 % Primary teachers with 16-20 years’ experience scored above 4.

Analysis

Analysis of Findings 1 Primary Teachers NEP vision awareness in context of CPD (Figure 2)

Analysis of overall findings show nearly 56 percent of the total sample population are having a high and above average understanding of the 50 hours CPD envisioned in NEP 2020, yet there is still 44 percent of sample respondents who have a moderate

understanding of the NEP 2020 vision in context of 50 hours CPD amongst Primary teachers in CBSE schools of Delhi.

Analysis interpreted from the responses to questions attempted shows that all primary teachers who participated in the survey are aware that the specific 50 hours Continuous Professional Development program has been mandated in the NEP 2020. They are aware that the 50 hours Continuous professional Development must be completed within a time duration of one year by every teacher. Primary teachers are also aware of the multiple modes they can opt for while participating in 50 hours Continuous professional Development programs. The two domains where Primary Teachers show less awareness is in the NEP 2020 expectations for teachers, "Self-Improvement" in latest innovations and advances and in identifying NEP 2020 suggested topics for 50 hours Continuous professional Development programs.

Analysis of Findings 2 (Figure 3)

Most Primary Teachers in the teaching experience between 16 to 20 years are fully aware of the 50 hours CPD mandate envisioned in NEP 2020 followed by Primary teachers with 11 to 15 years' experience as compared to primary teachers having teaching experiences between 1 to 5 and 6 to 10 years. Awareness in Teachers with more than 20 years of teaching experience are less in comparison to their junior colleagues.

Discussion

Analysis is drawn from the above survey that while sixty percent of the primary teachers are highly aware of the NEP 2020 vision, another 40 percent teachers need enhanced policy document awareness to ensure seamless and effective NEP 2020 vision implementation, especially with significant reforms at the Foundational and Preparatory Levels. This survey infers that through a span of nearly three years since NEP 2020 announcement and implementation in the Indian Education System, Primary Teachers as a community have become largely aware of the 50 hours Continuous professional development mandate, yet there is still a moderate level of awareness towards the expectations and outcomes of the core vision, rationale and the outcomes of this vision. The teachers having a teaching experience range from 11 to 16 years show a greater awareness as compared to the teachers with less or more teaching experience. This interprets that there is an urgent need to build focused NEP 2020 awareness for 50-hour Continuous professional Development in primary teachers having lesser number of teaching experience. Another dimension to draw from this inference is that these teachers with 1-5 years of teaching experience will be in the educational system for a longer period of services and hence their role in implementing NEP 2020 vision will be crucial. The need to incorporate modules on NEP 2020 Awareness for teachers 50 continuous professional development programs becomes important and relevant.

In understanding the urgency and imperativeness of teacher's professional competence enhancement for national development, Teachers Continuous professional development becomes important and relevant for national empowerment. There is an imperative

need for sustainable, comprehensive, continuous professional development programmes to enhance Teacher's awareness in NEP 2020 expectations for "Self-Improvement" and competency building in NEP 2020 identified specific topics for developing a positive skillset and mindset for successful implementation. The role of Continuous Professional Development must also take another portfolio of, "Risk Mitigation" to avoid misinterpretation or inadequate awareness and understanding of NEP 2020 vision. This could be acquired through inconsistent and sporadic capacity building programs to capture numbers, to fill in gaps for inhouse school activities or to complete 50 hours Continuous Professional Development. Educational Systems have a responsibility to work towards ensuring teachers of their significant role, relevance, and responsibility as transformers to lead students in preparation for a 21st Century life, learning and livelihood. The conclusions drawn by Bhattacharya, et.al. (2021), on a pivotal note of "teachers' mindset" being crucial for implementation supports, inferences drawn from this study that teacher's NEP 2020 Awareness building requires investing in Primary teachers with lesser teaching experience through detailed and systematic planning processes for continuous professional development programs to initiate a momentum of sustainable NEP-2020 educational reform.

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An Analysis of ICT Enabled Teacher Education Program with Special Reference to Teacher Training Colleges of Jammu and Kashmir

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Abstract

This paper presents an analysis of ICT-enabled teacher education with a special reference to teacher training colleges in Jammu and Kashmir (J&K). The study explores the integration of Information and Communication Technology (ICT) in teacher education programs, focusing on its impact on pedagogy, curriculum design, and professional development. Through surveys and interviews, data was collected from teacher educators in teacher training colleges of J&K. The research examines the challenges and opportunities associated with ICT integration, including infrastructure facility, digital skills development, and policy frameworks. The findings contribute in understanding the current state of ICT-enabled teacher education Program in J&K and offer recommendations for effective implementation ICT integrated teacher education and improvement in ICT enabled teacher education program in J&K.

Keywords: ICT, Teacher Education, Teacher Training Colleges, ICT- infrastructure, Jammu and Kashmir.

Introduction

In the current scenario every aspect of life has been affected by technology. Massive amounts of information are emerging in all disciplines across the globe. According to (Daniels et al., 2002), ICTs have quickly become one of the fundamental pillars of contemporary society. Now ICT is popularly used in educational field for making teaching learning process successful and interesting for students and teacher both. The impact of Information and Communication Technologies (ICTs) on the area of education has been

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significant, leading to noticeable changes in teaching methodologies, learning processes, and research endeavours (Yusuf, 2005). Incorporating technology into instructional practises not only improves the quality of instruction (Akram, Yingxiu, Al-Adwan, & Alkhalifah, 2021), but also enables students to develop their skills, increase their motivation, and efficiently increase their knowledge and information (Chen, Hung, Chang, Lin, & Lai, 2018). ICT enables us to expand access to education. With the help of ICT learning can occur anytime and anywhere. Research by (Thaheem, Zainol Abidin, Mirza, & Pathan, 2021) highlighted ICT performed a supporting role in sustaining teaching-learning activities during the COVID-19 global crisis, when all human activities in all spheres of life were restricted. It had become an imperative need for education to adapt to this world and incorporate Information and Communication Technologies (ICT) in the classrooms, in accordance to the requirements of society (Kreps & Kimppa, 2015). This rapid evolution of technology has enabled education to become more personalized, more interactive and more fast-paced (McCarthy et al., 2017). Educators have a crucial role in the foundation of any successful community. Technologies play a significant part in the training programmes for instructors. The effective performance of an ICT teacher in the classroom is contingent upon possessing adequate expertise in the field. Without such information, the classroom experience cannot be deemed comprehensive. Information and Communication Technology (ICT) equips teachers with the necessary abilities to effectively utilise technology in practical classroom settings. ICT-based education is rapidly changing the approach and methodology that teachers use to teach and students learn in an innovative mode using technology (Bhattacharjee & Deb, n.d.). An initiative taken by NPE 2016 is that Course on the use of ICT as a tool for enhancing the teaching learning process will be an integral part of the teacher education curricula. MOOC is another application of ICT which may help in enhancing the ICT enabled education at secondary and higher education levels, especially for enhancing access to quality education at an affordable cost (Kanjalal & Kaul, 2016). India has undertaken significant endeavours in the realm of content distribution and the advancement of education through the use of Information and Communication Technology (ICT). One example of an initiative founded in the year 2000 is Gyan Darshan, which was established with the purpose of disseminating educational content targeted towards school children, university students, and adults. In a same vein, Gyan Vani represented a significant advancement by disseminating educational content produced by esteemed schools like IGNOU and IITs through its broadcasting programmes. Under the UGC country wide classroom initiative, education programs are broadcast on Gyan Darshan and Doordarshan's National Channel (DD1) everyday. E-Gyankosh which aims at preserving digital learning resources a knowledge repository launched by IGNOU in 2005. Almost 95% of IGNOU's printed material has been digitized and uploaded on the repository. The National Programme for Technology Enhanced Learning (NPTEL), initiated in 2001, is a collaborative effort between the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc) aimed at fostering education via the utilisation of technology. Furthermore, the government initiated the National Mission on Education via ICT with the aim of effectively using the potential of information and

communication technology (ICT) across the whole nation. The "National Mission on Education through ICT" initiative was authorised by the government in 2009, marking a significant milestone. The National Mission on Education through ICT is centrally sponsored scheme submitted by the Ministry of HRD and approved by the Cabinet Committee on Economic Affairs (CCEA). The Mission has strategically devised a range of activities with the objective of fostering the growth and uniformity of digital content within the higher education sector in India. The Mission is to address the educational requirements of a population of 500 million individuals inside the nation.

Importance

The emergence of Information and Communication Technology (ICT) has fundamentally changed the practices of education. ICT-enabled education speedily transformed the way of teaching and learning in Teacher Training institutions. Incorporation of the ICT into education system can increase the quality of education (UNESCO, 2007); (Kumar, 2022). Education in the 21st century is currently student-centered. Students learn from a variety of sources; consequently, the use of ICT and multimedia in the sphere of education is extremely essential, as is the teachers' knowledge of ICT and multimedia. Research by (Bano & Ganaie, 2016) highlight students who were taught through modern technology had performed well because it creates an enjoyable environment which in turn motivates students and helps them in developing cognitive dimension. According to (Liu et al., 2022), it was shown that the integration of technology in learning had a positive impact on students' cognitive comprehension and learning outcomes. (Noor-Ul-Amin, 2002) revealed that continued use and development of ICTs within educational settings will have a strong impact to enhance: ICT and teaching learning process; quality and accessibility of education; learning motivation, learning environment and academic performance.

ICT-enabled education is a digital initiative, which is rapidly changing the approach and methodology that teachers use to teach and students learn in an innovative manner using technology (Amin & Jan, 2018). Extensive global research has demonstrated that the utilisation of Information and Communication Technology (ICT) has the potential to enhance student learning outcomes and provide more effective teaching methodologies (Ibrahim Ciroma, 2014). According to a research conducted by the National Institute of Multimedia Education in Japan, it has been demonstrated that the incorporation of information and communication technology (ICT) into educational practises, together with its integration into the curriculum, yields noteworthy and favourable outcomes in terms of student academic performance. The findings of the study indicate that students who have ongoing exposure to technology in their educational experiences demonstrate superior levels of knowledge, presenting skills, inventive capacities, and motivation for learning when compared to their peers (Lim, Yiung, Isawasan, Lee, & Lim, 2018). Efforts have been also made in Jammu & Kashmir state to keep pace with the globalized world and make Teacher Education ICT enabled. The state of Jammu and Kashmir is situated in the northernmost region of India. Besides several odds and tough terrain, the state is gearing towards development in education. The policy makers are veering for several

innovative ideas, practices, policies and strategies for revamping education in state. In distance learning state is making use of e-content, educational telecasts like Gyanvani e-gyankosh, Edusat etc. The proposed study is anticipated to evaluate the success of Initiatives and Implementation of ICT Enabled Teacher Education in J&K. The study will focus on actual status and implementation of the ICT at ground level.

Objective:

1. To analyze the status of ICT enabled Teacher Education in teacher training colleges of J&K.

Methodology:

Present research study was descriptive in nature. Sample of eight teacher training colleges were drawn through purposive sampling technique. Investigator selected all the teacher training colleges of two districts of Kashmir division. The data was collected with the help of self-constructed Information Blank and Investigator personally visited these teacher training colleges, and by contacting concerned teachers and administrators of colleges.

Analysis of the data:

Table No.1 Shows the College wise status of ICT enabled Teacher education on 18 parameters.

Name of the College		Al- Ahad College of Education, Anantnag		Shah-I-Hamdan College of Education, Siligam pehelgam, Anantnag		Rehmat-E-Alam College of Education, Anantnag		South Campus, University of Kashmir, Anantnag		Jamia College of Education, Brakpora Anantnag		Weeta College of Education, Sangam Anantnag		South Valley College of Education, Devsar Kulgam		Islamic Discovery College of Education, Pumbai Kulgam		Percentage
No. of Respondents		2		3		3		3		3		2		2		3		
S.No.	Statements	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	Yes/No	Qty.	
01.	No. of Class Rooms		06		05		10		04		07		06		10		05	
02.	No. of Smart Class Rooms		01		02	No		No			01	No			01	No		50%
03.	Digital Library	Yes	01	Yes	01	No		No		No		No		No		No		25%
04.	Computer Lab.	Yes	01	Yes	01	Yes	03	Yes	01	Yes	01	Yes	01	Yes	03	Yes	01	100%
05.	Internet Facility/ Wi-Fi	Yes		Yes		Yes		Yes		Yes		Yes		Yes		No		87.5%
06.	Wi-Fi access to the students	Yes		Yes		No		No		Yes		Yes		Yes		No		62.5%
07.	ICT Skilled Teachers	Yes	02	No		Yes	01	Yes	03	No		No		Yes	01	Yes	01	62.5%

08.	Do they use the installed equipments while teaching	Yes		Yes		Yes		No		No		No		Yes		No		50%
09.	Do these equipments really support the teaching to realize the set educational objectives	Yes		Yes		Yes		No		No		No		Yes		Yes		62.5%
10.	Govt. Policy regarding ICT based education	No		No		No		Yes		No		No		No		No		12.5%
11.	Does Govt. Provide any kind of funding	No		No		No		Yes		No		No		No		No		12.5%
12.	Is there any provision of ICT training programs for teachers	No		No		No		No		No		No		No		No		0%
13.	If, yes, are these programs fully funded by the Govt	No		No		No		No		Yes		No		No		No		12.5%
14.	Any specific paper based on ICT	No		No		Yes		Yes		No		No		No		No		25%
15.	If not a complete paper, then what portion of a paper		01 Unit		01 Unit	-	-	-	-		01 Unit		01 Unit		01 Unit		01 Unit	75%
16.	ICT based practical assignments to the	No		Yes		Yes		No		Yes		Yes		Yes		Yes		75%

	students																	
17.	How many times a month		Nil		03 Times		04 Times	-	-		04 Times		02 times		01 time		05 Times	75%
18.	Are students able to operate the ICT equipments after course completion	Yes		No		Yes		No		Yes		Yes		Yes		Yes		75%

Interpretation and discussion

The study was conducted on seven teacher training colleges and a university, of Kashmir division of J&K State. The study was aimed to investigate the status of ICT infrastructure in these teacher training colleges. The study was conducted by selecting all the teacher training colleges of two districts of Kashmir division. The data was collected by visiting these teacher training colleges, and by contacting concerned teachers and administrators of colleges. The analysis of the collected data revealed that only half of the selected teacher training colleges are equipped with facilities of smart classroom. However, there are some teacher training colleges where ICT infrastructure is almost negligible. The data shown in the table indicates that ICT infrastructure like digital libraries, Internet connectivity, ICT skilled teachers and Wi-Fi facilities to the students in the college premises are not up the expected level. The results of the study indicated that a lot more has to be done to create and maintain ICT infrastructure to implement ICT in the teacher training colleges and impart education to meet the technology challenge.

The analysis of above data of teacher training colleges of Kashmir division indicates that the implementation of ICT for the advancement of teacher trainees is facing the following challenges.

1. Insufficient Infrastructure.

The results of the study revealed that there is no proper ICT infrastructure in the teacher training colleges for providing technology -oriented education. This is due to lack of required hardware and software and also due to poor management of ICT resources etc.

2. Dearth of ICT skilled teachers.

Integration of ICT in to teaching learning process requires effective and efficient teachers who are digitally literate in order to face the challenges in the modern classroom. However, the results of the study indicated that there is dearth of ICT skilled teachers in these teacher training colleges.

3. Lack of Government policies.

Many policies and initiatives have been implemented by Government at university and college level but still teacher training colleges are lacking behind. The results of the study also indicated that there are no clear -cut policies from Government for the implementation of ICT in teacher training colleges.

4. Poor Internet connectivity.

Integration of ICT into the educational system not only requires trained teachers and proper infrastructure but also requires high speed internet connectivity for proper functioning. The results revealed that those institutions which are equipped with internet facility face lot of problems due to poor internet connectivity.

5. Inadequate Curriculum

In the present era of technology teachers are required to be technically sound, but the present curriculum in the teacher training colleges are not providing sufficient weight-age to ICT based contents in the existing curriculum. The study indicated that only a little portion of curriculum is dealing ICT related activities of students.

Conclusion

The integration of ICT in educational setup throughout the world has not only improved quality of teaching and learning but also enlarged the accessibility of information. The present paper has discussed the current scenario of ICT in teacher training colleges and the challenges faced in implementing ICT in classrooms of the teacher education colleges of Kashmir division. The results indicated that ICT based teacher education in these colleges is not up to the desired level. This paper strongly recommends the creation and extensive usage of ICT infrastructure in the classrooms, organizing teacher training programs based on ICT, installing high speed internet, etc. Apart from this, the Government and teacher training institutions need to develop strategies for effective implementation, maintenance and monitoring of ICT in education to improve quality, accessibility and advancement of education system. Therefore, this paper will be a helpful document for Government and teacher training governing bodies like NCTE to frame the policies accordingly for the implementation of ICT in these teacher training colleges.

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Pedagogical Approaches for Teaching Early Childhood Students

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Abstract

Examining current pedagogical approaches in early childhood education is the purpose of this paper. The learner-centered pedagogy is also included in the new pre-school education curriculum for the foundational stage (3–8 years), hence the initial purpose of this paper is to identify the various pedagogies now being used in the classroom. The learning and developmental successes during early childhood, preschoolers have been linked closely to pedagogical practise. Children's creativity, problem-solving abilities, critical thinking abilities, learning dispositions and socio-emotional or behavioral development abilities may all be enhanced by child-centered pedagogy. It may be claimed that pedagogy is a multifaceted and dynamic notion in Early Childhood Education (ECE) because there are many diverse approaches to it. Many pedagogical approaches are described and re-conceived in this work through an integrative literature review that concentrates on the concept's scientific papers and research reports. Interaction approach, scaffolding approach, narrative approach, play-way approach, Montessori approach, excelerate method, Reggio Emilia approach, and constructivist approach were the nine pedagogical approaches studied. This document effectively communicates the nine approaches' goals and benefits which will aid teachers in implementing sound pedagogical methods when instructing young children.

Keywords: Pedagogical Approaches, Teaching, Early Childhood, Students

Introduction

As each child is unique, there may be a certain pedagogy that works well with one group of students but not with another. As a result, it's important to have a wide variety of teaching techniques at your disposal, including play-based learning, class discussions, modelling, cooperative learning, questioning, creativity, technology integration and more. Being an effective teacher, then, necessitates the use of creative and innovative teaching strategies to meet each child's unique needs. Teachers can do this by

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addressing each child's unique learning style and academic ability as well as by creating a dynamic and motivating environment in the classroom (Goodwin, 2018).

The early years of a child's existence are crucial because they provide the foundations for their future physical, mental and emotional growth. Early childhood education (ECE) involves guiding the formation of a strong foundation for life throughout this era of intensive, rapid growth and development. Investing in early childhood education can have a significant favourable impact on the affective, conceptual, social, and overall educational development of children in later life. It is crucial to remember that for this level of education, these young children require quality instruction from their teachers; as a result, in addition to having academic skills, their teachers must also be kind, have a sincere affection for kids and be patient with them and have pedagogical skills (Rolnick and Grunewald, 2003; Bernette, 2006).

Pedagogy is the study of how to educate children and support their growth. It focuses on the methods and approaches you can employ to give children developmental opportunities and how your interactions and relationships with them might impact them (Andersson and Gullberg, 2014). An expanded, stimulating atmosphere and excellent pedagogical methods are necessary for a child's development of a harmonious personality. The pedagogy of ECE should always be grounded on scientific knowledge and adhere to national goals, contents, teaching strategies, and learning settings (Elliott, 2006; Sheridan, 2009).

Pedagogical Approaches and Methods

Early Childhood Care and Education (ECCE) entails flexible, multifaceted, multilevel, play-based, activity-based, and inquiry-based learning including the study of alphabets, languages, numbers, counting, colours and shapes. It also involves problem-solving, puzzles, logical thinking, visual art, craft, drama and puppetry as well as music and movement. Additionally, it emphasizes the growth of social skills, sensitivity, good manners, respect, ethics, personal and public hygiene, teamwork and cooperation. The overarching goal of ECCE is to achieve the best results possible in the areas of cognitive development, socio-emotional-ethical development, cultural or artistic development, communication and early language development, and literacy (NEP, 2020). Early childhood educators employ the following pedagogical strategies:

Scaffolding Approach

Scaffolding is the process of improving children's participation while indirectly facilitating children's competencies and prior knowledge in order to enhance learning (Eshach et al., 2011). The idea of education in early childhood education (ECE) is seen as a dynamic process in which kids are increasingly socialised into the practises and values of their society through engaged meaning-making (Kumpulainen, et al., 2010). The socio-cultural theory is invariably related with scaffolding. The Vygotskian theory holds that learning first occurs on a social level before moving to an individual one. The zone of proximal growth of the learner or the region between an actual and potential degree of development, is where learning is most effective. By providing scaffolding, a more

experienced member of society can help the child develop their learning and pedagogical skills. It is believed that scaffolding is a situation-specific, dynamic, and interpersonal process in which both students and teachers take the initiative and make decisions as active participants (Kangas, and Reunamo, 2019).

Interaction Approach

The interaction approach places a strong emphasis on the safety, security and care of the child. According to Pursi and Lipponen, pedagogy is viewed as a resource that facilitates interactions between students and teachers. Teachers can use this knowledge to create practical pedagogical methods when they actively participate in and learn to observe children's play signals and moments. The quality of ECE pedagogy is created through these integrative and interactional practices, according to early childhood education pedagogical viewpoints. With young children in particular, educational contact requires keen observation, responsiveness and sensitivity during pedagogical settings. Through this, it is intended to promote community and teachers work to facilitate child-to-child interaction, lessen disruptive behaviour and bullying and strengthen relationships and processes of shared meaning-making (Lowe and Curr, 2017).

Story Telling Approach

Since the development of human language, storytelling has played a significant role in all communities and is a valuable educational tool for young children (Phillips, 2000). Children of all ages like reading, writing and listening to stories because they can learn more about society and life in general from them. In large part of Vivian Paley's writings which discuss the impact of storytelling on children's social and cognitive development, recounting and dramatizing stories is a fairly common element to the preschool curriculum (Wright, 2008).

The storytelling exercises offer a lot of educational value for the child's learning and development process and might ignite a love of reading in them. While inviting and stimulating the thinking process, particularly imaginative tasks, storytelling can help in creating a joyful environment. It can serve to foster a deep bond while also fosters foundational preparation for language and literacy development (Satriana, Jafar, and Haryani, 2018)).

Play way Approach

German educator Friedrich Froebel who developed the idea of kindergarten, stressed the value of play and letting kids interact with their environment first hand. Additionally, there is a big emphasis on self-control and letting kids play in a setting where they can concentrate on their activities. Play has a significant impact on a child's ability to develop speech, cognitive processing, self-awareness, and self-regulation, according to Vygotsky (1978). According to Zosh et al. (2017), the educational play experience should exhibit the following five qualities: it should be meaningful, actively engaging, joyful, and socially involved. Parker and Thomsen (2019) found that when playful experiences

are meaningful, actively engaging, joyful, and socially interactive, they are beneficial in primary school settings and promote deeper learning. They did this by examining the characteristics of play as described by Zosh et al. and reviewing a variety of literature related to play, creativity, and the science of learning. Deeper learning was defined as learning that is reinforced through various contexts and activities (Sinnema et al., 2011) and learning is meaningful only when it connects to prior knowledge (Pursi and Lipponen, 2018). Speaking, singing, playing, dining with the family, playing games, participating in playgroups and sports, playing outside and other activities can help children develop their social, emotional, cognitive and linguistic domains (Goetz, 2017). This approach is an important part of the transition from home to school, the kindergarten approach is a preschool educational strategy that emphasizes play, singing, practical skills like drawing, and social interaction. To help youngsters whose both parents had jobs outside the home. Such institutions were first developed in the late 18th century in Germany, Bavaria, and Alsace. Friedrich Fröbel, a German pedagogue whose philosophy had a major impact on early childhood education, invented the word. Today, the word is used in many nations to represent a range of educational facilities and learning environments for kids between the ages of 2 and 6, depending on a range of teaching methodologies (Cryan, et al., 1992).

Montessori Approach

Italian educator Maria Montessori created the Montessori educational method at the beginning of the 20th century. It is based on the idea that every kid has the capacity for creativity and the innate desire to learn and is anchored on an independent approach to education. The kids in Montessori classrooms exhibit independent and eager dispositions, and they have appealing learning resources. As children advance in their early childhood education, various areas of development—cognitive, social, physical and emotional—are taken into consideration. This method focuses on developing the attributes of children through sensational learning, which comprises of touch, smell, seeing, and taste, instead of learning and reading. The classroom comprises such self-correcting content, the use of which is demonstrated by educators and reenacted by pupils. The actions are more work-based instead of play-based in the sense that the focus is more on reduction of mistakes and encouraging concentration abilities among children. Also, since it aims to improve the concentration skills of pupils, the classrooms and content are aesthetically planned and give a home-like feeling to pupils. As they learn more about themselves and the world around them, it encourages young learners to flourish. This foundation prepares pupils for long-term success and enables a smooth transition into formal education (Verma, 2017).

Constructivist Approach

Constructivist education is currently one of the most popular preschool teaching methods. The constructivist educational philosophy sees kids as engaged learners. Therefore, education is much more than rote memorising; rather, it is the integration and assimilation of knowledge for later application and exploration. Constructivist

teaching methods aim to spark a child's interest and enthusiasm for learning. This method places a strong emphasis on experiential learning or learning by doing. When paired with texts and lectures, hands-on learning can be particularly helpful for those who learn kinaesthetically. Children will be better able to visualise abstract topics they are learning about through field excursions, experiments, and other strategies if they have hands-on experiences (Sheridan, 2009).

An educational philosophy and practice with an emphasis on preschool and primary education is the Reggio Emilia approach which is also based on the principle of constructivist approach. This method emphasises self-directed, experiential learning in relationship-driven situations and is constructivist and student-centered. According to this perspective, children are the communal responsibility of parents and the larger community. Children, parents and the community are all incorporated into the inclusive, village-style teaching methodology as vital parts of the learning process. This method focuses on creating a setting that might support learning and improve the child's academic skills. The youngster attempts to comprehend the world around them while learning to form mental linkages between concepts, environment and people. This method places a strong emphasis on speaking and listening to young children. The preparation of the study material is based on the children's experiences, speech and interests. The child's ability to interact with others and function as a team is absolutely crucial; this inevitably advances cognitive development. As part of teamwork, people converse, make comparisons, offer criticisms, negotiate, solve problems, and make hypotheses ((Verma, 2017).

Conclusion

The future of children and societies are built by ECE pedagogy. As every nation's younger generation is essential to its development, growth and advancement. Therefore, excellent pedagogical techniques must be followed when teaching young children in order to strengthen the country. Early childhood educators can assist preschoolers develop their creativity, problem-solving abilities, critical thinking abilities, learning dispositions, and socio-emotional or behavioral skills by using the right pedagogy at the grassroots level. However, results from earlier studies show that teachers who interact with young children who lack pedagogical abilities are strongly linked to children's delays in reaching developmental milestones and goals, which has a major negative impact on their future growth and development and competencies. Therefore, nine distinct parallel methods to ECE pedagogy are discussed in this paper as these pedagogical approaches help in developing competent preschoolers. All instructional activities in ECE display the nine pedagogical methods and their benefits. These can be put into practise as this type of understanding and perspective of pedagogy is needed not only for critical evaluations of individual approaches and an understanding of pedagogy but also to further develop early childhood education.

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Teacher Efficiency in Relation to Emotional Intelligence and Institutional Maturity in B.Ed Trainees

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Abstract

Schools and teachers were given more responsibility for shaping kids' personalities. The teacher was expected to fulfill a multifaceted role. As a result, the current study was carried out to evaluate the impact of Emotional Intelligence on the Teacher Efficacy of B.Ed interns. B.Ed students from colleges with 5-10 years of existence and colleges with 15-20 years of existence were chosen as the study's sample. The Teacher Efficacy Scale (TES) developed by Kumar and Mutha and the Emotional Intelligence Scale (EIS) developed by Hyde, Pethe, and Dhar were used to assess Teacher Efficacy and Emotional Intelligence. Following examination, it was discovered that students studying in colleges with 5-10 years of establishment and 15-20 years of establishment had varying levels of Teacher efficacy. It was also discovered that high emotional intelligence consistently contributes to teacher efficacy in both categories of institutions, viz. 5-10 years of establishment and 15-20 years of establishment, with one observation that in the case of high emotional intelligence and average emotional intelligent students, maturity of institutions did not play any role with respect to teacher efficacy, but in the case of low emotional intelligence teacher efficacy was discovered

Introduction:

Education is one of the most powerful tools for making a person totally productive to the nation. An individual cannot solve difficulties or adjust to his surroundings unless he is physically, psychologically, and emotionally healthy. Education not only aids in the development of an individual's personality, but it also defines his future and, by extension, the future of the country. Indirectly, when the whole ability of all individuals is combined, it results in national productivity. Education is a social process in which knowledge is passed on to pupils via intermediaries, the teachers. It is available through

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both non-formal and formal educational systems. "All formal systems are based on classroom instruction. "India's destiny is shaped in her classrooms," emphasizes the essential role of teachers in shaping the country's destiny. It is worth recalling Sidney Hook's observation that everyone who remembers his own school experience remembers teachers rather than approaches and tactics.

Education is considered as a tool for developing people's cognitive abilities, tolerance, and understanding, and it should equip the next generation to understand and face the realities of globalization. In this framework, schools and instructors bear greater responsibility for shaping the character of pupils. As a result, the position of the teacher in society is critical to its advancement. In this digital era, the dream of a learning society becomes a reality only when teachers are able to collaborate with one another to complete the mission, and in the end, their capacity to communicate effectively becomes more important than their technical skills and talents. Teachers' roles are evolving in the modern world as a result of the pressures of social and economic upheaval. The society expects teachers to take the lead in making education an effective tool for nation building. A teacher's role is to inspire students, to impact their lives and character, and to equip them with ideas and ideals to enter the stream of national life as honourable citizens.

Teachers today are expected to help and develop their students into better people and wiser human beings, not just more knowledgeable people. It is the teacher who demonstrates the paths to spiritual heights and ultimately to individual liberty. It is the teacher who instills respect for our country's rich history and culture. Teachers help students develop their social consciousness, democratic temperament, and good attitudes. His responsibility is limited to not only stimulating intellectual capacities but also instilling high ideas and thoughts that influence the attitudes and aspirations.

Teacher Efficacy

The efficacy of the educational process is determined by the efficacy of its teachers. The notion of teacher efficacy is subjective, which means it might vary from person to person. A variety of concepts are used in the literature on teaching efficacy or teacher efficacy. It is defined as the characteristics of the instructor, teaching methods, or teaching outcomes. In the current study, teacher efficacy was defined as having good academic and professional knowledge with a clear concept of the subject matter, good lesson preparation with clear objectives, organized and systematic presentation of concepts with appropriate learning materials, ability to successfully communicate his/her knowledge to students, classroom management, positive attitude towards students and colleagues, and result feedback accountability,

Anand (1983) concluded that teachers' efficacy defines their ability to work towards the achievement of educational goals and objectives while also strengthening their teaching profession.

According to Krishnan (1994), an excellent teacher creates an environment that stimulates students.

Walsh and Maffei (1994) discovered that the student-teacher connection is critical to educational efficacy. A positive student-teacher relationship improves education in three ways: it makes education more fun for both instructors and students, it improves student assessments of teachers, and it boosts student learning.

According to Salami (2010), frequent and constructive feedback from students, colleagues, and school administrators enhances a teacher's self-evaluation of his or her abilities. Those with high EI are not scared to accept and use comments from others to enhance their performance over time. Teachers with excellent emotional intelligence skills are optimistic, adaptable, collaborative, confident, authoritative, open, approachable, and enthusiastic. They have improved their communication skills, conflict resolution and problem-solving abilities, impulse control and self-esteem. When they are motivated, they are more powerful, accountable, and deal with stress better.

A range of variables, including competency and classroom performance, can be used to assess teacher efficacy. Classroom efficacy is the result of the act of teaching, as well as their competency and performance. Further more, because modern technology is readily available, advanced media must be incorporated into the teaching learning process. A multitude of criteria for determining a teacher's efficacy have been discovered. These include verbal ability, material understanding, continued professional development, teaching experience, and teacher licensure. An effective teacher must treat all students fairly, understand classroom dynamics, be committed to teaching, and, most importantly, enjoy it. A teacher should be motivational, adaptive to changing circumstances, and capable of relating their subject to real-life issues. A competent teacher should be able to display fairness and respect, as well as enthusiasm, social contact pleasure, and a caring attitude. They should also be capable of organisational and managerial tasks.

Korur (2001) discovered that teachers should be excited about teaching because students can detect if professors are eager to teach or not, should smile, and should take into account students' gender, age, current achievement, motivation, and attitude.

Sutton and Wheatly (2003) discovered that instructors' emotional competency is essential for their own well-being as well as efficacy and quality in carrying out teaching learning processes in the classroom, particularly for students' socio-emotional development. These can be improved with good teacher intelligence.

Hwang (2006) concluded that instructors with higher competences, comfort, empathy, leadership, and self-efficacy outperformed teachers with lower competences, comfort, empathy, leadership, and self-efficacy. Faculty members who excelled in broad EI abilities were also shown to be more successful lecturers.

According to the studies, helpful attributes include behaving nicely with students, showing interest in their problems, exhibiting enthusiasm for teaching, fairness and impartiality, remembering their names fast, and treating them equally.

Emotional Intelligence

In the social sciences, emotional intelligence is essential. Emotional intelligence is becoming more essential among educators. Emotional intelligence is a type of social intelligence that includes the ability to control one's own and others' emotions, choose among them, and use them to direct one's life. As a result, this talent is vitally required for teachers to cooperate effectively.

Goleman's book on Emotional Intelligence popularized the concept, demonstrating that intelligence quotient is a weaker predictor of great leadership than emotional quotient.

According to Mayer and Salovey, emotional intelligence is the ability to recognize emotions, access and generate emotions to aid thought, understand emotions and emotional knowledge, and govern emotions reflectively to promote emotional and intellectual advancement. Teachers who are emotionally savvy can detect and regulate their own emotions, which increases job engagement and reduces stress.

Dong (2006) discovered in his study that an employee with high emotional intelligence may respond appropriately to workplace stress and emotional behaviour of his coworkers.

Improving emotional intelligence, according to Krishnamurthy and Varalakshmi (2011), increases employee motivation and efficacy.

Teachers with high emotional intelligence, according to Kauts and Saroj (2012), have lower work stress and vice versa. Thus, emotional intelligence was proven to be effective in minimizing occupational stress and boosting teaching performance in instructors.

Researchers have revealed that our emotional awareness and ability to control feelings, not our intelligence, determine our success and happiness in all parts of life. Employees with high emotional intelligence can respond appropriately to job stress and the emotional behavior of their coworkers. These skills contribute considerably to job happiness, good job performance, long-term mental health, better group outcomes, and leadership attributes. As a result, it was thought that learning emotional intelligence was crucial because it assisted humans in responding successfully to a variety of situations. It gave people a competitive advantage in economic, family, social, and even spiritual settings by focusing their attention on the inner world. It worked as a disincentive to bad conduct, concern, boredom, and depression, all of which are stressors.

Dimensions of Emotional Intelligence are

- Self-awareness, or being aware of one self;
- Empathy, or feeling and understanding the other person; and
- Emotional stability, or the ability to remain calm in all circumstances.
- Relationship management, or how to handle interpersonal interactions;
- Integrity, or being aware of one's own flaws, strengths, and beliefs

- Value orientation, i.e. adherence to ethical principles
- Commitment, i.e. the intention to continue

In their study, Goad and Justice (2005) found that providing emotional intelligence training to new teachers

Could improve pre-service teacher education, induction experiences with mentorship, and alternative certification programmes. For new and rookie teachers, emotional intelligence skills were linked to both classroom management performance and teacher retention variables. Teachers' emotional intelligence influences student behavior by allowing them to consider the needs of their students. Greater interaction with kids must be encouraged to improve instructors' emotional intelligence. A teacher that is emotionally intelligent must be able to monitor and regulate negative emotions, remain cheerful, and motivate students.

Maturity of Institutions

An effective teacher is the result of a long period of experience that shapes his attitude, beliefs, concepts, and understanding. According to theory, there is a duty to learn the things and ways that the teacher believes. This view point assumed that experiences are replaced by proper and beneficial concepts. For example, a freshly hired mathematics teacher may not teach a formula as efficiently as a teacher who has been teaching mathematics to the same class for ten years.

Gupta (1988) discovered in his research that teacher efficacy is connected to teacher experience. They were shown to be most beneficial in the 11-15 year experience group, but their effectiveness began to drop after that.

Experienced teachers demonstrate greater management abilities, such as being firm and forceful in the classroom, resulting in higher results. Colleges with experienced teachers are more productive. Teachers are the builders of nations. They are responsible for moulding students' personalities. As a result, teachers must have enriched and mature experiences, which can be instilled through well-established matured institutions. Teachers must possess professional and cultural values, which develop with age and experience.

In general, as in other professions such as lawyers, doctors, engineers, and scientists, efficiency grows with the number of years a person stays in his or her specific career increases. Each year of experience brings new challenges, which aids in the resolution of doubts and the construction of concepts. As a result, a person gets more efficient at doing the same activity since he is now familiar with the difficulties he may meet as well as the methods for overcoming them.

The task of teacher education is then to recognize that instructors have cognitive capacities to self-reflect, self-motivate, and self-regulate, as well as to harness self-efficacy so that teachers gain competence in exerting control over their thinking,

conduct, and emotions. A teacher who is emotionally stable can inspire students to be emotionally intelligent.

Statement of the Problem

The most significant barriers to achievement among students are emotional imbalances such as worry, frustrations, tensions, and so on. Thus, emotional intelligence of the teacher and institutional maturity contribute to a teacher's efficacy. Thus, it is paramount to study teacher efficacy in relation to Emotional Intelligence and Maturity of institutions among B.Ed students.

Objectives of the Study.

1. To compare the Teacher Efficacy of students studying in colleges with a history of 5-10 years and 15-20 years.
2. To compare the Teacher Effectiveness of B.Ed interns with varying levels of emotional intelligence.
3. To compare Teacher Efficacy of students studying in colleges 5-10 years old and 15-20 years old with different degrees of EI.

Hypotheses of the Study

1. There is no difference in Teacher Efficacy between students studying in colleges with 5-10 years of establishment and students studying in colleges with 15-20 years of establishment.
2. There is no difference in Teacher Efficacy between students with various degrees of Emotional Intelligence.
3. There is no interaction effect on the teacher efficacy ratings of B.Ed interns studying in institutions with 5-10 years of establishment and 15-20 years of establishment with varying levels of emotional intelligence.

Population

The sample was drawn from Punjabi educational colleges in order to conduct the study. The colleges with 5-10 years of establishment and 15-20 years of establishment were classified individually in terms of maturity.

Sample

700 B.Ed students were chosen as the study's sample using stratified random sampling technique from colleges with 5-10 years of establishment and 15-20 years of establishment.

Design of the Study

To study the primary and interaction effects, the following design was employed.

A factorial design 2x3 was used on the scores of Teacher Efficacy, where institutional maturity is studied at two levels, colleges with 5-10 years of establishment and colleges

with 15-20 years of establishment, and Emotional Intelligence was studied at three levels, high, average, and low.

Tools of the Study

Following tools have been used for conducting the present study.

1. Teacher Efficacy Scale (TES) (Kumar and Mutha)
2. Emotional Intelligence Scale (EIS) (Hyde, Pethe and Dhar).

Statistical Techniques Used

To test the hypotheses, the following statistical approaches were used to analyse the data obtained:

1. Descriptive Analysis techniques such as Mean and Standard Deviation are used to investigate the overall nature of the sample.
2. Analysis of variance (23) is used to investigate the main effects as well as the interaction effects.

Methodology

After obtaining authorization from the relevant institution's heads, B.Ed interns were approached to give the examinations and collect data. They were told why such information was being gathered. They were promised that the information they provided would only be utilised for research purposes. They were sufficiently motivated to offer accurate and relevant information. Before handing out booklets and answer sheets, every effort was taken to put the matter at ease. Only after establishing a good rapport with the student-teachers were the instructions delivered, read aloud, and explained to them as per the manual for each test. The investigator was always available to answer their questions. Following the completion of one test, the answer sheets and booklets were collected, and the next test was administered. Similarly, all of the tests were finished.

All of the assessments, including Teacher Efficacy and Emotional Intelligence, were scored strictly according to the scoring guidelines provided in their respective manuals.

The final sample size for the study was 648 student-teachers: 326 student-teachers from colleges with 5-10 years of establishment and 322 student-teachers from colleges with 15-20 Years of establishment.

Analysis & Interpretation

On the scores of Teacher Efficacy in connection to institutional maturity and emotional intelligence of B.Ed. interns, a two-way ANOVA was used. The means of two-way analysis of variance sub groups on teacher efficacy series scores have been determined and are shown in Table 1.1:

TABLE1.1

Means and SD’s of different sub-groups of Teacher efficacy in respect to Two Dimensions of Maturity of Institutions and Three Dimensions of Emotional Intelligence of B.Ed Interns.

VARIABLES	MATURITY OF INSTITUTIONS		
	5-10	15-20	TOTAL
HIGH EMOTIONAL INTELLIGENCE	M1 =304.90 SD=17.140N=21	M4 =304.55 SD=20.649N=29	MHEI=304.70 SD=19.068N=50
AVERAGEE MOTIO NAL INTELLIGENCE	M2 =272.99 SD=29.210N=274	M5 =271.42 SD=33.331N=233	MAEI=272.27 SD=31.150N=507
LOWEMOTIONAL INTELLIGENCE	M3 =256.26SD=38.765 N=31	M6 =229.77SD=55.940 N=60	MLEI=238.79SD=52.07 N=91
TOTAL	M5-10=273.46 SD=31.077 N=326	M15-20=266.64 SD=42.613 N=322	

In order to analyze the variance, the obtained teacher efficacy scores have been subjected to ANOVA with respect to maturity of institutions and emotional intelligence of B.ED interns. The summarized results have been presented in the Table 1.2 Below:

TABLE1.2

Summary of ANOVA on the Teacher Efficacy Scores of B.ED. Interns in Relation to Maturity of Institutions (A) and Emotional Intelligence (B)

S.No	SOURCES OF VARIANCE	SS	Df	MSS	F
1.	MATURITY OF INSTITUTIONS (A)	5812.441	1	5812.441	5.055*
2.	EMOTIONAL INTELLIGENCE (B)	120193.906	2	60096.953	52.266**
3.	INTERACTION (AXB)	11164.785	2	5582.393	4.855**
4.	WITHIN	738190.254	642	1149.829	

*Significant at the 0.05 Level of Confidence **Significant at the 0.01 Level of Confidence

Maturity of Institution (MOI)

Table 1.2 shows that the F-Ratio for the difference in means of TE scores between students studying in institutions of education of 5-10 years of establishment and 15-20 years of establishment was found to be significant at the 0.05 level of confidence. As a result, hypothesis (1), "There is no difference in teacher efficacy of students studying in colleges with 5-10 years of establishment and colleges with 15-20 years of establishment," has been rejected. As a result, the teacher efficacy of the two groups differs significantly, implying that institutional maturity influences the teacher efficacy

of B.Ed interns. The analysis of means table 1.1 demonstrates that teacher efficacy of B.Ed interns in institutions established for 5-10 years is considerably greater than teacher efficacy of B.Ed interns in institutions established for 15-20 years.

Emotional Intelligence (EI)

Table 1.2 shows that the F-Ratio for the difference in averages of Teacher efficacy ratings of B.Ed interns with varying levels of EI was determined to be significant at the 0.01 level of confidence. It means that B.Ed interns with varying levels of Emotional Intelligence have varying levels of Teacher effectiveness. To determine the importance of the difference in means that caused the F ratio to be significant, t ratios between the subgroups were calculated and are shown in table 1.3 below.

TABLE 1.3 Summary of t-values

Source of Variation	Mean Difference	Std Error diff	t-values
MHEI-MAEI	32.43	4.488	7.226**
MHEI-MLEI	65.91	7.641	8.626**
MAEI-MLEI	33.48	3.998	8.373**

Table 1.3 also shows that the differences between means of MHEI-MAEI, MHEI-MLEI, and MAEI-MLEI have been calculated, and t-ratios are shown to be significant at the 0.01 level of confidence. Furthermore, Table 1.1 shows that the MHEI (high emotional intelligence) group has higher mean Teacher efficacy scores than the MAEI (average emotional intelligence) and MLEI (low emotional intelligence) groups, implying that B.Ed interns with higher emotional intelligence have higher Teacher efficacy than B.Ed interns with average emotional intelligence and low emotional intelligence. Similarly, MAEI (average emotional intelligence) interns have higher mean Teacher Efficacy scores than MLEI (low emotional intelligence) interns, indicating that B.Ed interns with average emotional intelligence have higher Teacher efficacy than B.Ed interns with low emotional intelligence.

The findings are similarly consistent with the findings of Jha and Indoo (2012), who discovered a favourable relationship between teacher efficacy and emotional intelligence. There was also a substantial relationship between teacher efficacy and emotional intelligence, with teacher efficacy improving as emotional intelligence increased.

Hwang (2006) discovered that teachers with higher competence, comfort, empathy, leadership, and self-esteem performed better in terms of total teaching efficacy. The author also discovered that faculty members with stronger overall EI abilities likely to have higher teaching efficacy.

The findings are consistent with the findings of Das (2004), who investigated the effect of emotional intelligence on teacher efficacy at the senior secondary school level and

discovered that there is a positive effect of emotional intelligence on teacher efficacy (as a whole and across all dimensions) at the seniors secondary school level.

Emotional Intelligence and Maturity of Institutions

Table 1.2 shows that the F-Ratio for the interaction between institutional maturity and emotional intelligence on Teacher efficacy scores of B.Ed interns was determined to be significant at the 0.01 level of confidence. As a result, hypothesis (3), "There exists no interaction effect on teacher efficacy scores of B.Ed interns studying in institutions with 5-10 years and 15-20 years of establishment with different levels of emotional intelligence." Was rejected. As a result, the results show that teacher efficacy of B.Ed interns varies with different levels of emotional intelligence in colleges of education with 5-10 years of establishment versus colleges of education with 15-20 years of establishment.

In order to investigate the differences between groups, t-ratios for the difference in means of distinct sub groups were calculated and are shown in Table 1.4 below:

TABLE 1.4

Summary of t-values for THR interaction between maturity of institutions and Emotional Intelligence on the Teacher Efficacy scores

Source of Variation	Mean Difference, D	Std Error diff, SE	t-values
M1-M2	31.912	6.464	4.937**
M1-M3	48.647	9.023	5.392**
M1-M4	0.353	5.520	0.064
M1-M5	33.488	7.369	4.544**
M1-M6	75.138	12.451	6.035**
M2-M3	16.735	5.740	2.916**
M2-M4	31.559	5.570	5.666**
M2-M5	1.576	2.778	0.568
M2-M6	43.226	5.055	8.551**
M3-M4	48.294	8.100	5.962**
M3-M5	15.158	6.5	2.332*
M3-M6	26.491	11.237	2.357*
M4-M5	33.135	6.342	5.225**
M4-M6	74.785	10.750	6.957**
M5-M6	41.650	5.645	7.379**

Further, it may be observed from Table 4.4 that the differences between means of M1-M2, M1-M3, M1-M5, M1-M6, M2-M3, M2-M4, M2-M6, M3-M4, M3-M5, M3-

M6, M4-M5, M4-M6, M5-M6 have been calculated and t-ratios are found to be significant at the 0.01 level of confidence.

Further more, the means from Table1.1 show that

1. M1 i.e. high emotional intelligence group yields higher mean Teacher efficacy scores than M2 i.e. average emotional intelligence and M3 i.e. low emotional intelligence group, implying that B.Ed interns with higher emotional intelligence studying in institutions with 5-10 years of establishment exhibited significantly higher Teacher efficacy than B.Ed interns with Average Emotional intelligence and M3 i.e. low emotional intelligence group..
2. B.Ed interns with average emotional intelligence studying in institutions with 5-10 years of establishment exhibited significantly higher Teacher efficacy than B.Ed interns with low emotional intelligence in both categories of institutions, but B.Ed interns with high emotional intelligence studying in institutions with 15-20 years of establishment exhibited significantly lower Teacher efficacy.
3. B.Ed interns with poor emotional intelligence who studied in institutions with 5-10 years of experience displayed considerably lower Teacher Efficacy than B.Ed interns with high emotional intelligence or medium emotional intelligence who studied in institutions with 15-20 years of experience.
4. B.Ed interns with high emotional intelligence who studied at institutions with a history of 15-20 years had considerably higher Teacher Efficacy than B.Ed interns with average emotional intelligence and poor emotional intelligence who studied in the same category of institutions.
5. B.Ed interns with average emotional intelligence who studied in institutions with 15-20 years of history had considerably greater Teacher Efficacy than B.Ed interns with low emotional intelligence who studied in the same category of institutions.

Discussion

It can be generalized from all of the findings that high emotional intelligence consistently contributes to teacher efficacy in both categories of institutions, viz. 5-10 years of establishment and 15-20 years of establishment, with one exception: in the case of high emotional intelligence and average emotional intelligent students, institutional maturity has no bearing on teacher efficacy. However, in the event of low emotional intelligence, teacher efficacy is found to be higher in institutions with 5-10 years of existence than in institutions with 15-20 years of existence. The reason could be that students with low emotional intelligence require more attention and monitoring than other categories of students, and institutions with less maturity or fewer years of establishment are less structure with respect to institutional values and more focused on the students' performance due to internal institutional challenges.

Educational Implications

Interns' emotional intelligence levels can be measured at the start of a B.Ed session in order to create programmes to help them enhance their competences. When B.Ed interns are aware of their emotional intelligence competencies that can increase their teaching efficacy, they become more realistic and resilient in their teaching emphasis. Efforts to improve teacher efficacy should begin during training. As a result of the current study's findings, it is advised that emotional intelligence training be employed to improve the teacher efficacy of B.Ed interns. However, numerous programmes might be developed to provide teachers with knowledge about burnout and suggestions for dealing with it. Emotional intelligence training modules should be utilized in teacher education programmes so that future teachers can monitor and regulate negative emotions, remain optimistic, and motivate their students.

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Teacher Effectiveness among Secondary School Teachers in Relation to their Professional Commitment

Tahira Akhtar¹ & Mohammad Yusoo²

Abstract

The present study investigated the teacher effectiveness among secondary school teachers of Baramulla district of Jammu and Kashmir in relation to their professional commitment. The objective of the present study was to study the relationship between teacher effectiveness and professional commitment of secondary school teachers, the difference in teacher effectiveness of male and female secondary school teachers and the difference in professional commitment of male and female secondary school teachers. The sample of this study comprises of 100 secondary school teachers, 50 male and 50 female. Two standardized tools, Teacher Effectiveness Scale by Dr. Umme Kulsum and Professional Commitment Scale by Dr. Ravinder Kaur et al, were used by the investigator for collection of data. For the purpose of drawing out the results the investigator used statistical techniques like correlation and t-test. The results revealed that there exists no significant relationship between teacher effectiveness and professional commitment among secondary school teachers, there exists significant difference in teacher effectiveness among male and female secondary school teachers and there exists no significant difference in professional commitment among male and female secondary school teachers.

Keywords: Teacher Effectiveness, Professional Commitment, Secondary School Teachers

Introduction

Education is the development of the 'whole person' of the child or the learner. It aims at developing a working hand, a feeling heart and a knowing head. Education tries to develop the innate potentialities of the individual in a harmonious manner. It may be formal, non- formal and informal. In formal education teacher plays the pivotal role. There is no substitute of a teacher as a nation builder. The role that the teacher plays is vast, unique and unmatched.

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Teaching is a profession indeed a noble one conceptually and ideally. It is also different from other professions because of multitude of dimensions. There is a daily need for teachers to fully engage in their work with not only their heads, but also with their hearts. As it is also mentioned in Report of Kothari Commission (1964-1966) that, "*the destiny of the country is shaped in its classrooms*". So, this indicates the unmatched role of the teacher in the development of a country. This concept of the role of the teacher invites great and effective teachers to be in the teaching profession. Every teacher we see may be a good one in their ways, but every teacher is not an effective teacher. Effectiveness refers to the finest trait/virtue of a person. It represents his/her personality in the best of his/her form as an attribute. Now the question is who is an effective teacher? Here we can say that effective teacher may be the teacher who has attained the needed competence in their roles and functions, such as the preparation and planning for teaching, classroom management, and knowledge of the subject matter, teacher characteristics and their interpersonal relations. Effective teachers always help their students in developing sound health, body and mind. They always engage in cultivating the basic skills, thought process, healthy habits, scientific temperament, positive attitudes, value orientation, value judgment and ability to adjust in ever changing psycho-social environment among the students. These teachers excel in their other personality characteristics and are said to be the best teachers.

Teacher Effectiveness: Teacher effectiveness is the ability or quality of a teacher of having a positive impact on student's learning, behavior and attitudes. The teacher effectiveness is examined with the help of some criteria such as the abilities, teaching strategies and performance of the teacher both inside and outside the classroom environment. The criteria of teacher effectiveness can be described in the form of variables which includes Presage, Process and Product. These variables play a vital role for judging the teacher effectiveness which is described as under:

a) Presage Variable: The presage variable involves the personal qualities and academic background of a teacher. It includes the abilities such as intelligence, creativity, aptitude, attitude, values, interest, moral principles, etc of a teacher.

b) Process Variable: It includes the practical teaching abilities and skills of the teachers. It also includes the methods, principles & maxims of teaching used by a teacher during the presentation and various teaching skills used by a teacher while teaching like skills of writing instructional objectives, probing questions, discussing, using the blackboard, providing reinforcements, etc.

c) Product Variable: Product variable refers to the outcomes of teaching learning process. Achievement tests and other measures in the cognitive, affective and psychomotor domains are used to measure teacher effectiveness according to this criterion.

Professional commitment: Professional commitment of teachers refers to the devotion and dedication of teachers towards their teaching profession. It is closely connected to teachers work performance, absenteeism, burnout and turnover as well as having an

important influence on students' achievement and attitude towards school (Louis, 1998). It appears to be a professional necessity for teachers to be committed to their work, as without commitment, teachers face the constant danger of burnout in an increasingly intensified work environment (Nias, 1996). Commitment is seen to be one of the most desirable attributes of a teacher and is a part of teacher's effective or emotional reaction to their experience in school setting, (Ebmeir and Nicklaus, 1999). "Commitment" is a term that teachers frequently use in describing themselves and each other (Nias, 1981). It is a word they use to distinguish those who are caring, dedicated and those who take the job seriously from those who put their own interests first. Cambridge international dictionary of English says, "Commitment means to promise or give your loyalty to a particular profession, person or plan of action. Commitment depicts the firm and not changing orientation in support of one's belief in his principles." (O.Relly, 1989, p 17), has defined commitment as typically conceived as of an individual's psychological bond to the organization including a sense of job involvement, loyalty and beliefs in the value of organization. It is evident from the survey of various definitions that professional commitment is a multidimensional construct and refers to a socio- psychological bonding of an individual to his/her group or organization, its goals and values and to his occupation and profession.

Literature Review

Malik, U. & Sharma, D.K. (2013) studied teaching effectiveness of secondary school teachers in relation to their professional commitment. A sample of 300 secondary school teachers was selected using random sampling. It was found that there existed a significant relationship between teaching effectiveness and professional commitment of secondary school teachers. This study also revealed there was no relation between that gender of the secondary school teachers and professional commitment on gender basis and also locality of school does not influence their teaching effectiveness but influences their professional commitment.

Singh, B. & Kumar, P. (2015) conducted a study on comparison between professional commitment of male and female teachers and more and less experienced teachers in relation to different areas of commitment. A sample of 95 teachers was selected using simple random sampling. It was found that more experienced teachers were more committed towards their profession and also it was revealed that male teachers are committed more towards society while female teachers were more committed towards learners.

Lata, S. and Sharma, S.K. (2016) conducted a study with the aim to investigate teacher effectiveness of elementary school teachers in relation to gender and professional commitment. A sample of 400 elementary school teachers was selected using simple random sampling technique. It was found that male and female elementary school teachers differ significantly in their teacher effectiveness and there exists a significant difference in teacher effectiveness of elementary school teachers in relation to their level of professional commitment. It was also found that there is no interactional effect

of gender and level of professional commitment on teacher effectiveness of elementary school teachers

Dr. Dar, R.A. (2018) studied qualities of effective teachers. A sample of 800 secondary school teachers was selected randomly. The study examined factors promoting teacher effectiveness like professional commitment, punctuality, job satisfaction, attitude towards teaching, appropriate training and good learning environment. It was found that the effective secondary school teachers have more professional commitment and also showed positive commitment towards students as well as progressive betterment of society.

Singh, L. & Dr. Singh, S. (2018) studied professional commitment level of teachers with respect to dimensions of professional commitment and demographical variables. A sample of all the teachers of 12 schools of district Una, Himachal Pradesh was selected using convenience sampling technique. It was found that professional commitment level of teachers working in primary, secondary and higher secondary schools was average and above average. The results also indicated that gender wise differences, locale and type of school contributed no difference in commitment among teachers.

Dar, R.A. & Peerzada, N. (2018) conducted a study on professional commitment of effective and less effective secondary school teachers. The objective of the study was to study and compare more effective and less effective secondary school teachers on various factors of professional commitment. A sample of 800 secondary school teachers from Kashmir was selected using random sampling technique. The findings of this study revealed that effective secondary school teachers have more professional commitment as compared to less effective teachers. It was also found that effective teachers are more committed to their jobs and show positive commitment towards students as well as the progressive betterment of society.

Habib, H (2019) studied professional commitment of secondary school teachers in relation to their self efficacy. A sample of 100 secondary school teachers was selected using purposive sampling technique. Findings of the study indicated that female teachers have higher professional commitment as compared to male teachers. No significant difference was found in self-efficacy of secondary school teachers but significant positive correlation was found between professional commitment and self-efficacy of secondary school teachers.

Need of the Study

The success of any educational institution is determined by its effective teachers. The teacher holds the most important place in the process of education. So, there exists a greatest need for the teachers to be effective. Many studies have been done on teacher effectiveness in relation to various teacher related variables. Many factors are responsible and affected the teacher effectiveness, professional commitment is one among them. Commitment to the teaching profession is related to teacher effectiveness (Coladarci, 1992). After reviewing the research studies related to teacher effectiveness in relation to professional commitment, though these variables have been studied in

different settings and contexts but the investigator did not come across even a single study on teacher effectiveness among secondary school teachers in relation to professional commitment in Baramulla district. The present study was selected while realizing the professional commitment as one of the most important factors affecting teacher effectiveness and also because of the non-existence of such a most important study.

Statement of the Problem

The study is entitled as “Teacher effectiveness among secondary school teachers in relation to their professional commitment”.

Objectives

1. To study the relationship between teacher effectiveness and professional commitment among secondary school teachers.
2. To study the difference in teacher effectiveness among male and female secondary school teachers.
3. To study the difference in professional commitment among male and female secondary school teachers.

Hypotheses

H₀1. There is no significant relationship between teacher effectiveness and professional commitment among secondary school teachers.

H₀2. There is no significant difference in teacher effectiveness among male and female secondary school teachers.

H₀3. There is no significant difference in professional commitment among male and female secondary school teachers.

Methodology

For present study descriptive survey method is opted.

Population and Sample

The population included all the secondary school teachers of district Baramulla and 100 teachers comprised of 50 male and 50 female teachers were taken as sample using simple random sampling.

Tools

The investigator used following tools for the collection of data:

1. Teacher Effectiveness scale by Dr. Umme Kulsum (2011).
2. Professional Commitment Scale by Dr. Ravinder Kaur, Sarbjit Kaur Ranu and Sarvjeet Kaur Brar (2011).

Data Analysis

In the present study, the data were analyzed with the help of SPSS software keeping in view the formulated hypothesis and objectives of the study. Investigator used Correlation and t-test for analysis of data for the present study.

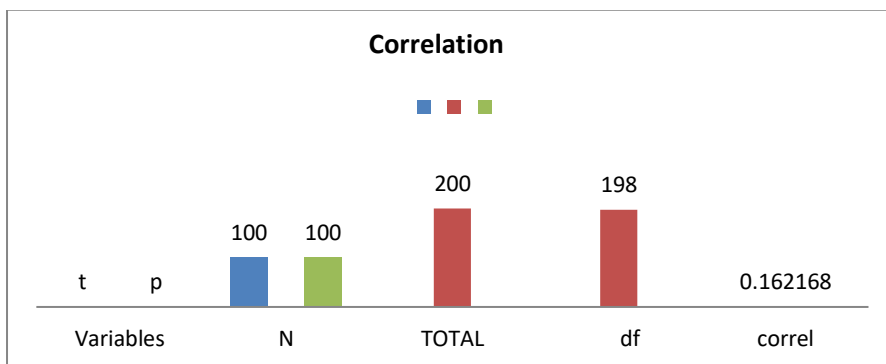
Objective 1: To study relationship between teacher effectiveness and professional commitment among secondary school teachers.

For this objective teacher effectiveness and professional commitment scales were used for collection of data. After data collection, it was analyzed with the help of correlation test. Results are shown in the table:

Table 1.1

Table showing the relationship between teacher effectiveness and professional commitment among secondary school teachers.

Variables	N	Mean	SD	Correlation
Teacher effectiveness	100	418.16	48.75	0.162
Professional commitment	100	170.97	17.44	



Findings

From the table 1.1, the r value regarding teacher effectiveness and professional commitment among secondary school teachers is found to be 0.162 whereas table value for the same at 98 df is found to be .195 at 0.05 level of significance. Hence the hypothesis i.e., there is no significant relationship between teacher effectiveness and professional commitment is accepted.

Objective 2:To study the difference in teacher effectiveness among male and female secondary school teachers.

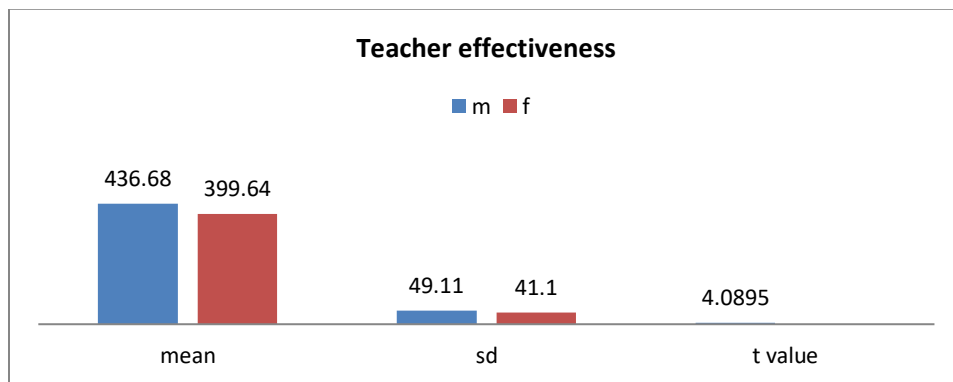
For this objective, teacher effectiveness scale was used for collection the data. After data collection, it was analyzed with the help of t-test. Results are shown in the table:

Table 1.2

Table showing difference in teacher effectiveness among male and female secondary school teachers

Variables	Gender	N	Mean	SD	DF	t-value	Sig.
Teacher Effectiveness	Male	50	436.68	49.114	98	4.090	.000
	Female	50	399.64	41.104			

Table value of t at 0.05 and 0.01 levels of significance is 1.98 and 2.63 respectively.



Findings

From table 1.2, the mean score of male and female teachers is found to be 436.68 and 399.64 respectively. The calculated t-value is found to be 4.09 whereas table value at 0.01 level is 2.63. Hence, the calculated value is found to be significant. Therefore, the hypothesis which states that there is no significant difference in teacher effectiveness among male and female secondary school teachers stands rejected. Hence it can be concluded from the results that male teachers have higher teacher effectiveness than female teachers.

Objective 3: To study difference in professional commitment among male and female secondary school teachers.

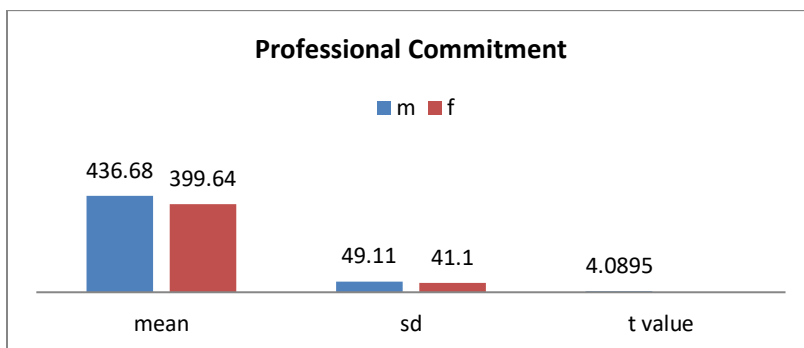
For this objective, professional commitment scale was used for collection of data. After data collection, it was analyzed with the help of t-test. Results are shown in the table:

Table 1.3

Table showing the significant difference in professional commitment among male and female secondary school teachers.

Variable	Gender	N	Mean	SD	DF	t-value	Sig.
Professional Commitment	Male	50	172.06	17.818	98	0.623	.535
	Female	50	169.88	17.161			

Table value of t at 0.05 and 0.01 levels of insignificance is 1.98 and 2.63 respectively.



Findings

From table 1.3, the mean score of male and female teachers is found to be 172.06 and 169.06 respectively. The calculated t-value is found to be 0.62. Table value for tat 0.05 levels is 1.98. Hence, the calculated value is found to be insignificant. Therefore, the hypothesis which states that there is no significant difference in professional commitment among male and female secondary school teachers is accepted. Hence it can be interpreted that there is no significant difference in the professional commitment of male and female secondary school teachers.

Conclusion

The investigator aimed to study teacher effectiveness among secondary school teachers in relation to their professional commitment. The results of this study provide important insights regarding the influence of professional commitment on teacher effectiveness. It was found that there exists no significant relationship between teacher effectiveness and professional commitment among secondary school teachers. It means that professional commitment does not affect teacher effectiveness which contradicts with the previous studies that shows more effective teachers have high professional commitment (Dar, R.A. 2018). Secondly, it was found that there exists significant difference in teacher effectiveness among male and female secondary school teachers which aligns with the study that shows male and female teachers differ significantly in

teacher effectiveness but contradicts with another study that shows gender does not bear any relationship with teaching effectiveness, (Malik, U. 2013). Lastly the results indicated that there exists no significant difference in professional commitment among male and female secondary school teachers which also contradicts with the previous study that shows female teachers have higher professional commitment as compared to male teachers, (Habib, H. 2019). Thus, it can be concluded that the variable teacher effectiveness is not only affected by gender and professional commitment as indicated by previous studies also but could be due to various other factors that needs to be studied in order to identify the most contributing factors for increasing teacher effectiveness. The variable school organizational climate could be also included in a future study. The variable professional commitment could be studied in relation to other variables such as socio-economic status, personality traits, mental health. The comparative study can be conducted on all the teachers of elementary, senior secondary and also in higher education. The comparative study can also be conducted on teachers of different states of India. Also the study can be extended to the large sample.

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Exploring the Educational Anxiety among Adolescent Students of South Delhi - A comparative Study of Private and Government Schools

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Abstract

Adolescents' educational anxiety refers to the pressure related to their academics which includes preparing for exams and class tests, completing school work, homework, project work, comprehending new concepts & terms and also making adjustments in a new social setting. Only academic aspects don't lead to academic stress among adolescents but there may be other aspects such as environmental, social and personal which indirectly harm their academic career. The primary objective of the study was to measure and compare the levels of educational anxiety among adolescent students of Private and Government schools of South Delhi. For this purpose, data was collected from 60 adolescent students using Educational Anxiety Inventory by Dr. Vishal Sood and Dr. (Mrs.) Arti Anand. After statistical analysis of the collected data, it was observed that there was no significant difference in the levels of educational anxiety of the adolescent students belonging to Private schools and Government schools. Also, no statistically significant differences were found between the boys and girls in a particular type of school or when comparing boys and girls from Private schools to boys and girls from Government schools.

Keywords: Educational Anxiety, Adolescent students, Private School, Government Schools, South Delhi

Introduction

A child has unique capabilities, attitudes, potentialities and interests and accordingly, he reacts in a unique manner to the situation. While the search for excellence becomes a universal quest, some find themselves unable to cope up with the challenges of time, which cause a state of restlessness in them. One amongst such issues is educational anxiety. Educational anxiety is feeling of being distressed, fearful or stressed out

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because of school pressures. The concept of educational anxiety is a new construct and is proposed as a unifying representation for the various forms of specialized manifestation of anxiety in school settings. It is a stress or pressure that is experienced or based upon functions related with school.

Adolescents' educational anxiety refers to the experience of distress in all spheres of life specifically with areas related to academics which causes them to feel overwhelmed. Their lives go out of control with too much pressure, fear and panic due to exposure to the new educational concepts, adjusting to new social setting, studying for exams, work overload, the amount of material to learn and the need to do well.

Excessive levels of educational anxiety can result in an increased prevalence of psychological and physical problems like depression, unrest, nervousness and stress related disorders, which in turn can affect their academic results. Anxiety and stress have a substantial negative effect on their social, emotional and academic success. It is also a reflection of an individual's academic frustration, academic conflict, academic anxiety, and academic pressure.

Rationale of the study

In the present competitive world, there is a considerable amount of educational anxiety among the young generation. Anxiety amongst adolescent boys and girls is very common and natural. Be it about self, career, academics or any other issue, the youths undergo feelings of anxiety at some phase of their lives. Adolescents live in a world where nothing seems to be guaranteed with certainty and at the same time they are expected to perform at every front, the main being academics. They are not able to cope up with academic work, which results in chaos and confusion in their minds. On the other hand, each parent wants that their ward should get the best education and must perform well in academics. As all individuals are not alike; some adolescents create unnecessary pressure on their minds to perform well in academics and vocation which leads to stress, anxiety, and other psychological and emotional problems. Academic anxiety is sometimes also created by vocational and educational interest. Sometimes adolescents are interested in a particular vocation that their abilities do not favour and which in turn may lead towards academic anxiety. Keeping all these factors in view, a study to find out the levels of educational anxiety of the adolescents looked relevant.

Literature Review

The review of related literature paves a way for the researcher for forming clear objectives and hypotheses for the study. It avoids duplication of work. It also develops insight which leads to a good research design. Literature review also helps the researcher to avoid many of the pitfalls and contributes to widening the view of the researcher concerning the present research problem.

Archbell and Coplan (2022) in their study assessed a conceptual model connecting socio-emotional functioning indicators at university with social anxiety, communication with peers and instructors, student experiences (i.e., involvement, connectivity, and

satisfaction). 1,073 undergraduate students ($M_{\text{age}} = 20.3$ years, $SD = 3.49$) who participated in the study filled out a variety of self-report questionnaires. The findings showed that social anxiety was adversely correlated with interactions with teachers, socio-emotional functioning, and student experiences. Significant variation in these relationships was attributed to academic communication.

Pascoet. al (2020) observed that numerous recurring pressures connected to academic obligations are experienced by students in secondary and higher education settings. This narrative review summarises the most recent findings on the effects of academic stress on students' ability to study and academic achievement, as well as on mental health issues like melancholy and anxiety, sleep disorders, and drug abuse.

Rahaman and Rana (2019) examined academic anxiety among secondary school pupils in West Bengal's Murshidabad region. The Academic Anxiety Scale for Children (AASC) by A.K. Singh and A. Sen Gupta was employed to collect data. A well-implemented quantitative descriptive study design was created. According to the study, no significant difference has been found between male and female secondary school students on the variable of academic anxiety.

Alam and Halder (2018) determined the relationship between adjustment and test anxiety among secondary students in Dakshin Dinajpur District, West Bengal, taking into account their gender and location. To gather the necessary data, the investigators used a test anxiety scale and an adjustment inventory. To determine the aforementioned relationship, they employed the Pearson Product Moment Method and a t-test was also used to determine the variance in correlation coefficients between the sub-samples. The research examined the considerable inverse relationship between secondary students' adjustment and test anxiety. The study also found a statistically significant inverse relationship between test anxiety and adjustment in male and female secondary school pupils.

Azeem (2018) studied academic anxiety and academic achievement among secondary school students. For his study, a sample of 340 secondary school students from different schools of Aligarh was chosen. The anxiety ratings and Cumulative Grade Point (CGP) of the pupils in their previous classes were gathered using a standard technique and utilized as a measure of their academic performance in school records. CGP were later changed to percentage marks. With respect to gender and religion, the study aimed to identify differences as well as connections between academic anxiety and academic accomplishment. The study's findings made it abundantly evident that there was no appreciable difference between male and female pupils in terms of academic achievement or academic anxiety.

Mahajan (2015) determined how parental support affected secondary school students' academic anxiety. For his study, a total sample of 120 Class X students from 12 secondary schools were chosen using a stratified sampling procedure based on gender and school type. The Academic Anxiety Scale for Children by A. K. Singh and A. Sengupta (1998) and the Parental Encouragement Scale by Kusum Aggarwal were used to collect

data (1998). According to the study's findings, parental support was strongly and negatively connected with academic stress. There was no discernible difference between male and female secondary school pupils' levels of academic anxiety. Government and Private secondary school students' levels of academic anxiety were found to differ significantly.

Putwain et. al (2015) investigated the associations between students' self-reported levels of cognitive test anxiety (worry), academic buoyancy (withstanding and successfully addressing routine school challenges and setbacks), coping mechanisms and their achieved grades in high-stakes national examinations after compulsory schooling. Three hundred and twenty-five English students in their last year of secondary school who were prepared for high stake examinations made up the sample. When gender and prior achievement were taken into account, higher levels of worry predicted poorer test scores. Less usage of successful pre-exam coping mechanisms served as a partial mediator of this. The indirect link between worry and exam performance was modified by academic buoyancy, making the indirect link stronger when academic buoyancy was lower.

Shakir (2014) did a research to better understand how academic anxiety affects students' academic performance. Three hundred and fifty-two senior high school students were selected at random from the total population. The information was gathered using the Dr. A.K. Singh and Dr. Sen Gupta Standardized Academic Anxiety Scale. The data were analysed using Mean SD, Correlation and t-test. The results of the study showed a negative correlation (inverse link) between students' academic achievement and academic anxiety. Significant differences were discovered between the academic performance of students in high and low academic anxiety groups, as well as between male and female students in high and low academic anxiety groups, as well as between students in low academic anxiety groups and high academic anxiety groups.

Operational definitions of keyterms used

Educational Anxiety

In this study, educational anxiety refers to the mental distress with respect to academics. This includes test anxiety and academic anxiety. Educational anxiety is perceived to be one of the major concerns affecting adolescents today.

Adolescent Students

Adolescents are individuals who are no longer children but are not yet adults. For this study, adolescent students are taken as individuals aged 16-18 years of age and who are studying in Class XI or Class XII of CBSE Private/ Government Schools of South Delhi.

Objectives of the study

The present study was taken up with the following objectives:

1. To find out the levels of educational anxiety among adolescent students of a Privateschool of South Delhi

2. To find out the levels of educational anxiety among adolescent students of a Government school of South Delhi.
3. To compare the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi.
4. To find out the levels of educational anxiety among adolescent boys of a Private school of South Delhi.
5. To find out the levels of educational anxiety among adolescent boys of a Government school of South Delhi.
6. To compare the levels of educational anxiety of adolescent boys of a Private school and a Government school of South Delhi.
7. To find out the levels of educational anxiety among adolescent girls of a Private school of South Delhi.
8. To find out the levels of educational anxiety among adolescent girls of a Government school of South Delhi.
9. To compare the levels of educational anxiety of adolescent girls of a Private school and a Government school of South Delhi.

Hypotheses of the Study

1. There is no significant difference between the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi.
2. There is no significant difference between the levels of educational anxiety among adolescent boys of a Private school and a Government school of South Delhi.
3. There is no significant difference between the levels of educational anxiety among adolescent girls of a Private school and a Government school of South Delhi.

Methodology

Keeping in view the objectives of the present study, the descriptive survey method was used. Since survey method is always based on a sample of the population, the access of the research is dependent on the representativeness of the sample with respect to a target population of interest to the researcher. That target population were Class XI and Class XII students of a Private and a Government school of South Delhi.

Population

The population of the present study was all the Private and Government schools of South Delhi.

Sample

Sixty students from Class XI or XII were randomly selected. Out of which, 30 were selected from a Private School and 30 were from a Government School. The ratio of boys and girls in the sample was 50-50.

Data Collection Tool

In the present study, data was collected by employing the Educational Anxiety Inventory by Dr. Vishal Sood and Dr. (Mrs.) Arti Anand. Educational Anxiety Inventory has 42 items

catering to two dimensions: 1. Test Anxiety (20 items) and 2. Academic Anxiety (22 items). This is a 42-item scale that measure the common symptoms related to educational anxiety. The items in the inventory are categorized into two groups - positive and negative. For positive items, the score ranged from "5" to "1" for strongly agreed, agreed, neutral, disagreed and strongly disagreed respectively, whereas it is "1" to "5" for negative statements.

The sum of the scores on all the statements in each dimension of Educational Anxiety Inventory is considered as respondent's total anxiety score. The higher the score on any of the two dimensions or overall Educational Anxiety indicates higher anxiety level of the student. The range of Anxiety scores on two different dimensions and overall education anxiety is given below.

Table 1: Range of Scores on Educational Anxiety Inventory

S.No.	Dimension Type	Minimum Score	Maximum Score
1.	Test Anxiety	20	100
2.	Academic Anxiety	22	110
Overall Educational Anxiety		42	210

Procedure of data collection

The data was collected from Class XI or XII students of Sanskriti School, Chanakyapuri, New Delhi (Private School) and Government Co-Ed. Sr Sec School, Lajpat Nagar, New Delhi (Government School).

The Educational Anxiety Inventory is a self-administered scale. The tool used in the present study was administered on a sample of randomly selected 60 students. Due to the COVID-19 pandemic, it became increasingly difficult to conduct the test in person. Contact details of the selected students were taken from their respective schools after the due permission from the Principal of the school.

The researchers translated the tool to English and converted it into a google form (handover of the hard copies of the inventory was not feasible during COVID-19 Pandemic). Before administering the test, all the instructions were shared with the students through a phone call. The link of the form prepared was shared with the respondents through WhatsApp or via E-mail. All the questions were required to be answered along with their personal details, only then the form could be submitted and received at the researchers' end.

Statistical Techniques

The statistical techniques employed to compare the scores of the respondents were mean, standard deviation and t-test.

Delimitations of the study

Following are the delimitations of the present study: -

1. The study was delimited to the schools located in South Delhi.

2. The study was restricted to only one Private and one Government school in South Delhi, due to the restriction of time and resources at hand.
3. The time and resources at the disposal of the researchers compelled to restrict the sample to 60 students.

Data Analysis

This study covered the following five aspects:

1. Comparison of the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi.
2. Comparison of the levels of educational anxiety among adolescent boys of a Private school and a Government School of South Delhi.
3. Comparison of the levels of educational anxiety among adolescent girls of a Private school and a Government School of South Delhi.

1. Comparison of the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi

Table 2: Mean, SD and t-value for levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi

	N	Mean	Standard Deviation	t-value (df=58)	Interpretation
Private school students	30	124.77	28.30	0.558	Insignificant at 0.05 and 0.01 levels
Government school students	30	121.40	14.98		

Table 2 indicates that the mean scores for level for educational anxiety of Private school students is 124.77 and Government school students is 121.40 whereas SD values for educational anxiety levels of Private school students is 28.30 and Government school students is 14.98. Calculated t-value is 0.558. For the null hypothesis to be rejected, the calculated t-value should be higher than critical t – values 2.00 and 2.66 at 0.05 and 0.01 levels (df=58) respectively.

Finding 1: Hypothesis 1 i.e there is no significant difference between the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi is accepted.

2. Comparison of the levels of educational anxiety among adolescent boys of a Private school and a Government school of South Delhi

Table 3: Mean, SD and t-value for levels of educational anxiety among adolescent boys of a Private school and a Government school of South Delhi

	N	Mean	Standard Deviation	t-value (df=28)	Interpretation
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Private school boys	15	117.73	32.37	0.958	Insignificant at 0.05 and 0.01 levels
Government school boys	15	117.27	11.48		

Table 3 indicates that the mean scores for levels for educational anxiety of Private school boys is 117.73 and Government school boys is 117.27 whereas SD values for educational anxiety levels of Private school boys is 32.37 and Government school boys is 11.48. Calculated t-value is 0.958. For the null hypothesis to be rejected, the calculated t-value should be higher than critical t – values 2.04 and 2.76 at 0.05 and 0.01 levels (df=28) respectively.

Finding 2: Hypothesis 2 i.e there is no significant difference between the levels of educational anxiety among adolescent boys of a Private school and a Government school of South Delhi is accepted.

3. Comparison of the levels of educational anxiety among adolescent girls of a Private school and a Government school of South Delhi

Table 4: Mean, SD and t-value for levels of educational anxiety among adolescent girls of a Private school and a Government school of South Delhi

	N	Mean	Standard Deviation	t-value (df=28)	Interpretation
Private school girls	15	131.80	22.48	0.418	Insignificant at 0.05 and 0.01 levels
Government school girls	15	125.53	17.22		

Table 4 indicates that the mean scores for levels for educational anxiety of Private school girls is 125.53 and Government school girls is 131.80 whereas SD values for educational anxiety levels of Private school girls is 17.22 and Government school girls is 22.48. Calculated t-value is 0.418. For the null hypothesis to be rejected, the calculated t-value should be higher than critical t – values 2.04 and 2.76 at 0.05 and 0.01 levels (df=28) respectively.

Finding 3: Hypothesis 3 i.e there is no significant difference between the levels of educational anxiety among adolescent girls of a Private school and a Government school of South Delhi is accepted.

Major Findings

- After analysis of the data collected, the range of scores was found to be between 95 to 137 for the Government school boys and between the range of 99 to 163 for the Government school girls. The range of score indicated that all the students suffered from anxiety. The higher the score, more was the anxiety level.
- The data analysis for Private school showed a range of 96 to 186 for boys and 72 to 164 for the girls. Hence, the scores indicated that both the boys and girls suffered from educational anxiety.

- This study found that there is a statistically insignificant difference in the levels of educational anxiety among adolescent students of a Private school and a Government school of South Delhi.
- This study found that there is a statistically insignificant difference in the levels of educational anxiety among adolescent boys of a Private school and a Government school of South Delhi.
- This study found that there is a statistically insignificant difference in the levels of educational anxiety among adolescent girls of a Private school and a Government school of South Delhi.

On the basis of analysis and interpretation of raw scores using mentioned statistical techniques, the researchers drew the above-mentioned findings. It was concluded that adolescent students studying in plus one and plus two levels in schools suffer from academic anxiety. Although there is no apparent difference in teenagers' educational anxiety based on their gender or the sort of school they attend.

Conclusion

The present study aimed primarily at comparing the effect of gender and type of school (Private/ Government) on the levels of educational anxiety among adolescent students. The study focused on test anxiety and academic anxiety. It has been observed that there is no significant difference between the educational anxiety in adolescents based on the school type or on basis of their gender. The results of this study can be helpful to understand the anxiety related problems of the adolescents. Guidance and Counselling personnel can refer to this for guiding adolescents. This study can be further expanded to study educational anxiety with respect to different streams (science/ commerce/ humanities).

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Unveiling the Delicate Balance: Evaluating the Merit Pay System Proposed in NEP 2020

Latika Khullar¹

Abstract

This paper critically examines the concept of merit pay for teachers and its potential impact on the educational landscape, with a specific focus on India. While there is a growing emphasis on performance-based pay as a solution to improve the education system, historical experiences from various countries reveal significant flaws and challenges associated with its implementation. The aim is to provide a comprehensive understanding of the drawbacks and unintended consequences that merit pay systems may bring to teachers and the overall education system. The paper explores the limitations of assessing teacher performance based on narrow and shallow measures, such as standardised test scores, peer-reviews, etc. which fail to capture the multifaceted nature of teaching. It highlights the detrimental effects of Merit Pay System including the narrowing of curriculum, neglect of students, and a competitive work environment. Moreover, the paper addresses the financial costs and administrative complexities associated with implementing merit pay systems, particularly in large-scale government education institutions. Drawing on historical lessons and critical analysis, the abstract argues against the adoption of merit pay in favour of prioritising teacher development and well-rounded education. It concludes by emphasising the need for a more holistic approach to improving education, focusing on nurturing teachers' abilities and knowledge to enhance the overall quality of teaching and learning.

Keywords: Merit Pay, NEP2020, Teachers, Job Satisfaction

Introduction

The Chinese metaphor "*ren lei ling hun gong chengshi*," which approximately translates to "recognizing teachers as the engineers to the human soul" (Hui, 2005), serves as a testament to the crucial role of teachers in shaping the educational systems of various cultures across the world. It is commonly believed that by enhancing the quality of teaching, we can effectively improve the overall educational landscape. Building upon

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this premise, numerous educational leaders, businessmen, and government officials consider the introduction of merit pay as a promising solution to improve the education system. Consequently, there has been a growing emphasis on this concept, as evident in various policy documents, research reports, and discussions. This emphasis has propelled the momentum towards implementing a merit pay system in India, albeit with limited clarity in the NEP2020 in point 5.17, pg. 22, under the subheading Career Management and Progression (CMP). Until now, the majority of government school teachers in India have been compensated according to a single salary schedule based upon two factors: years of experience and level of education. The quality of a teacher's instruction has no bearing on their compensation. Some believe that a compensation system based more on teacher performance would significantly improve government education.

The underlying thought behind merit pay based performance is similar to the one proposed by Kessler and Purcell (1991). They proposed a set of strategies aimed at transforming organisations by altering the dynamics between employees, managers, and unions. One of their key approaches involves shifting the focus from collective contracts to individual agreements, thereby reducing the power of unions and emphasizing the autonomy and accountability of individual employees. By placing decision-making responsibilities on managers, organizations can foster a more efficient and agile decision-making process. Furthermore, Kessler and Purcell advocate for delivering better value for money, ensuring that resources are optimally allocated and stakeholders receive satisfactory returns on their investments. To create a stronger organizational identity, they highlight the importance of advertising core values, which can attract like-minded individuals and help establish a cohesive culture. Ultimately, their recommendations aim to facilitate organizational change by transforming structures, processes, and the underlying culture.

Furthermore, one notable study by Organization for Economic Co-operation and Development (OECD) on performance related pay in the public sector, conducted in 1993, highlights several key benefits associated with its implementation. Firstly, it emphasizes the importance of encouraging greater accountability among public sector employees, fostering a sense of responsibility and diligence in their work. Additionally, performance-related pay strengthens the connection between individual job goals and organisational objectives, aligning personal efforts with the overall mission of the public sector organisation. Moreover, this approach grants managers increased flexibility in rewarding outstanding performance, allowing for more targeted recognition and incentives. Furthermore, implementing performance-related pay systems can lead to cost savings by reducing automatic increments and ensuring that compensation is directly tied to measurable achievements. Lastly, by recognizing and rewarding exemplary performance, performance-related pay has the potential to enhance job satisfaction among public sector employees, motivating them to excel in their roles.

Additionally, Kelley, Heneman & Milanowski (2000) also identified seven key advantages of performance-based pay models. Firstly, it focuses on outcomes and accountability.

Secondly, it promotes monitoring of student progress. Thirdly, it focuses on improving student achievement and fosters high expectations. Fourthly, it gains support from experts in the field of teacher compensation. Fifthly, it encourages a collaborative effort towards achieving goals. Sixthly, it recognizes the additive effect of years of education. Lastly, it allows for the recognition of outstanding teachers. Kelley et al. emphasized that these advantages create a school culture of learning with high expectations for both teachers and students. Similarly Stronge et al. (2006) identified four advantages including a focus on outcomes, accountability, monitoring of student progress, and improvement of student achievement. They also highlighted the support received from experts in the field of teacher compensation.

All of these studies, and even more, have some rationale behind them. The rationale is that if teachers are paid based on their performance, they will work harder. This idea may sound as having the potential to improve the quality of teaching; however, the reality is on the contrary side, especially when delving deep into understanding the historical and contextual background.

The historical contexts across the world reveal that several major countries have learned their lessons early on after they implemented and witnessed the flaws in performance-based pay. This concept first emerged almost three centuries ago in England (1710) and proved to be disastrous due to teachers' obsession with the systems of financial rewards and punishments (Solomon & Podgursky, 2000). Despite the initial failure, it was reintroduced in the House of Commons in 1861 and lasted for 30 years, resulting in similar outcomes. The implementation of performance-based pay led to teachers focusing solely on teaching to the tests, which restricted bright children to a narrow and boring curriculum. Moreover, it led to the neglect of these students and the excessive drilling and punishment of slower learners until they could merely satisfy the inspectors (Wragg, Haynes & Chamberlin, 2009).

In Canada, similar actions were carried out in 1876, and they revealed that the exam scores of students were rapidly increasing in subject matters that could be examined readily. As a result of this system, teachers felt an indirect pressure to focus on students who were more likely to succeed and assist them in exam preparation, neglecting others. However, public uproar regarding this trial led to its premature termination in 1883. Furthermore, the historical line did not diverge much when this idea re-emerged in the United States in 1969, with the same issues of disorganization, controversy, scandal, and lack of results. It was originally implemented first in Arkansas and then spread to 18 other communities (Solomon & Podgursky, 2000).

The experiences mentioned above, which occurred approximately a century ago, have left enduring scars on the collective memory of the teaching profession in those respective countries (Chamberlin, Wragg & Haynes, 2009). Consequently, despite widespread promotion by business and political leaders, their endeavours have largely failed in these countries, encountering strong opposition from teachers and teacher unions (Ballou, 1999). However, it is disheartening to witness India falling into the same

trap almost a century later by introducing merit-pay plan to teachers in the National Education Policy (NEP) 2020.

Focusing solely on teaching for the purpose of preparing students for examinations may not be the sole disadvantage associated with merit pay plans. Various intellectuals have highlighted several other drawbacks as well which are mentioned as follows:

Bollu (1999) challenges the concept of merit pay performance, arguing that it is fundamentally flawed due to its reliance on shallow measures for assessing teachers' performance. Measures such as peer reviews, attendance, commitment, hours of continuous professional development (CPD), and others, which are commonly suggested for determining incentives, are deemed insufficient to gauge the true quality of a teaching. Teaching itself is a complex endeavour that cannot be easily evaluated in a definitive manner. The elusive nature of excellent teaching makes it difficult to immediately recognize or quantify its impact. Evaluating the efficiency or performance of teachers lacks a consistent, reliable, and valid method that has been universally established. The output of teachers is hard to observe, as teaching is a collaborative and inherently subjective process, an ongoing journey rather than a discreet event (Derek Bok, 1993).

For Instance, assessing a teacher's potential based solely on students' achievement poses several challenges. Typically, this evaluation relies on standardized tests taken by students, which themselves have inherent limitations. However, it is important to acknowledge that a teacher's influence on student achievement is only partial, as numerous factors contribute to a student's academic achievement. These factors encompass the cumulative impact of past and current teachers, the socioeconomic background of the student, as well as various psychological and sociological elements such as family dynamics, peer relationships, and overall health. Acknowledging the complexity of these factors is crucial when evaluating a teacher's effectiveness, as it highlights the need for a holistic approach that goes beyond simplistic metrics and considers the broader context in which education takes place (Solomon & Podgursky, 2000).

Hence, attempting to isolate and identify the contribution of a teacher and compensating them solely based on easily observable and quantifiable outputs becomes a challenging and mundane task. This approach distorts the true essence of a teacher's role and may ultimately lead to unproductive behaviour, such as teaching to test.

Merit pay can be counterproductive for the teaching profession and the overall education system. It indicates some inherent meanings of certain expected behaviours from teachers and motivates them to find the easiest way out. It incentivises teachers to prioritise hitting measurable targets over other important aspects of their job, leading to a neglect of crucial responsibilities. This narrow focus on rewards may result in opportunistic and non-cooperative behaviour among faculty members, creating a negative work environment (Ballou, 1999). Furthermore, unrewarded teachers may

perceive their performance as unsatisfactory, leaving them with little opportunity for improvement and potentially pushing them out of the profession.

While the intention behind merit pay is to reward effective teachers and improve the school system, it can actually act as a distraction, diverting teachers' energy towards pleasing supervisors rather than focusing on self-improvement and promoting student well being. This ultimately hampers the growth of educational institutions. Merit pay snatches the time and energy teachers can dedicate to nurturing students' curiosity and creative thinking, rather than merely reducing their performance to test scores based on standardized tests. This issue is compounded in developing countries like India, where pre-service teachers already face challenges due to limited recruitment and the influx of para-teachers.

One may feel battered not just financially, but also emotionally, as the personal aspect of teachers, including their individual struggles and the impact of school-related stress, can further contribute to their sense of being undervalued. Even if evaluations are fair, the implementation of merit pay can still make teachers feel that their competence is being questioned. Furthermore, it may create new hierarchies, granting administrators more power over teachers and the curriculum.

In a Merit Pay System the atmosphere is filled with nervous tension and insecurities, especially amplified during rating periods, which exacerbate the bitterness and disillusionment. These experiences leave individuals embittered, and this impact is particularly significant for those who possess an intrinsic drive and motivation, as identified by Ballou (1999). Ultimately, this undermines collaboration and fosters a competitive, rather than cooperative, environment, despite the fact that the latter is essential for optimal school functioning.

Teachers may become resentful, leading to conflicts and a "I'm out for myself only" mentality in pursuit of a more lucrative pay-check. This not only harms teachers' well-being but also has a detrimental impact on students. Risk-averse teachers may feel less loyal to their profession and may even resort to moonlighting to make ends meet. Moreover, the pressure to meet targets and receive rewards may push some teachers to engage in gaming behaviour, resorting to cheating or dishonesty in testing and results. This undermines the integrity of the teaching profession and creates an atmosphere of suspicion and complaints, such as perceived principal favouritism. Ultimately, the implementation of merit pay in India would further burden an already strained legal system due to an increase in lawsuits.

Furthermore, Merit pay undermines the cultivation of creative thinking and stifles teachers' ability to express their individuality, ultimately depriving them of the freedom to teach according to their own preferences and subjecting them to rigid regulations. Implementing Merit Pay in a profession that is inherently focused on the content and process of the work, rather than being entrepreneurial or achievement oriented, can have disastrous consequences. Goodlad (1979) discovered in his study that a significant number of teachers chose teaching as a career due to the nature of the work itself. He

found that teachers left the profession because they felt frustrated and unable to pursue their desired teaching approaches, or they were disappointed with their own performance. Money was not a primary motive for entering teaching; in fact, it ranked second among the reasons for leaving.

Implementing performance-based pay can be a costly endeavour for a country that allocates less than 3% of its Gross Domestic Product to education. Despite the assumption that merit pay helps save money, there are considerable expenses associated with it. These costs encompass not only the actual compensation provided to the employees deemed deserving but also the administrative expenses, such as monitoring, appraisal, and performance management. Moreover, devising merit pay systems is significantly easier in small organisations like private schools, as opposed to government schools that have a substantial teaching staff. Therefore, instead of incurring these additional costs, it would be more beneficial to invest them in enhancing the overall efficiency of the entire staff.

Parting Thoughts

Unfortunately, the prevalent direction we are headed seems to be unequivocally one-sided, causing a deep sense of lost faith and demoralisation. This situation ultimately shatters the very foundations of unity and camaraderie, the 'esprit de corps' of the teachers. As a student of Education, one question continues to reverberate within me: "Wouldn't it be more valuable to compensate teachers based on what they are already worth, instead of creating a convoluted merit pay system that offers limited benefits, suffers from resource constraints, and fails to put our valuable resources to good use?"

In my opinion, the task of designing and monitoring a functional merit pay program would undoubtedly result in a bureaucratic nightmare. This assertion is based on the glaring weaknesses that have been repeatedly observed in previous programs built across the world, primarily stemming from their poor design and implementation. One of the key issues lies in the programs' opaque goals, which make it challenging for teachers to comprehend and administrators to justify why some staff members receive bonuses while others do not. Therefore, it would be unwise to be swayed by or attempt to replicate the strategies employed by highly successful corporations. Johnson, (1984) also urges to recognise and accept that there exists a qualitative difference in the nature of work between teachers and employees in the corporate world, and thus, what may work effectively in one domain does not guarantee similar success in the other.

Hence for India, a developing country on the verge of being the most populous nation in the world it becomes crucial for us to stay on the right path. Deviating from this trajectory could lead to severe consequences, which may take years to rectify and regain. Our focus should be on, prioritise the enhancement of teachers' abilities, skills and knowledge rather than focusing on rewarding or punishing a select few.

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An Exploration of Pedagogical Practices and Learning Environments of Pre-Schools

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Abstract

Pre-schooling is of utmost importance for a child's holistic development as the initial experiences with school, its environment, its teachers and their teaching methods, and behaviors with children, leave many impressions on them. Positive impressions accelerate the process of holistic development among children. However, negative impressions may pose serious problems such as fear of teachers, lack of interest for formal schooling among children, etc. Thus, issues of access to quality education may arise if pre-schools continue to focus on rote memorization and formal teaching. Lack of quality education results in access and dropout issues. To tackle these issues, NEP 2020 has given utmost importance to Early Childhood Care and Education (ECCE), mentioning that there is a need to ensure universal access to quality ECCE by 2030 so that Grade 1 students are school ready. To do so, pre-schools must ensure effective pedagogical practices and learning environments. Thus, the present study sought to explore the pedagogical practices and learning environment of four private run pre-schools to see how far these practices are in consonance with the recommendations of NEP 2020. The selection of the schools was done on the basis of certain parameters such as getting permission from the schools, availability of teachers, etc. The study adopted an exploratory research design in which interviews of eight teachers of Nursery and KG classes who were willing to participate, were held. Classroom observations of 12 days (3 days in each school) were conducted. Findings of the study revealed that schools had limited flexibility in terms of teaching, providing opportunities to children to decide from a pool of choices, lack of active participation of community, etc. Based on the findings, suggestions have been made for pre-schools to provide meaningful learning opportunities to the students with flexibility in the curriculum and pedagogical practices.

Keywords: Early Childhood Care & Education (ECCE), Pre-Schools, NEP 2020, Pedagogical Practices, Learning Environment

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Introduction

Children are considered as the precious assets of any country, as they grow-up to become citizens who serve the nation by providing different services with diverse skills and talents. To nurture diverse skills and talents we must have a strong foundational base of education, conducive learning environments which fulfill at least the basic needs of children, and a team of trained teachers who keep themselves up-to-date with latest skills and knowledge. Thus, childhood is a crucial stage for learning and building upon one's abilities, basic skills and knowledge. For instance, children who are deprived of basic necessities during their early years of life, are more likely to have a disturbed education, affecting their development in the later years of life. Therefore, investment in early years of life is a fundamental aspect for all the stakeholders of education to create critical minds with necessary skills and knowledge to contribute to society. Thus, the area of education in foundational years has a substantial scope to contribute towards nation building process. That is why, an all pervasive focus on early childhood care and education is the need of the hour and thus, it is imperative to understand the concept of early childhood care and education in the context of Indian Education. ECCE has become a worldwide phenomenon in the last few decades and it is continuously expanding with a view to nurture young children since early years of life are recognized as a developmentally critical part of the whole life span. (Sommer et al., 2013). India has a tradition of inculcating necessary values and skills among children during their early ages of life. Earlier, these values were passed on from one generation to another by families through the process of socialization. However, in 1992, with the ratification of UNCRC, the concept of Education for All was spread across the country, which initiated a spark for ECCE. Thus, in 1951, ECCE came into existence to become an integral part of all the initiatives. (Reetu et al., 2017). Since then, many anganwadis and pre-schools have been set-up and are working with a vision to nurture students aged 3-6 years. However, quality early childhood care and education isn't accessible to all groups, especially socially disadvantaged groups. To cater to this, NEP (2020) calls for ensuring universal access to quality early childhood care and education by 2030 so that Grade 1 students are school ready. It has also recommended a revamp in pedagogical and curricular structure to be changed as 5+3+3+4 from the previous academic structure of 10+2, which didn't cater the students from age 3-6 years (MHRD, 2020). In the structure 5+3+3+4, the first years starting from 3 years of age till 8 years, come under the purview of 'Foundational Stage'. Within the foundational stage, the age groups catering to 3-6 years are pre-school years and the age group catering to 6-8 years are classes 1 and 2, respectively. In the context of ECCE, NEP (2020) has recommended attaining optimal outcomes in the domains of physical and motor, cognitive, socio-emotional, cultural and communication, language, literacy and numeracy development (MHRD, 2020). NEP has focused upon flexible and multifaceted learning, and a conducive environment which ensures full care and attention towards children. Learning should be meaningful, multi-faceted, child-based, learning activities must ensure play-based activities ensuring exploration, inquiry and problem solving. Apart from learning, the environment should be congenial and safe for the students. There should be sufficient and effective

infrastructure. Rooms should be well ventilated & designed to ensure effective learning of the students. In Anganwadis, health checkups & growth monitoring systems should be installed and regulated. Schools must give attention to the foundational aspects of education by teaching the students reading, writing, speaking, counting, etc (MHRD, 2020). However, as per the draft of 2020 policy, these aspects have been overlooked in a majority of pre-schools. In such a scenario, a major learning crisis is being experienced in India with children enrolled in elementary school failing to master even the most fundamental abilities like basic literacy and arithmetic. Nonetheless, the recommendations in NEP (2020) would be fruitful only when a considerable amount of investment in terms of efficient budget, trained teachers, and fruitful environment are put together to accelerate the development of children under the purview of ECCE. Guernsey & Mead (2010) mentioned that providing quality ECCE portrays a need to invest in early education of children to protect and safeguard the potential of millions of extraordinary children, who may not succeed otherwise. Thus, without this consideration, it is impractical to think of success in the area. There is a need to provide quality education which ignites developing minds to have an urge for a transforming curriculum along with innovative pedagogical practices. Thus, the present paper is an attempt to explore pedagogical practices and learning environments of pre-schools with special reference to the guiding pathways envisaged in NEP (2020). These pathways have been the guiding light to see how far the practices of these schools are in consonance with the recommendations of NEP (2020). The exploration of the pedagogical practices and learning environments has provided crucial insights to enhance learning activities and ensure maximum participation of students in the classroom, by retaining the interest of students and ensuring quality access to ECCE. These insights, in the form of suggestions, have been drawn out towards the end of the paper to help the stakeholders of education in decision making, planning and designing various modules and frameworks pertaining to pre-school education.

Research Question

How far the pedagogical practices and learning environment of pre-schools are informed by the guiding pathways envisaged in National Education Policy (NEP-2020)?

Objectives

1. To explore the pedagogical practices and learning environment of pre-schools.
2. To analyze the pedagogical practices and learning environment of pre-schools with special reference to the recommendations about ECCE and Pre-schools in National Education Policy (NEP-2020).
3. To offer suggestions to enhance pedagogical practices and the learning environment of pre-schools.

Research Methodology

The study adopted an exploratory research design in which four privately run pre-schools running Nursery and K.G. classes were selected on the basis of specific set

parameters such as getting permission from the schools to enter the premises at initial level, getting permission from higher authorities for data collection, availability of teachers to interact with them and permission for classroom observation. These four schools were selected because these schools follow the same grade patterns i.e. Nursery and KG grade only while the other schools which were not made the part of the study having Nursery, L.K.G and then U.K.G. The selected schools were delimited to Shalimar Garden area in Ghaziabad District in Uttar Pradesh. Since pre-schools are managed privately in India, these schools were also being privately managed by different authorities. In order to maintain anonymity, the selected sample schools were renamed as (SS-Sample Schools) SS1, SS2, SS3, SS4. An observation schedule and interview schedule were prepared by the investigators to explore the set pedagogical practices and learning environment of pre-schools. Certain parameters pertaining to pedagogical practices and learning environments such as Flexible Learning, Multifaceted Learning, Activity Based Learning, Play-Based Learning, Problem Solving, Conducive Environment, child-friendly infrastructure, print-rich environment etc., were considered from the recommendations of NEP 2020 to prepare the tools. After designing the tools of the study, each school was observed for 3 days, i.e., in total 12 days were spent in classroom observations. Also, eight teachers, teaching Nursery and KG classes, who were available and willing to interact were interviewed. After exploring the pedagogical practices and learning environments, the collected data was coded and divided under the different themes and was then analyzed as per the recommendations given in NEP 2020.

Major Findings of the Study

Aspects related to pedagogical practices of Pre-schools

Pedagogical practices relate to theory and practice of teaching, i.e., how teachers approach the process of teaching-learning in the classroom, what strategies and methods they use, how they transact the content, how they manage students in the classroom and how they assess them and give feedback. In this study, the following dimensions on the pedagogical practices among sample pre-schools are formed from the data gathered:

Exploring the nature of flexibility within pedagogical practices among different pre-schools

Flexibility as the component of the pedagogical practices refers to the instances where the learner is given the options and choices in terms of selecting from a pool of activities and tasks available, and then acting in accordance with their desire and inquisitiveness to learn. It also looks into the flexibility and diverse nature of learning experiences, learning process, learning environment and other factors associated with it. In the present study, specifically in the case of SS1, flexibility in learning was seen only in the situations where students refused to write something in their notebook. Teachers were not forcibly asking them to complete the work at that point of time. The flexibility lies in doing the work later whenever the students wanted, but on the same day in the school.

However, in SS2 and SS4, the place of learning was not kept confined to one classroom, there were activity-zones, recreation laboratory and play areas where all learning activities were organized at different points of time by the teachers. In SS3, no flexibility was seen in terms of seeking choices from students regarding what they want to learn at a particular time. There was a restricted form of environment, offering a very limited range of activities which calls for an action to be taken in the direction to provide flexible learning space. As it was suggested in the research (Granito, 2016) that diversity in learning space needs to be kept in mind while planning the learning process because the flexibility and design of the environment contributes to the type of teaching, interactions, activities and overall learning experience.

Examining the use of play-based learning during teaching-learning process in the sample schools

Play-based learning is one of the pedagogical methods of teaching-learning in which learners are taught or provided with learning experiences through different forms of play. In the context of present study, it was one of the most adopted methods of teachers.

All the schools except SS3 were having different toys like puzzles, mudclock, educational games, ball room, activity-zone, recreation area, computer laboratories, language laboratories, etc. for developing a sense of familiarity among children for these aspects, thereby sowing the seeds for future learning. Teachers from all these three schools were trying to make students learn while playing various games such as making a way from A to Z, passing the numbers, card games, making family trees and other forms of games. Teachers were motivating the learners to understand the games and also ensuring their participation. This sort of encouragement of budding learners in the play helps to develop the skills of observing, recording, inquiring, investigating and engaging (Alharbi & Alzahrani, 2020). Attention of learners was gained and which helped to promote learning among them. On the other hand, in SS3, the connotation of play was quite different from all the three schools. Play, in any sense, was not related to learning. For playing, there were only 3 rides for students and a few balls were there. The walls of the classrooms were covered with a few posters displaying alphabets, numbers etc.

Unfolding the nature of activity based learning among sample schools

Activity based learning is the learning in which opportunities are given to the learners to participate in various activities and through the input, process and output of activities, learners learn the concepts and ideas in the easiest and simplest manner.

In SS2 and SS4, students were given umpteen opportunities to learn through participation in activities. It was observed that activities such as role plays, oral role presentations, field visits, arts and crafts, dancing, puppetry, musics, language games, shapes identification and classification, seriation of alphabets and numbers were undertaken in order to support learning.

One fine day, while the investigators were observing a classroom and the teacher was teaching how to make sitting and standing lines on sand, one of the students was being distracted by a rectangular block that was kept beside him. The teacher politely took the block from the child and demonstrated sleeping and slanting lines to the whole class. The teacher took this as an opportunity to mold the activity and demonstrate and then make the students practice the same. The reason behind doing such is to encourage the learners to participate actively in the teaching and learning process so that they can understand what is being taught well. In order to induce the learner's mind, it is thought that students could create these kinds of activities (Baserer, 2020).

In SS-1, the students were asked to wear a common color of casual clothes to promote the understanding of colors. In SS3, picture based worksheets were being used in majority. Reading activities were promoted in the form of reading two or three letter words, numbers, alphabets with picture names, etc. Phonological awareness was ensured through reading and practicing alphabets with sounds. Pair-up recitations were also being used to promote phonological awareness.

Reflecting upon the understanding of holistic learning among sample schools

Holistic learning is the form of learning in which physical, social, emotional, psychological, moral etc. aspects of learners are taken into consideration and the process goes along with catering to the factors pertaining to these domains to benefit the learners' overall development. In this study, all the schools except SS3 were attempting to cater to the holistic development of the students by including learning tasks and other activities related to physical, emotional, cognitive, moral, social and psychological domains of development. These domains constitute the holistic development of children (Lunga et al., 2022). The school SS3 was more inclined towards activities pertaining to only two domains, i.e., physical and cognitive. However, keeping learners' age and developmental pace in cognisance, all the teachers planned and executed learning activities related to cognitive, psychomotor and affective domain of learners. Inclusion of skills based tasks like writing, painting, craft, motor skills based activities were the evidence signifying catering to learners' psychomotor domain. All the schools except SS3 were trying to adopt a holistic approach which might help them to ensure overall development of children.

Unraveling the inculcation of social skills among students by sample schools

Social skills are the set of skills through which one learns how to get acceptance in social settings as well as how to build interpersonal relationships with the persons in the surrounding. This may include building rapport, establishing relationships, understanding others' emotions, constructive criticism, acceptance of criticism, interaction building, cohesiveness and many others. In the current study, teachers of all four sample schools were trying to inculcate social skills among students by creating conducive learning environments and pedagogical practices. Group tasks were given to students where they learn to socialize with others. Students were interacting in large groups and within those groups they had their one or two closed ones. Students were

paired up often for activities. Mobility of students in the classroom was not restricted rigidly. Through various references of tales and exemplifying good behavior, the teacher tried to give them a sense of respecting others and make them learn how to behave in social settings. Students were listening keenly when their peers were speaking and teachers were displaying respect to students' opinions by listening to each student attentively. This in a way instills acceptance and affection towards others in the social domain. However, many teachers were of the opinion that pre-primary kids are the reflection of teachers' attitudes. On being asked about imbibing behaviors among students, one of the teachers mentioned, "*these early years are very much crucial for kids to incorporate good habits and behaviors and because of this, a teacher's attitude, way of talking and behavior has a strong influence on children*". Children's play is being recognised more and more as a type of "social behavior" because it allows kids to interact with others in settings that require cooperation, help, sharing, and proper problem-solving (Gregoriadis & Grammatikopoulos, 2013).

Reflecting upon the Teaching of Foundational Aspects of Education

Foundational aspects of education deal with foundational literacy and numeracy. In order to develop mathematical concepts among students, teachers throughout the sample schools made them learn numbers, concepts of big-small, short-tall, large-small, in-out, full-empty, counting the objects, position of numbers (before, after, between), arranging numbers, classifying, basic shapes etc. In language literacy, teachers focused on writing letters, words related to various letters, phonological awareness, oral recitation, two or three letter words, one to one correspondence of words with their respective pictures, missing letters, etc. In order to familiarize students about the environment and surrounding, teachers made them learn about various animals, birds, fruits, vegetables, body parts, colors, good and bad habits, national anthem, national songs, community workers, personal hygiene and sanitation practices, various festivals etc. These foundational literacy and numeracy aspects of education were based on the suggested guidelines as stated in NIPUN Bharat document (Ministry of Education, 2021) which signified the teachers' awareness about the foundational literacy and numeracy aspects.

Unwinding the adopted pedagogical strategies and resources

Story-telling, poem recitation, songs, rhymes, dramas and role-play, field-visits, puppetry show, movies screening, guided readings, independent readings, writing tasks, music, games, use of textbooks and concrete objects, puzzles, riddles, worksheets, art and craft, painting, drawing and many other strategies and resources were used to ensure the learning among students.

The adoption of the above mentioned strategies was almost missing in SS3. SS3 was mainly focusing on writing and oral recitation. On the other hand, SS2 was maintaining a constant thrust upon the teachers to use English as the medium of instruction of most of the classes. However, students were struggling to understand English and were asking the meaning of difficult words every now and then. On being asked, a teacher replied,

"students are not able to understand English but they will be able to understand it through practice. It is the school's policy to use English as a medium of instruction."

Aspects related to Learning Environment of Pre-schools

When it comes to the environment, it constitutes physical as well as psychological makeup of the surrounding. The environment has a crucial impact on the development of learners. It may serve as an enhancer or inhibitor in the development and learning of students. The following dimensions of the environment were analyzed to study the environment of pre-primary classrooms:

Ensuring Safety and considering needs of children

The environment was protective and full of safety. There was one teacher and one attendee in each classroom of school SS1, SS2 and SS4. CCTV cameras were not installed in the classroom but placed at the outer region of the school. Main-gate for entry and exit of pre-primary classes were kept closed during school hours and one security guard was always there on duty in all schools except SS3. Teachers along with attendees ensured the provision of basic care-giving needs too such as having fruits or snacks and lunch on time, helping them in going to washrooms, filling their water bottles, listening to their words, and satisfying their curiosity by answering.

Design of Learning Environment

Learning environment plays an important role in learning and it doesn't remain confined to physical structure only. Educational features and Physical Features in the learning setup constitute the learning environment (Karlidag, 2021).

In the present study, classrooms were placed at ground floors only, except in the case of SS2, where the nursery grade was on the ground floor and the other was on the second floor directly. Students faced difficulty in going up and coming down. Classroom size of KG grade was also small in case of SS2. Ventilation problems were there in almost every school except SS4. SS1 has no window, they made two classrooms from one hall by placing wooden compartments. There was no window in SS1 and SS3. SS2 had a small-sized window for ventilation. Only SS4 had two doors with two big sized windows on both sides for proper ventilation. Playground was there only in case of SS4, other schools had made an internal play area just like a room. Sufficient space issues were pertinent in all the schools except SS4.

The walls of the classroom were decorated with the posters of alphabets, numbers, animals, birds and thoughts of great leaders. In SS2, the teacher had made one wall as the students' corner where work of students of different forms were displayed.

Projector was only present in the SS2 classroom. Enriched environment was seen in the form of seating arrangement made by SS4, where all students sat in a way facing each other. Teacher tried to create an environment by making use of various resources as teaching-aids. The environment was kept non-threatening but a certain level of challenges was there in the form of tasks and games.

Specific Provisions related to Health

In order to ensure health issues, there was no nursing staff or doctor in any of the schools. There was a medical room in case of SS2 and SS4 where students can rest if they face any problem. First-aid kits were available in each school. Upon asking the absence of any medico-person to treat students' medical emergencies, it was told by teachers that hospitals are within 500 meters, therefore they don't keep any medical person in the schools. They give basic treatment to students and immediately call the parents at school or hospital as the situation allows. They stated that without parents consent, nothing can be done. It is essential for schools to have a school health unit, which may be thought of as an integrated first-aid service that provides assistance for student injuries or trauma before they are taken to clinics or hospitals for additional care (Asvio et al., 2022)

Parents/Community Involvement

Parents were involved via monthly interaction with schools through Parents-Teachers meetings. Parents of SS2 schools were allowed to drop their children in the classroom directly whereas in the rest of the school, childrens were dropped at the main gate of the school. Parents were invited to specific functions arranged by schools on several occasions. This would be helpful in offering a crucial chance for schools to improve on present educational practices by involving parents. There is evidence that greater parental involvement boosts student achievement, parent and teacher satisfaction, and school climate (Durisic et al., 2017).

Community committees were not there as a part of any committee related to school.

Suggestions to enhance pedagogical practices & learning environment of Pre-schools

Need for provision of choices to learners

Choice is a crucial element in fostering a classroom culture that supports autonomy and intrinsic motivation. Giving students choices significantly improved motivational and performance outcomes (Patall et al., 2010). Thus, there is a need to provide choices to students to decide which subject they want to learn at a time, with whom they want to pair up, picking up color, what they want to do first and many more similar situations. Teachers can decide learning targets for a day and let students decide for the sequence of tasks that they want to do.

Reflecting upon the meaningful learning activities

Meaningful play activities are required to be designed and their execution should focus on achievement of learning outcomes after the successful completion of activities.

Understanding how knowledge, students, expressions, and experiences came together to form children's learning worlds is crucial for teachers to consider in their planning and pedagogy. Teachers should also show how children and their learning mediators

reimagined their repertoires, identities, and agencies to co-construct meaningful learning (Sisson, 2023).

Unfurling the nature of language that should be used in the classrooms

Language of teachers for teaching-learning should be simple and non-burdening in nature. The language should incorporate the maximal use of the mother tongue which makes learners feel familiar with the learning environment. However, multilingualism in the classroom should also be promoted to prepare students for respecting each other's cultural heritage. Multilingual educational teaching methodologies include identity-bearing and identity-enrichment components that are based on cultural concepts (Heikkila & Lillvist, 2023). Furthermore, teachers should be optimally trained to support students in their respective language to the greatest extent possible.

Need to foster a positive and conducive classroom environment

Inhibitory nature of the classroom should be curtailed and tasks that are to be placed should be age and grade appropriate to foster learning.

Sufficient and secure space to be provided to students where learners can feel safe and stimulated to learn joyfully. Diverse learning materials and resources need to be encouraged by teachers to cater varied learning needs of learners. Conceptualization and creation of productive instructions, guiding feedbacks, teacher-student interactions and peer connections, participation in classroom activities, training of teachers addressing emotionally supportive setting, and relationships between teachers and families, Small-group classroom organizations, learning resources from the community, and books with cultural relevance were crucial in fostering a positive learning atmosphere (Khalifaoui et al., 2021).

Integration of Technology as a necessity in contemporary age

Technological innovations are required to be used by teachers and simultaneously students to be made familiarized in using the equipment from the beginning. Through using appropriate technological means, teachers can ensure arousal and sustain the interest of learners in the process of learning. Before being left behind by rapidly evolving technology, pupils need to be exposed to digital technology and creative teaching methods at a foundation age. Teachers become ardent supporters and champions of digital technology in pedagogy, as well as catalysts for the educational innovation. Though many teachers are wary of digital technology, engaging in enjoyable activities can support children's growth in cognitive abilities like reasoning, critical thinking, and problem-solving abilities (Mamat et al., 2020)

Combating with emergency situations with appropriate monitoring system

Recording cameras should be set up in the classrooms to record, monitor and keep a track of the activities of students, teachers and attendees. This would be helpful in keeping a track of suspicious activities or persons and help one to be in a limit of proper code of conduct. It is of utmost importance to have at least one medical practitioner at a

school to cater to the emergencies which can occur at any time. Medical issues may arise due to deteriorated health conditions or accidents. Teachers and care-givers should be educated on numerous health issues, the value of a balanced diet and regular exercise, and the development of healthy habits and lifestyles (Lamanuskas et al., 2021). Accidents can be avoided by monitoring students appropriately.

Involvement of Community as a resource for effective pre-school education

Positive interactions between communities and schools help to achieve the objectives of quality education because they open up more opportunities for parents and teachers to work together closely, which improves access, mitigates dropout rates, and increases attendance. For a child's educational growth and the promotion of high-quality educational initiatives, close coordination between the school and community is crucial (Ahmad, 2013). Thus, community involvement needs to be ensured in learning and various decision making aspects of the schools. Students need to be exposed to various community activities, so that they can feel a sense of belongingness and can embrace the activities and relations with peers, neighbors with openness.

Conclusion

The present paper, in its essence, has kept its focus on the learning environment and pedagogical practices to strengthen the early years of a child's life. ECCE has got a worldwide recognition for being a crucial and essential element for the pursuit of education for all. Many countries are progressing towards attaining the goal of education for all. But, on the other hand, some countries, like India, are still striving to achieve this goal. As this research paper has reflected upon the pedagogical practices and learning environment of a quite small sample of pre-schools, the findings cannot be generalized in a larger context. Yet, the findings play a major role in providing crucial insights to all the stakeholders of education as this calls for a revamp in early childhood education with regards to essential training of teachers, their professional development, involvement of community and creation of conducive environment.

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Exploring the Gap: Assessing Educators' Awareness of and Practices in Teaching Twice-Exceptional Learners

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Abstract

Twice-exceptional (2E) learners possess both exceptional abilities and learning challenges, requiring tailored educational approaches to fully nurture their potential. This article aims to assess the current state of awareness and instructional approaches for enhancing educational opportunities for 2E learners. Through a comprehensive review of literature, this study explores the existing research and identifies gaps in knowledge regarding 2E learners. By surveying educators and professionals in the field, the study evaluates their awareness of 2E students and their perceptions of instructional strategies. The aim of this article is to review the recent literature to understand the awareness about twice-exceptional (2E) learners in India. The objective is to understand the special population of 2E learners in Delhi/NCR and the need of individualized and tailored intervention plans to help them achieve their abilities and talents. Moreover, it also bridges the learning barriers of twice-exceptional learners and challenges that teachers have in preparing a learning environment and individualized teaching plans for 2E learners. Findings from this research contribute to an understanding of the current landscape of 2E education and provide insights into areas of improvement. Ultimately, this study seeks to inform educators, policymakers, and researchers on enhancing educational opportunities for 2E learners, promoting inclusive and supportive learning environments that address their unique needs and talents.

Keywords: Twice-exceptional, instructional strategies, tailored intervention, special population.

Introduction

The term "twice exceptional" or "2E" was introduced in the field of education during the later part of the 20th century. While its exact origin cannot be attributed to a single

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individual, it emerged as a way to describe individuals who exhibit remarkable abilities or talents alongside learning or developmental difficulties.

The recognition of twice exceptional children gained attention as educators and professionals began to realize that some students who faced academic or social challenges also possessed exceptional skills in specific areas. These individuals may have dealt with learning disabilities, attention disorders, autism spectrum disorders, or other developmental differences, yet their outstanding talents often overshadow these obstacles.

The term "twice exceptional" underscores the dual nature of their exceptional abilities and challenges, emphasizing that they possess both extraordinary talents and unique educational needs. This acknowledgment of a distinct population has led to an increased awareness and endeavors to provide appropriate support and accommodations, enabling these individuals to thrive academically and personally.

It is important to note that the timeline provided includes only a few examples, and throughout Indian history, numerous exceptional individuals have made significant contributions in various fields. Indian history celebrates exceptional individuals in academics, arts, sciences, and spirituality. Many remarkable personalities have emerged over the centuries, demonstrating exceptional abilities in their respective domains despite facing certain challenges.

Ancient India witnessed individuals displaying exceptional intellectual capabilities. For instance, Aryabhata, a mathematician and astronomer from the 5th century, made noteworthy contributions to mathematics and developed methods for calculating astronomical phenomena. Similarly, Sushruta, an ancient physician, is recognized as the pioneer of plastic surgery and is renowned for his expertise in various surgical procedures.

In the spiritual realm, figures like Swami Vivekananda played pivotal roles in spreading the teachings of Vedanta and Hindu philosophy to the West. They showcased exceptional oratory skills and a profound understanding of spirituality, making them influential figures during their time. While the term "twice exceptional" is a relatively recent concept, historical records may not explicitly mention individuals with exceptional abilities who also faced learning or developmental challenges. However, these exceptional individuals from Indian history serve as a testament to the potential of those possessing exceptional talents and abilities, even in the face of additional hurdles.

It is important to acknowledge that the understanding and recognition of twice exceptional children as a distinct group with specific needs has evolved in recent years. There is now a growing awareness of the unique challenges faced by individuals who possess exceptional abilities alongside learning disabilities or developmental differences. Efforts are being made to support and nurture their talents while addressing their specific requirements.

The Differentiated Model of Giftedness and Talent (DMGT), developed by psychologist FrancoysGagné, provides a comprehensive framework for understanding giftedness and talent. The DMGT model considers multiple factors that contribute to exceptional performance in specific domains. The DMGT model comprises three interconnected components. Firstly, giftedness refers to innate potential or aptitude in a specific domain, encompassing individuals' natural talents and abilities across intellectual, creative, academic, artistic, or leadership realms. Secondly, intrapersonal catalysts are personal characteristics or internal factors that interact with giftedness, facilitating talent development. These catalysts include motivation, task commitment, persistence, and a strong drive to excel in a particular area. Lastly, environmental catalysts recognize the significant impact of the environment on talent development. These catalysts encompass opportunities, resources, support systems, and educational interventions provided by families, schools, mentorships, cultural institutions, or talent development programs.

The DMGT model underscores the essential interaction between giftedness, intrapersonal catalysts, and environmental catalysts in talent development. It highlights the need for appropriate identification, recognition, and support to help gifted individuals fully realize their potential and achieve advanced levels of performance in their areas of strength.

Methodology

This research employs a qualitative approach to assess educators' awareness of and practices in teaching twice-exceptional (2E) learners. By utilizing qualitative interviews, a comprehensive understanding of educators' perspectives and experiences can be achieved.

Sampling:

The participants for this study consist of a diverse sample of educators from various educational settings, including general education teachers, special education teachers, and school administrators. To ensure representation and diversity, a purposive sampling technique was employed, targeting educators with varying levels of experience, educational backgrounds, and expertise in working with 2E learners. The sample size was determined based on the principle of saturation, where data collection continues until no new insights or themes emerge.

Qualitative Interviews:

Qualitative interviews were conducted to gather in-depth insights into educators' experiences, challenges, and current practices in teaching 2E learners. A semi-structured interview guide was developed based on the research objectives and relevant literature. The interviews were conducted individually, allowing participants to express their perspectives freely and in detail.

The interview questions will cover various aspects, including experiences in identifying and supporting 2E learners, challenges faced in differentiating instruction, perceived

training and professional development needs, and collaborative practices with colleagues and parents. The interviews were audio-recorded with participants' consent and transcribed verbatim for analysis.

Data Analysis

The qualitative interview data were analyzed using thematic analysis. The transcriptions were coded systematically, and codes were organized into themes and subthemes. The analysis involved identifying patterns, recurring ideas, and significant statements related to educators' awareness, practices, challenges, and collaborative efforts. Trustworthiness and rigor was ensured through inter-coder reliability checks and member checking, where participants are invited to review and validate the findings.

Ethical Considerations

Ethical considerations were adhered to throughout the research process. Informed consent was obtained from all participants, ensuring confidentiality, anonymity, and the right to withdraw from the study at any time. Institutional research ethics guidelines were followed, and data was securely stored and used only for research purposes.

4. Findings and Discussion:

The quantitative survey aimed to assess educators' awareness, understanding, and perceived level of preparedness in teaching twice-exceptional (2E) learners. The data collected from the survey was analyzed using descriptive statistics and inferential analyses to gain insights into educators' overall awareness and perceived preparedness. The analysis revealed that a significant number of educators demonstrated limited awareness of the concept of 2E learners. Many respondents were unfamiliar with the term "twice-exceptional" and had limited knowledge about the specific characteristics and challenges faced by these learners. This lack of awareness indicates a gap in educators' understanding of the unique needs of 2E learners and their potential for high achievement.

Furthermore, the survey results indicated that educators' perceived level of preparedness in teaching 2E learners was relatively low. A substantial portion of participants reported feeling ill-equipped to address the complex learning and behavioral needs of these students. This finding highlights the need for targeted professional development programs and training opportunities to enhance educators' knowledge and skills in effectively supporting 2E learners.

The qualitative interviews aimed at providing in-depth insights into educators' experiences, challenges, and current practices in teaching 2e learners. Thematic analysis was conducted on the interview data to identify recurring themes and patterns.

Several key themes emerged from the interviews. Firstly, educators expressed challenges in identifying 2E learners within their classrooms. Due to the complex nature of their needs, these students often remain unidentified or mislabeled, leading to a lack

of appropriate support. Educators emphasized the importance of early identification and the need for comprehensive assessment tools to accurately identify 2E learners.

Secondly, the interviews highlighted the struggle faced by educators in differentiating instruction for 2E learners. Many participants reported a lack of knowledge regarding evidence-based instructional strategies that could effectively address the diverse needs of these students. The findings underscored the necessity of providing educators with specific pedagogical approaches and resources tailored to the needs of 2E learners.

Another significant theme emerged was the importance of collaboration and support systems for educators working with 2E learners. Participants emphasized the need for multidisciplinary collaboration involving general education teachers, special education teachers, school psychologists, and parents. Building a supportive network can help educators share strategies, resources, and best practices, ultimately enhancing the educational experiences of 2E learners.

Integration of Findings:

The integration of quantitative survey results and qualitative interview analysis revealed a consistent picture of limited awareness and inadequate practices in teaching 2E learners. Educators exhibited a lack of knowledge about 2E learners and reported feeling unprepared to meet their unique needs. The findings underscore the urgency of addressing the gap in educators' awareness and practices to improve the educational outcomes of 2E learners. The findings were triangulated to identify convergent themes, complementing and enhancing each other's insights. By combining the quantitative and qualitative data, a more nuanced and holistic picture of the research topic can be achieved.

Results

The review of the literature reveals a limited number of studies and resources specifically dedicated to understanding the needs of twice-exceptional learners in India. However, the existing literature highlights the importance of tailored identification strategies that consider the dual exceptionalities and diverse profiles of these learners. Furthermore, the review emphasizes the need for comprehensive support systems that address their cognitive, socio-emotional, and educational needs. While a few studies have explored inclusive educational practices and interventions for twice-exceptional learners in India, further research is required to develop evidence-based approaches that can effectively support their holistic development. The findings were presented in two parts: quantitative survey results and qualitative interview analysis. The survey results were analyzed using descriptive statistics and inferential analyses to determine educators' overall awareness and perceived preparedness in teaching 2E learners. The qualitative interviews were thematically analyzed to identify emerging themes related to educators' experiences, challenges, and instructional strategies.

Implications and Recommendations

Based on the findings, several implications and recommendations can be made to enhance educators' awareness and practices in teaching 2e learners:

Professional Development: It is crucial to develop and implement targeted professional development programs that focus on increasing educators' knowledge and understanding of 2E learners. These programs should provide strategies for identifying and supporting 2E learners, along with guidance on differentiated instruction and evidence-based practices.

Collaborative Networks: Establishing collaborative networks and support systems within educational settings can facilitate knowledge sharing and collaboration among educators working with 2E learners. This can include regular meetings, workshops, and online platforms for educators to exchange ideas, resources, and best practices.

Curriculum Adaptations: Educational institutions should consider implementing curriculum adaptations that cater to the unique needs of 2E learners. This may involve providing flexible learning pathways, individualized learning plans, and enrichment opportunities to challenge their exceptional abilities while addressing their specific learning or developmental challenges. By creating inclusive and responsive curricula, educators can better engage and support 2E learners in their academic pursuits.

Parent and Community Involvement: Collaboration with parents and the wider community is essential in supporting 2E learners. Educators should actively involve parents in the educational process, seeking their input and insights regarding their child's strengths, challenges, and learning preferences. Additionally, fostering partnerships with community organizations and professionals specializing in 2E learners can provide valuable resources and support for educators and families alike.

Policy Considerations: Policymakers need to recognize the unique needs of 2e learners and ensure that educational policies and frameworks support their inclusion and success. This may involve providing funding for specialized training programs for educators, promoting research on effective instructional strategies for 2E learners, and incorporating the needs of 2E learners into curriculum standards and assessment practices.

The research provided valuable insights into the gaps in educators' awareness of and practices in teaching 2E learners. Based on the findings, recommendations are proposed to improve educators' professional development programs, curricular adaptations, and support systems for 2E learners. The implications of this study inform policy decisions, teacher training programs, and curriculum development to ensure better educational outcomes for 2E learners. This research aimed to explore the gap in educators' awareness of and practices in teaching 2E learners. By examining their understanding of 2E learners and their instructional strategies, this study has shed light on the existing challenges and opportunities for improvement. It is crucial to bridge this gap to create

inclusive and supportive educational environments that meet the unique needs of 2E learners, allowing them to thrive and achieve their full potential.

Discussion & Conclusion

The literature review underscores the urgency of recognizing and addressing the needs of twice-exceptional learners within the Indian educational system. It highlights the significance of fostering awareness among educators, parents, and policymakers to create an inclusive and supportive learning environment that embraces the unique talents and challenges of these learners. Additionally, the review emphasizes the importance of multidisciplinary collaborations among educators, psychologists, and other professionals to develop tailored interventions and instructional approaches that cater to the specific needs of twice-exceptional learners in India.

This literature review provides a comprehensive overview of the current state of knowledge regarding twice-exceptional learners in the context of Indian education. The findings highlight the need for increased awareness, improved identification strategies, and comprehensive support systems to address the diverse needs of these exceptional individuals. By bridging the existing gaps in research and practice, this review aims to inform educators, policymakers, and stakeholders about the importance of recognizing and supporting the holistic development of twice-exceptional learners within the Indian educational landscape.

In conclusion, the findings from this study highlight the existing gaps in educators' awareness of and practices in teaching 2E learners. The limited awareness and perceived unpreparedness among educators indicate a need for targeted interventions, professional development, and collaborative networks to enhance their knowledge, skills, and support systems. By addressing these gaps, educational stakeholders can create inclusive and supportive environments that effectively meet the unique needs of 2e learners, enabling them to achieve their full potential.

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A Comparative Study of the National Achievement Survey Results of 2017 and 2021 in Andaman and Nicobar Islands

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Abstract

The National Achievement Survey (NAS) is a nation-wide competency-based assessment conducted by NCERT that provides information on the learning outcomes of school students. Andaman and Nicobar Islands do regularly participate in NAS. The primary goal of such assessments is to gauge the effectiveness of school education and guide policy makers and planners in initiating appropriate educational reform measures. The comparison of the NAS 2021 survey results with the 2017 survey results highlights the disruptions in children's education caused by the pandemic. According to the findings of the two surveys, the mean score in all subjects in NAS 2021 decreased when compared to the 2017 NAS Survey for classes 3 and 5. In the NAS 2021 results, the performance of the Andaman and Nicobar Islands saw both an increase and a decrease, with a decrease in performance for Classes 3 and 5. This trend may have implications both for the design to improve student performance and also for understanding the strategies which lead to growth in the results. The qualitative research methodology was used in this study. The data for the research was collected from a self-developed "Teacher's belief and perception regarding growth and decline in NAS' 21 performance Questionnaire". The survey used the stratified random sampling method to decide on the total sample size and samples from each stratum. The Islands were divided into nine strata based on the geographical location of nine different educational zones of the Islands. Zonal heads were entrusted to disseminate the test items randomly to teachers based on the sample size of that particular educational zone. This self-developed questionnaire was bi-lingual (English and Hindi) and the responses were collected through Google form, for which links were made available to the zonal heads.

Keywords: Results, Survey, Performance, Islands.

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Introduction

NCERT's National Achievement Survey (NAS) is a large-scale national assessment that it is conducted in sampling schools all over India to find out how well children in classes 3,5, 8, and 10 have learned (Class 10 was included in the NAS from 2021 onwards). The survey focuses on the NCERT's recommended learning outcomes for each grade (Ministry of Education, 2022). NAS serves as a diagnostic tool for determining the overall health of education at the national, state and district levels. The findings assist all stake holders in developing timely interventions to close learning gaps. In NAS 2021 Pupil Questionnaires, Teachers Questionnaires, and School Questionnaires were also obtained in addition to students' academic assessments to better understand the various settings and perspectives of students, teachers, and schools. This provides valuable information regarding the background and the effectiveness of education system.

NAS 2021 is the first achievement survey conducted following the publication of the National Education Policy 2020 (NEP). The assessment is used to compare students' learning to criteria like process skills and learning outcomes (ANI, 2021). NAS 2021 replace the content and memory-based assessment system with a competency-based assessment system as envisaged by NEP 2020.

The results of NAS 2021 clearly indicate a significant learning gap among the students of the country at large and specifically in Andaman and Nicobar Islands (Gazta& Jadhav, 2022). The comparison of the NAS 2021 survey results with the 2017 survey results highlights the disruptions in children's education caused by the pandemic. According to the findings of the two surveys, the mean score in all subjects in NAS 2021 decreased when compared to the 2017. In the case of the A & N Islands, a performance decline is observed for Class 3 and 5. The NAS 2021 reports can be accessed at <https://twitter.com/indranibhaduri/status/1648309988903772162>

Rationale

The Education system has undergone changes because of school closures as a result of COVID-19 pandemic. The after math of the pandemic created an increasing inequality in education and learning loss. An effective and workable recovery program is required to reduce and reverse the effects of learning loss that have happened and to help all children get back on his/her educational track. Unfortunately, despite best efforts to setup a supportive remote learning experience, evidence is emerging to show that school closures have resulted in actual learning losses (Robin Donnelly, Harry A Patrinos, James Gresham, 2021). This research will give the stakeholders a strong database that will provide insight into the areas of weaknesses and strengths in the education system at the State level. The database provided will help in planning a concrete road map to improve student performance.

Review of Literature

Poor performance of students at the school level has long-term consequences for the child and society (OECD, 2016). Poor performance or failure is a vicious cycle that entangles the students and sucks their confidence and self-esteem. Students entangled in this vicious cycle end up dropping their school education. Research findings say that poor performance is not confined to single or to two subjects, rather it goes on expanding and lands up making the child a poor performer in all subjects (OECD, 2016). The low performance of the students is not limited to a single factor or any particular school characteristics. COVID-19 pandemic added a few more new factors like unavailability of digital devices, poor internet connection, digital illiteracy, etc.

The attitude of students and teachers plays a very crucial role in the academic performance of students (Wu & Xin, 2019). COVID-19 pandemic induced fear and uncertainty in the lives of people to such an extent that people especially teachers and students' attitudes towards learning also got entangled in the loop of uncertainty. It takes many weeks to accept the fact that some alternative to offline teaching also exists. The pandemic also shrunk the motivation level of the learners.

The digital divide is also one such factor which plays a very crucial role in the field of academics during the pandemic time. India has a sizable number of internet users, but NITI Aayog (Niti Aayog, 2018) claims that the disparity in digital access is getting in the way of inclusion and equity, which needs to be evaluated. In India, almost 60 percent of school children cannot access online learning according to a study conducted by Azim Premji Foundation (Azim Premji University, 2020). Digital schooling was the only option left behind during the pandemic period to keep learning mode active, but unfortunately many struggled with the cost of mobile phones and even with mobile data. Internet connectivity and power issues were added challenges in the path of digital schooling.

Many parental factors also contribute to the academic performance of students. One of the major contributors in this domain is the socio-economic status of parents. The socio-economic status of students in their academic performance is also widely mentioned in literature. According to research, children from low-income households and communities develop academic skills more slowly than children from higher-income families and communities (Morgan, Farkas, Hillemeier, & Maczuga, 2009). Low SES in childhood, for example, is associated with poor cognitive development, language, memory, socio-emotional processing, and, as a result, poor income and health in adulthood. A lot of migration happened with the onset of the pandemic. The Islands have a lot of migrants both the floating population of migrants and permanently settled migrants. People moved back to their home town from their place of work causing a lot of displacement of their families. Children lost contact with their school teachers and online schooling for them was almost gone blank during this pandemic period. The technological backwardness of parents was one of the hurdles to their children's digital schooling. Parents with lower incomes were more likely than parents with higher incomes to report that their children had technology-related difficulties with school work.

Traditionally, the learning dynamic in families has been from parent to child. Parents who are not aware of the technological advancements in education can't contribute effectively to their children's digital schooling (Akash, 2018). The pedagogies used by teachers during online teaching also have a very direct impact on the academic performance of the students. Since digital schooling was a sudden shift from the offline mode many teachers find it very difficult to adapt themselves to this new blanket. When transitioning from offline to online learning, various issues arise, such as how to provide informal social interactions, how to ensure student attention, and even how to ensure active participation.

Most schools or other institutions struggle with these because neither their teaching materials nor their training address this issue (India TodayWeb Desk, 2021).

Research Questions

1. What are the main factors for the decline in the performance of students in classes 3 and 5 as compared to the results of NAS 2017?
2. What are the pedagogies used by teachers in classes 3 and 5 in the schools of the Andaman and Nicobar Islands?
3. What factors do teachers teaching in classes 3 and 5 perceive as the key factors for decline in performances as compared to the results of NAS2017?
4. What are the suggestive interventions as perceived by teachers teaching in classes 3 and 5 for improving the performance of the students?

Methodology

This study proposes qualitative research methodology. The data for the research was collected from a self-developed "Teachers' belief and perception regarding growth and decline in NAS' 21 performance Questionnaire". The target population was 2360 teachers which comprised 1224 Primary School Teachers teaching in classes I to V and 1136 Graduate Trained Teachers teaching in Upper primary and secondary classes from nine educational zones scattered all over the Islands. Stratified Random Sampling technique was used to select the samples from all the nine educational districts. The ideal sample size at a 95% confidence level and 5% margin of error for the research study was 581 comprising 388 Primary School Teachers and 193 Graduate Trained Teachers. The sample, therefore, represented 25% of the teacher population of Andaman and Nicobar Islands teaching in primary, upper primary and secondary schools.

All the respondents were assured of confidentiality and their identity anonymity to protect the privacy of each respondent and to get the required information, which is the true opinion of each respondent. Informed consent was also taken from each respondent and that was also included in the opening section of the questionnaire.

Quantitative research based on data collected from a self-developed "Teacher's belief and perception regarding growth and decline in NAS' 21 performance Questionnaire", was used in the study. Which comprised of 30 test items, all of which were open-ended

items? Zonal heads were entrusted to disseminate the test items randomly to teachers based on the sample size of that particular educational zone. The self-developed questionnaire was bi-lingual (English and Hindi) and the responses were collected through Google form, for which links were made available to the zonal heads.

Process of Data Analysis

The process of data analysis involved arranging of the transcripts of the open-ended questions. The transcripts were read line by line and were dissected into codes. The initial codes were further refined and converted into themes. The themes were both theory-driven and data-driven. For analyzing the transcripts of the answers to the open-ended questions, the matic networks were used. The network was further used for interpreting the data and for reaching at a theoretical integration. The basic, organizing and global themes were the elements of the thematic network and the details are given in Table 1.

Table 1: Table showing the basic, organizing and global themes related to this study

Basic themes	Organizing themes	Global themes
Internet connectivity	Technological issues	Basic technical issues
Electric power issues		
Lack of adequate ICT tools		
Unavailability of smart phones/Laptops	Low socio-economic status of parents	Parental factors
Low socio-economic status of Parents		
Migration of students	Parental priority	
Lack of parental awareness		
Technological backwardness of Parents	Digital divide	Digital divide
Delay in shifting mindsets to online Mode		
Parental involvement in children's Digital learning		
Differentiated instruction in Classrooms	Pedagogies used by teachers	Diverse pedagogies Used by teachers
Instructional Scaffolding		
Insufficient digital repository for Online teaching contents		
Planning for online teaching	Tech-enabled pedagogies	
Mastery in ICT tools		
Online collaborative learning		
Involvement of teachers in COVID duties	Teachers' perception Decline/increase in students'	

	performance	
Disruption of the education of students on account of the COVID Pandemic		
Media influence		
The concept of priority in the time of pandemic		
Tailored bridge courses	Fusion of technology and 21 st Century skills in lesson plans	Suggestive Remedies
Emphasis on tech-based teaching		
Incorporation of 21 st century skills in daily lesson plans		
Teacher professional development Plan	Capacity building of teachers	
Pairing of teachers		

Results

The COVID-19 pandemic created a huge learning loss for children. Many associated factors can be held responsible for students’ decline in performance in NAS 2021. The reasons for disruption in children’s education caused by the COVID-19 pandemic mentioned by the participants were categorized into themes. The transcripts of the open ended questions collected were read line by line and were dissected into basic themes as internet connectivity, power supply issues, Lack of adequate ICT tools, Unavailability of smart phones/Laptops, Low socio-economic status of parents, Migration of students, Lack of parental awareness, Technological backwardness of parents, Delay in shifting mindsets to online mode, Parental involvement in children’s, Digital learning, Differentiated instruction in classrooms, Instructional Scaffolding, Insufficient digital repository for online teaching contents, Planning for online teaching, Mastery in ICT tools, Online collaborative learning, Involvement of teachers in COVID duties, Disruption of the education of students on account of the COVID pandemic, Media influence, The concept of priority in the time of pandemic, Tailored bridge courses, Emphasis on tech-based teaching, Incorporation of 21st century skills in daily lesson plans, Teacher professional development plan and Pairing of teachers.

The basic themes were further clubbed into nine organizing themes which are Technological issues, Low socio-economic status of parents, Parental priority, Digital divide, Pedagogies used by teachers, Tech-enabled pedagogies, Teachers’ perception of decline/increase in students’ performance, Fusion of technology and 21st-century skills in lesson plans, Capacity building of teachers. The basic and organizing themes are further classified into five global themes which are Basic technical issues, Parental factors, Digital divide, Diverse pedagogies used by teachers and Suggestive remedies. The reasons for disruption in children’s education caused by the COVID-19 pandemic mentioned by the participants who were placed under the basic themes are (all names are given in codes):

"The most discouraging aspect was that my students do not have mobile phones, TV and Radio."(Participant G182).

"Many parents did not have android phones and radios etc." (Participant P11).*"I could not continue teaching due to internet connectivity."* (Participant G01).

"The most discouraging aspect was not able to reach each and every student due to lack of internet access." (Participant O32).

"During the lockdown, many families had migrated to other places. We lost communication with them."(Participant P01).

"Migration of students to their native place and were not in contact." (Participant G44). Lack of adequate ICT tools especially a smartphone, internet connectivity and migration of students from their original residence was mapped as the major reasons for the decline in student performance.

"Lack of instructional objective, unavailability of teaching resources to the child, parents ...not skilled in technology to guide child, teachers are not trained to deal with current information and communication technology create learning gaps in teaching during this period" (Participant P67).

The unavailability of e-content for primary-grade students, alongwith the lack of adequate technological skills among teachers were the major road blocks in motivating and monitoring students in online mode.

"Non-availability of digital devices due to poor family background." (Participant G54).

"Govt school students were coming from a poor background, so they do not have the comfort of smart phone and connectivity." (Participant O07).

"Some children are coming from poor backgrounds. Parents can't afford a digital device for kids."(Participant P117).

The low socio-economic status of parents was held responsible for not providing digital devices to students.

"Lack of support from parents in their ward's studies at home."(Participant P21).

"In the absence of teachers, lack of parents' cooperation in educating their wards during the pandemic period caused the drop in the performance level of the students." (Participant G179). *"Unaware and lack of literacy of parents."* (Participant G177).

Lack of parental awareness, technological advancement not being at par compared to the students studying in main land India and the delay in shifting the mindsets to online mode were some of the reasons for the decline in performance.

"We were not able to attach emotionally to the children."(Participant P21).

"Lack of interaction with the students during pandemic created a vast gap in the continuous learning process of the students which now is becoming a hindrance in the teaching process."(Participant O21).

“As we could not have the desired interaction with students which indeed is a vital aspect in the teaching-learning process, it hindered the communication and hence affected the performance level the most.”(Participant P21).

Virtual mode of teaching also impacted the teacher-student relationship which also has a direct impact on student’s academic performance. Supportive teacher-student interactions are an important component of the social atmosphere in schools and are closely tied to students’ academic performance (Lee, 2012), which was missing largely in digital classrooms.

“I was also engaged in the COVID-19 duty as a supervisor and it was very distracting in the teaching work” (Participant G45).

“To serve the society during a pandemic is also a duty of teacher but some where it may be the reason.”(Participant P195).

“Media created a pessimistic influence on students. The news about new variant of coronavirus and increasing death rate caused a state of helplessness and fear among students. This created a decline in their academic performance of them” (Participant G49).

“Media coverage had a negative influence to some extent on children.” (Participant P195). *“Media created a bad influence to some extent on children.”*(Participant G160).

The involvement of teachers in COVID duties, media influence and the concept of priority intimes of pandemic were the major perceptions of the teachers for the decline in students’ performance in NAS2021.

“Bridge courses will assist students in filling the learning gaps revealed by the NAS 2021 results.”(Participant G54).

“I believe that technology will help in bridging the learning gaps.”(Participant P91).

Tailored bridge courses, emphasis on tech-based teaching, and incorporating 21st-century skills in daily lesson plans are some of the suggestive remedies perceived by the teachers to overcome the gap in the learning of the students caused by the COVID-19 pandemic. *“Incorporating 21st-century skills in to daily lesson plans will help children to be updated with current affairs.”*(Participant G86).

“If we include those skills in daily lesson plans then it helps them to think critically and creatively. And also, they feel more confident to solve problems on their own”. (Participant) *“21st-century skills will make the children innovative and experimental. It will improve their academic performance.”* (Participant P171).

“Continuous Professional Development of teachers will improve the efficiency levels of teachers and will have a positive impact on student’s performance.” (Participant P171).

Opportunities for academic conversation and discussion, Teacher professional development, and pairing of teachers with one of their co-teachers who will act as

mentors are also perceived as strong remedies by eachers for overcoming the learning gaps.

Discussion

The present study focused on the Growth and Decline aspect for understanding the NAS 2021 results to the NAS 2017 results in the scenario of Andaman and Nicobar Islands. Five major themes were identified in this study. These themes described and focused on the factors responsible for the academic growth and decline aspect of NAS 2021 as compared to NAS 2017 results for Andaman and Nicobar Islands. The pandemic has created a huge learning loss and widened the existing gap with severe disruptions in education. School closures and then the sudden shift to digital teaching created a lot of confusion and adjustment issues among both teachers and students. In general, especially in rural areas digital devices were commonly used for communication and entertainment and the pandemic made a sudden shift in converting digital devices into the only means of learning. The knee jerk reaction on the use of technology at the core of imparting education created turbulence in the pedagogical realm and the teachers found it very challenging. The most affected in this entire process were the little children, as there were compromises in their foundational learning strategies that were being implemented online.

The major theme identified in this study was teachers' concern about the basic technical issues involved in online transactions. Andaman and Nicobar Islands are far from the main land and basic facilities are not the same or at par with mainland. The islands face power cuts and have connectivity issues.

Parental factors also had a direct link to the academic performance of their ward. Children from low socio economic backgrounds develop academic skills more slowly compared to other children and the condition is worse in foundational grades (Morgan, Farkas, Hillemeier & Maczuga, 2009). The sudden shift from offline schooling to digital schooling created huge chaos and parents were not able to provide a proper digital learning environment for their children. The condition was severe amongst children of migrant workers as most of them were struggling between their place of stay and employment, both were threatened during the pandemic. The Islands have a good number of migrant workers (Joy, 2017) and the children of these workers on account of their parental migration suffered learning losses. During the pandemic parental priority was for basic sustenance, and in that struggle, education was secondary which also leads to academic loss for their children.

Many studies support the notion of the digital divide in India which still continues to pose challenges in remote teaching and learning (Chandola, 2022). The digital divide has serious social consequences. Access to technology can exacerbate existing social exclusion and deprive individuals of essential resources. As we become more dependent on digital technology and the internet digital divide impacts many aspects of our life especially education at the time of the pandemic when there was no any option for

learning other than digital schooling. Moreover, technologically illiterate parents find it very difficult to shift their existing mindsets about the mode of delivery of education.

The other major theme identified was the pedagogies used by teachers. Teachers used diverse pedagogies in offline classes to cater to the diverse needs of the students. Few teachers were able to shift the concept of differentiated pedagogies to the online mode. The digital classroom concept was new to both teachers and students. Teachers did not get the time and opportunity to equip themselves to take up the task of online teaching. Another concern with the teachers of Andaman and Nicobar Islands was that 53% of the participant teachers of this research were engaged in full-time COVID related duties. Thus, there was no thinking involved in making a shift from the offline to online mode. It was just what was being done offline, went online. This strategy of only a shift in platform, without the actual shift in the transactions was a major deterrent. Small children cannot be glued to electronic media for three to four hours, thus the premise of translation from offline to online was faulty.

The pandemic created a huge gap in the existing learning system. Teachers were not able to build good rapport with students in virtual mode. The teacher-student relationship was largely missing which is also very much directly related to academic performance (Lee, 2012) and is perceived as one of the major factors in the decline in the performance of students. Also, the peer interactions, which suffered during the pandemic.

Bridge courses are very much required in foundational and preparatory stages as perceived by the majority of the teachers. Tailored bridge courses will help teachers to patchup the learning losses that occurred during the pandemic. Infusing 21st-century skills through classroom lessons will equip children to become more resilient. Teacher professional development and mapping of teachers under a mentor-mentee network will help teachers to equip themselves with the latest pedagogies.

Limitations and Future Studies

The data for this study was gathered using open-ended Google forms, which limited the participants' opinions. The qualitative interview schedule with face-to-face interviews would have added more value in the collection of data, which was not possible in this study due to time constraints and the vast geographical dispersion of the islands. A further study may be carried out in a face-to-face mode, involving focus group discussions with teachers, students, parents community members and other stakeholders to generate an in-depth understanding of use of online modes of teaching during the foundational learning years.

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A Study on Eradication of Social Inequality and Discrimination among Marginal Sections through Strengthening of Education: A Review

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Abstract

'Education' is not just limited to getting a degree and scoring more marks. It is also a means of advancement for the 'deprived' and 'economically weaker sections' of the society. Despite many social restrictions, this group is still trying to come into the mainstream society. Today we are in the 75th year of independence and even today we have not been able to achieve hundred per cent literacy rate. For now, today our focus is on NEP 2020 and it also has a ray of hope, so that the education of the underprivileged section of the society is not limited to a degree, but need to develop skilled student. Until social evils, stereotypes and patriarchal concepts are not ended through education, there will be no justification for 'complete education'. So education is important so that they can become aware of their rights and also understand the policies and rules given by the government which are made for their upliftment. This article will outline these topics. In today's context, what will be the role of NEP-2020 in social upliftment; this article will focus on all these points.

Keywords: Marginal Section, Social Inequality, Discrimination, Upliftment and Education

Introduction:

This time is known as the reach of 'Digital Education and Technology'. In the post-Covid-19 era, its importance has increased among educational systems in India. Recently a few years back, Make in India, Skill India and Atmanirbhar Bharat, Beti Bachao and Beti Padhao schemes and campaigns were launched. These have certainly been added as top priority in policy making. Earlier, Mid-day meals scheme, free books, cycle, cloth scheme and stipend for students also were launched. Now, in the recent years the New Education Policy (NEP), 2020 has been introduced. After a long time such an attempt has been made to revive the education system in India. This reform will help in making an impact on the marginalized students and will be a positive initiative in the path of

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education reform. Many changes have been implemented and some are going to move forward. In India, free and compulsory education for all children in the age group of 6 to 14 years is a fundamental right of the citizens under the 86th amendment in the Constitution of India. Therefore, today the youth of the marginalized sections have to come forward to save the traditional culture, especially the traditional culture and customs of the tribal and primitive tribes; This 'education' will be a proper medium, through which they will be able to bring their 'culture and customs' in front of everyone in their own way. Education is the mirror of the society. It affects our society at large in either direct or indirect ways. Now, society is moving towards upliftment and is changing. This can be possible only by acquiring knowledge and works of literature. So this knowledge helps to reconsider the existing traditional attitudes which are followed without any judgments. So 'education' is part of the recycling of the whole society. These have been possible through various debates and discussions. Therefore, many scholars like Mahatma Jyotiba Phule, Savitribai Phule, Raja Ram Mohan Roy, Mahatma Gandhi, Babasaheb Dr. B.R. Ambedkar, Maulana Abul Kalam Azad, Ram Monohar Lohia and many other Indian scholars emphasized getting an education full of all tradition, culture, value and based on Indian Knowledge System.

If we look at today's modern education, today education is being spread in tribal areas through ashram schools (tribal schools), model schools available in remote areas of India. The government has also set up Kendriya Vidyalayas in district headquarters and Navodaya Vidyalayas in different areas of various tribal areas. It is a kind of hope for marginalized students who live in remote areas and belong to very poor families. Their parents cannot spend money on getting education. That is why many schemes, plans are implemented by the government at different times for the children and girls of these deprived sections of the society; the successful results of which we are seeing today.

Comparative Analysis on the 'Education System' from Earlier to Present Time

The history of 'Education' system in India has been very bright. In which there has been a huge legacy of 'education' from Gurukul to Raja Rammohan Roy and Gopabandhu Das. Gopabandhu Das is known as 'Utkal Mani' in Odisha. The 'Satyabari Vidyalaya' created by him, is a perfect example of a holistic education model. This area today falls near Sakhigopal in Puri district of Odisha. Anyway, the tradition of giving 'education' has been going on for centuries in all religions. Talking about 'modern education', western languages like English language were promoted during the British Raj as well as this English was successful as a revolution for freedom fighters in India. During this freedom movement, newspapers and poems in different Indian languages played an important role and inspired the freedom fighters. If those poets, writers and editors did not understand the importance of 'education', then today they would never have been able to breathe freedom. Most of the known freedom fighters were educated. So 'Education' should not be considered only as a means to get a degree, score more marks and get a job. The meaning of 'education' is very broad. But, the other side of this was that the condition of the deprived class was very pathetic during the colonial period of India.

Dalit and tribal groups have always been victims of atrocities, oppression and tyranny due to various cast base reasons. This was the reason that Dr. Babasaheb Ambedkar did many struggles to get the desired place for Scheduled Castes and Tribes out of which Poona Pact¹ is important. What was the status of a marginal community that can be understood from the data given below (Bhattacharya, 2002):

Table No:-1

Literacy of selected communities
(percent of total population)

	1901	1911	1921	1931
I. Upper castes (Dwijias)				
1. Brahmin	35.5	38.9	37.5	51.1
2. Kshatriya/Raju	N.A.	N.A.	11.4	20.8
3. Arya Vaishya/Komati	25.2	26.2	29.1	34.5
II. Upper/advanced Shudra castes				
1. Kapu/Telaga/Reddi	2.9	5.2	6.0	8.6
2. Kamma	2.5	6.5	7.6	N.A.
3. Velama	1.3	3.2	4.2	N.A.
III. Bahujan/productive castes				
1. Artisans				
a) Kamsala (goldsmith)	8.3	13.1	15.0	17.4
b) Sale (weaver)	2.5	6.2	8.7	N.A.
2. Lower Shudras/other backward castes				
a) Golla/Yadav (shepherd)	0.5	1.4	1.6	2.4
b) Gamalla/Settibalija (toddy tapper)	1.0	1.9	2.6	N.A.
c) Mutracha (hunter/cultivator)	1.0	2.0	3.2	N.A.
d) Boya/Bestha (hunter/fisherman)	0.4	1.1	1.4	1.7
e) Mangala (barber)	1.8	3.5	4.6	N.A.
f) Tsakala (washerman)	0.3	0.6	1.0	N.A.
g) Kummara (potter)	N.A.	N.A.	2.8	N.A.
h) Odde/Uppara (earthdigger/mason)	0.2	0.6	1.4	N.A.
i) Dependent and begging castes (see Table 2)				
IV. Dalits				
1. Madiga (leather worker)	0.1	0.4	0.5	1.6
2. Mala (field servant)	0.3	0.7	0.9	1.9

Compiled from the census reports of the Madras Presidency for the years shown (N.A. = not available).

In the development of education process, we should adopt different approaches and methods developed by different scholars from time to time. In 1978, Goetz examined

¹ <https://www.thehindu.com/opinion/op-ed/ambedkar-and-the-poona-pact/article31333684>

these questions in a review of studies on women and education published through the mid-1970s. That review and synthesis concentrated on four themes. These are like - (i) analysis of the functioning of sex-role culture in educational settings; (ii) examination of the status and roles of boys and girls, and men and women, in schools; (iii) exploration of the differential effects of schooling on women and men from various ethnic groups and social classes; and (iv) identification of productive theoretical approaches to studying gender (Goetz & Grant, 1988).

Assessment on the role of education making uplifting for Marginal sections including Women:

According to the 2001 census data (Census Report, 2001), national literacy rate stands at 64.84%. While male literacy was noted as 75.26%, female literacy lags behind at 53.67%. A more recent government report on education statistics (2008) notes that the literacy rates for women in India has steadily increased from 8.9% in 1951 to around 57% in 2004. Although substantial progress has been achieved since India won its independence when less than 8% of females were literate, the gains have not been rapid enough to keep pace with population growth. Although there has been marked improvement over the years, there is still much wanting in terms of women's literacy. The problem is further compounded if we look at the male-female gap in literacy rates (Nair, 2010). Now we just look at following table-2, which are indicated to female literacy rate in 2011 census. The female literacy shows a positive change of twenty two percent in 2011 over 2001 census. In rural areas, it went up by nine percent. Females in SC and ST categories have also done well as their literacy rate went up to 56.5 percent from 4.9 percent and 34.76 percent respectively (Singh U. K., 2016):

Table No-2²

Female Literacy Rate in 2011 over 2001

Census Years	Rural	Urban	Combined	SC	ST*
2011	58.75%	79.92%	65.46%	56.50%	49.35%
2001	46.7%	73.2%	53.67%	41.90%	34.76%
Rate of Change	26%	9%	22%	35%	42%

² This table no-1 with these data explained in detail by Utsav Kumar Singh in his article Meeting Gender Parity, which have published in Kuruksetra monthly journal, January 2016, Vol.64 and published by: Publication Division, Ministry of I & B, Lodhi Road New Delhi-3

³ <https://pib.gov.in/PressReleasePage.aspx?PRID=1657743>

³As per Census 2011, literacy rate of Scheduled Tribes (STs) was 59% whereas the overall literacy rate was 73% at all India level. As per Periodic Labour Force Survey (PLFS) report 2017-18 published by Ministry of Statistics and Programme Implementation, literacy rate for STs is 67.7% and corresponding figure over all is 76.9%. The PLFS 2018-19 reports reveals an improvement in literacy rate of STs at 69.4% as compared to 78.1% over all. ⁴As per Census- 2011, the number of scheduled castes in India is 20, 13, and 78,086. It is 16.6% of the total population of India. The scheduled castes are 18.5% of the total population of rural areas and 12.6% of urban areas. It is to be noted that during 2001-2011 the decadal growth rate of the population of India was 17.64%. During this period decadal growth rate of the scheduled castes was 20.8%. ⁵ As per 2011 census, literacy rate in India has been reported as 74.04% with a 14% increase to that in 2001, whereas the hike is maximum for rural women at 26% in the last decade, which may be attributed to literacy mission of Government of India. The female literacy levels according to the Literacy Rate 2011 census are 65.46% whereas the male literacy rate is over 80%. For more understanding, recently, Government of India released data on the higher education. Following table no-1 showing as the enrollment of SC Students is 14.2%, ST students are 5.8% and OBC students are 35.8%. The percentage of female studies in ST category exceeds that the males (Ministry of Education, 2022)

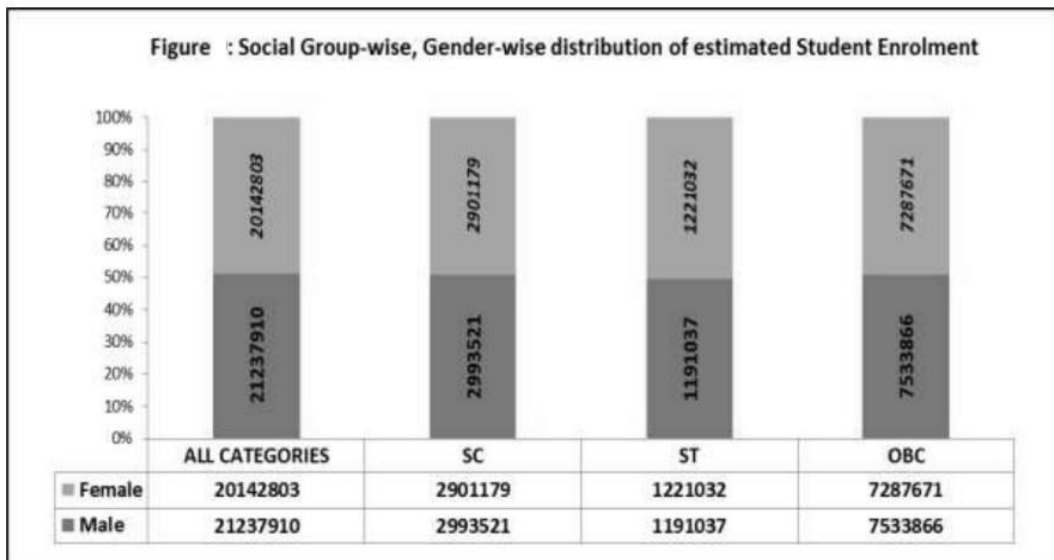


Figure No-1⁶

⁴<https://www.jagranjosh.com/general-knowledge/schedule-castes-in-india-1448688335-1>

⁵<https://www.mospi.gov.in/>

⁶ AISHE-2020-21 by Ministry of Education, Dept. of higher Education, Govt. of India

When we discuss on literacy rate of ⁷PVTGs community, same time we remind again situation of Dongria Kondhs PVTGs group, which one of Odisha's most primitive and backward tribal communities. In struggle for education, Dongoria community belonging girls from Odisha tribal community break barriers. As per 2011 census, the Scheduled Tribe community has a population of about 8000, with just a 10 percent literacy rate. The female literacy rate is a dismal three percent⁸. As per Ministry of Human Resource Development Publication, drop-out rates in the year 2013-14 were observed to be 18.30 and 21.20 in the classes I-V, 32.90 and 39.20 in classes I-VIII for females and males respectively indicating that the drop out at primary level is more or less equal for both the genders but the gap increases in higher classes. As per NSS 71st round report, more persons (around 60%) drop out in 5-15 age in rural whereas more persons (around 55%) drop out in age 16-25 in urban area irrespective of gender in the year 2014. Major reason for drop out for males is "engaged in economic activities"; for females the reason is "engaged in domestic activities" for rural as well as urban. When we discuss rural areas, many scholars attribute poverty as the main reason for the lack of education; especially discussion on the education of women from marginalized sections, which are centric points of analysis. Author Baiju said that, 'Poverty is not gender neutral. Indigenous culture and tradition of tribal households involve deep rooted prejudices and discrimination against women. Poverty among women is more prevalent and typically more severe than male poverty and women also play a crucial role on the livelihood and basic human capabilities of poor households' (Baiju, 2014). This is the fact that, without the strong pillar of 'gender priority' wise any policies implemented in 'education system'; we can't be forward any necessity steps toward the equality. Means- there has no discrimination between boys and girls for acquire the knowledge. It is true that in rural and remote areas it may not be possible to build consensus in all respects in any policy to be implemented in the 'education system'. To strengthen education various social indicators, geographical reasons are the main hindrance in proper implementation. But this barrier will be removed, if awareness is spread through people who know their language, culture and behavior. It is a very easy way to connect with rural people. And we can involve local NGOs and various local organizations, which can be very helpful for awareness of education. Today the newly energetic youth can play a leading role in public policy making and setting an example for others. Things must be possible; If the youth are properly trained then they will use their knowledge and contribute to their society. 'Education, Skill, Empowerment and Health' are the central issues of awareness among all the youth. In Indian society, there is a very repressed and negative thinking about disability issues, especially women or girls. So we need to remove such mindset through proper awareness towards education.

⁷ PVTGs Mean- Particular Vulnerable Tribal Groups

⁸ <https://www.hindustantimes.com/india-news/in-struggle-for-education-girls-of-odisha-tribal-community-break-barriers/story-NbnYaeqYTVqavdziAOjUdJ.html>

Conclusion

At present, we have to further develop our 'Monitoring Mechanism' for 'Checks and Balances' on the 'Implementation of the policy relating to marginalized sections'. Therefore we all can make effective efforts in making a successful policy. In particular, there is a need to focus on the upliftment of women within PVTG society. As such, without 'gender equality', we cannot imagine the situation of 'all-round development' within the concerned society and hence there is a need for greater awareness of all 'developmental policies'. On the other hand, we have to try to focus more towards the solution. Earlier, we discussed various statistics given by various agencies. No one discusses solutions or improvements. If we go to the whole area of remote areas, we just imagine why we are talking of solutions or reforms. Still, they are waiting for a better educational environment and patiently, we must say, basic amenities like 'light and road' cannot be seen in many remote areas including the tribal belt. How to expect them to stay connected with digital education and digital world. During the lockdown period, it was reported in the news that tribal students were taking their online classes on hilltops due to unavailability of internet access there. Then what is the policy being made after such unfortunate incidents during the lockdown? Still, many tribal belt areas remain disconnected from proper mobile networks. What did we learn after the Corona period? How is it possible to join free online education with these concerned students? These are not imaginary questions but also the real conditions of the marginalized sections of Indian society. So we should evaluate the existing loopholes in the policy and make changes in the existing applicable policies. Then students can take benefit of it as per their requirements.

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Designing a Course in the Discipline of Education to Improve Indian Student Teachers' Conceptions of Teaching

Anju Sanwal¹

Abstract

Teachers in universities and schools are seen adopting different conceptions on their teaching. These views about teaching affect the way the teacher believe, behave and use teaching strategies in the class. A lot of literature in students' learning suggests that student teachers' conception of teaching can be changed/improved when they experience student-centered learning environment. Designing a course for knowledge construction of student teacher may be helpful in improving their views about teaching learning and can encourage them to teach constructively in their future. The present paper describes designing of a course in the subject of 'Educational Psychology' in the discipline of education for student teachers in a pre-service teacher education programme in India. The course designed entails the suggestions given by National Education Policy (2020, India) and National Council of Teacher Education (NCTE, 2022, 2014, 2009) of India. The course has been designed for student teachers to be delivered in a constructive learning environment; so that in future they can provide a student-focused environment to their students.

Keywords: Conceptions of Teaching, Teaching Strategies, Student-focused Strategy, Teacher Focused Strategy, Higher Education

Introduction

Literature in higher education teaching theories hold a consensus that there is congruency between intention or motive for teaching and teaching strategies adopted by university teachers (Trigwell, Prosser & Taylor, 1994). Teachers holding conceptions of information delivery and concept acquisition by students were found adopting teacher-centered strategies of teaching (like delivering information to students with very less or no student interaction) while teachers holding conceptions of concept development and conceptual change were found adopting student centered

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strategies of teaching (like interactive teaching, buzz group, peer teaching or collaborative learning etc) (Trigwell and Prosser, 1996). These conceptions or views of teaching of teachers certainly affect students' learning. Students taught with a knowledge transmission view of teaching were found adopting more surface approach to study in their courses while students taught with a learning facilitation view of teaching were found adopting more deep approach to study in their courses (Gow and Kember, 1993). Thus, it is important to consider conceptions/views of teaching-learning of teachers/student teachers. To change their predetermined beliefs and views of teaching learning, it is required to teach them in an environment which emphasizes on construction of learning (Degene, 2020).

Context of the study/Need of designing a course for prospective teachers in India

Ultimate aim of higher education is to inculcate deep approach to study in students which can be only done by providing a constructive learning environment to students. According to National Council of Teacher Education, NCTE (India,2009), dominant practices of teacher education in India largely "focus on psychological aspects of learners without adequate engagement with contexts" (Pg.52). Further, this council found that there is less focus on self-directed learning and reflective learning. Brinkmann (2015) stated, "Indian teachers' traditional pedagogy is grounded in deeply rooted cultural attitude on gender, caste, social inequality, hierarchy, knowledge transmission, etc. that make it difficult for existing practices to change" (p. 345). National Education Policy (2020) of India also found a large number of teacher education colleges in India providing low quality education and giving, "less emphasis on the development of cognitive skills and learning outcomes" (p. 33). This may be due to large consensus of teacher educators for applying information transmission teaching practices rather than inculcating critical thinking and analytical thinking in students. The reason for this consensus building can be the most dominant traditional teaching and assessment practices in Indian schools and colleges and learning- experience of teacher educators in teacher education colleges where theoretical parts and classroom realities are very different. Transforming student teachers' conceptions of teaching to a more sophisticated level emphasizing construction of knowledge can be helpful in this direction of accomplishing good quality learning outcomes in students. Various educational researcher like Degene (2020), Lunenberg et al. (2010), Korthagen et al. (2005) suggested that teacher education program was not sufficient to transform/change their conceptions/view about teaching and teaching practices unless these programs are delivered in a constructive learning environment. Cheng et al. (2010) also stated that teacher education program delivered to construct knowledge helps in improving conceptions of student teachers about teaching. The present article, thus proposes a course designed for student teachers which will be transacted through Real life scenario based (activity based) teaching method using constructivist strategies of teaching.

Literature Review

Conceptions of Teaching and Teaching Practices

According to Chan and Ealliot (2004), conceptions of teaching are the beliefs of the teacher about teaching and learning. These beliefs/conceptions influence the way of teaching in teachers. Teachers in schools and universities are found adopting a range of conceptions of teaching from quantitative increase in knowledge that is teaching facts and skills to students to qualitative increase in knowledge of students like applying, theorizing, explaining the phenomenon in a real context (Biggs, 1990). Biggs (1999) explains three levels of conceptions of teaching. He calls these conceptions of teaching as different levels of thinking about teaching which are hierarchically structured. Almost all teachers go through these levels in their teaching profession. Novice teachers are assumed to be at the level 1 or 2 and sometimes reach at level 3 by applying reflective practices in teaching and assessment. Level 1 conception of teaching is based on “Knowledge Transfer” view of teachers. At the level 1 conception of teaching, the teachers usually see learning as a matter of students’ ability. For example, beliefs like students having good IQ or high motivation will learn better than a student with average IQ or lower motivation for study. Here the, “Learning is a function of individual differences between students” (Biggs, 1999, p.21). Level 2 conception of teaching is still based on ‘Knowledge Transfer’ views of teachers. But this is one level ahead of level 1 conception of teaching as this level not only facts are transferred but there is stress on increasing level of understanding and concept formation by students. Teachers use plethora of teaching strategies to make the learning material interesting. But these strategies totally show activities done by teachers in the classrooms. Here, “students have little or no responsibility for the teaching-learning situation” (Trigwell et al., 1994, p. 80). Level 3 conception of teaching is based on “Learning Facilitation” or “Knowledge Construction” view of teachers. Teachers having level 3 conception use reflective practices in their teaching like students’ or peer feedback or use action learning.

Research Methodology

Existing policy documents related to education and teacher education in India have been analysed to assess status of teacher education, required adaptation needed in teacher education programmes specifically curriculum design and teaching learning in teacher education colleges in India. Recommendations of National Education Policy (NEP-2020, India), National Curriculum Framework for Teacher Education (NCFTE, 2009), National Council of Teacher Education Regulations (NCTE, 2014) and NCTE Guidelines (2022) for curriculum design and pedagogy in teacher education colleges are reviewed, critically analysed and applied while designing the course.

Document Analysis

Results of analysis of above said documents and related papers on Indian student teachers’ conception of teaching are discussed below:

Status of Teacher Education in India

Teacher education in Indian universities has been primarily dominated by transmission strategies of teaching. Lecturing is the primary method of teaching in these teacher education programs. Despite providing in-service training for considerable years to teachers, these teacher-centered practices are still prevailing (Government of India,2010). Which in turn affects student teacher' belief about teaching and teaching practices. According to Rajput and Walia(2001): In India, "Student teachers are mainly interested in satisfactorily completing the total number of lessons they are required to deliver, rather than with improving the quality of their teaching from lesson to lesson"(p.251). Since teaching practices in India are deeply rooted in cultural values; it is difficult to change their views/ believes and thinking about teaching and teaching practices (Brinkmann, 2015). Brinkman further suggests that there is a severe need to address teachers' conceptions and beliefs in Indian universities which can be better addressed by inculcating constructive teaching practices in teacher education program. "Since teachers tend to teach in the form they were taught" (Struyven et al.,2010, p.43). Preeti and wisemen (2021) while doing a discourse analysis study suggested that there is a severe need to change in teacher preparation program in India.

Conceptual Change of Student Teacher by Teaching in a constructive Learning Environment

Many studies in teacher education found that student teachers' approach to teaching was influenced by the way their teacher training was held including the effect of course they were teaching (Knudson and Maxson,2001), nature of modules to be taught (Cheng,2000), and program purposefully designed (Pissalidis et al.1998). Sanger and Osguthorpe (2011) advocated that it was necessary to improve/develop studentteachers' belief/conception to facilitate student-centered teaching. Further Struyven et al. (2010) stated, "Rather than delivering information about engaging and innovative teaching practicest hrough traditional approaches, modeling the use of these teaching methods serves the purpose of providing student teachers with 'experiences' of good teaching practices ((in the hope that they will use these methods when they are teaching children in their future career) (p.43-44). Degene (2020) agreed. "Effective implementation of a constructive teacher education programme can bring change on student-teachers' conception of teaching and learning" (p.5). Also, Loughran and Berry (2005) explicitly modelled an approach where teacher educator facilitated student-centered teaching by doing the activities which he/she wants from the student teacher to do in future.

Findings and Recommendations of NEP (2020), NCTE (2022, 2014 and 2009) to improve curricula and teaching learning in Teacher Education Colleges

According to NEP (2020), curricula in most teacher education colleges was found *rigid and disconnected with real life situations*. It was recommended to develop more vibrant curricula which correlate with the graduate attributes/learning outcomes set-up by relevant body in that field. The policy further recommends that teaching learning must

go beyond lecture method. Co-operative and peer supported activities must include while teaching. Projects and practicums must increase to engage students. Earlier, National Council of Teacher Education NCTE (2009) had also found that theory courses in the discipline of Education not linked with real class room experiences of student teachers and recommended to create linkages between theory and class room practices. The council further suggested that assessment procedures in education colleges need to change from information transfer to knowledge construction. National Education Policy NEP (2020) also suggested that criterion-based assessment must be in priority to norm-based assessment. In this direction, policy recommended to include “peer and self-assessment, portfolios, assignments, projects, presentations, and dissertations” (Draft NEP, 2019, p. 244) in the courses. NCTE (2022) in this direction has recommended universal design for learning (UDL) which recommends clear goals of the course, multiple representation and engagement of students and authentic assessments which fosters collaboration and cooperation in students.

Designing a course in the Discipline of Education to be delivered in a constructive learning environment

Based on document analysis, the present paper is discussing designing of a course on “Nature of Teaching Learning” in the discipline of Education. This course has been designed for student teachers with an intention to achieve higher order learning outcomes like applying effective principles of teaching for a constructive learning environment, designing authentic teaching and assessment activities for quality learning of students and evaluating and improving teaching quality (Table 1). This 8-week course of 2 credit is of 60 hours requiring at least 6-8 hour of study per week. Over views of different modules of the course is given in Table 2. Assessment tasks used in the course entail a physical context (classroom) and social context has been added while learning in the form of peer review/peer assessment and teachers’ feedback (Table 3).

Table 1: Course Outcomes to be achieved after completion of course

Course Outcomes	Level of cognition / understanding
Applying effective principles of teaching in classroom.	Application
Designing authentic teaching and assessment for encouraging deep learning in students.	Design/plan
Evaluation of teaching for further improvement in students’ learning	Evaluation

Table 2: Overviews of different modules and study hours required

Module No.	Module Name and Overview	Study Hour
1.	Effective Principles of Teaching Learning: This module explains the effective principles of teaching to student teachers like presenting knowledge which has been connected to their previous knowledge, engaging students with authentic activities in the class, making a social context of learning in the classroom by incorporating	20

	peer teaching, collaboration and peer review and constructive feedback on discussions; which are helpful in making students' learning better.	
2.	Designing for quality Learning: This module explains to student teachers various authentic teaching and assessment methods for quality learning of students. Various authentic teaching methods like case-based learning, scenario -based learning, problem- based learning, life-long learning, collaborative learning etc. and assessment methods like peer review, open book exam, concept map and,project report etc. are described and discussed which are helpful in achieving intended/desired learning outcomes.	20
3.	Improving Quality through evaluation of Teaching: This module explains to student teachers how they can improve their teaching by reflective feedback by students and peers. A proper explanation of the topic, clear goal of the work/task they are doing, authentic assessment activities, independence given in the expression of the understanding and appropriate workload in the course enhance the quality of learning in students. On the other hand, a high workload, unclear goals, assessment requiring factual information to reproduce encourage surface level study in students. Besides, self- reflection of teacher and peer reflection is also important in enhancing quality of teaching-learning.	20

Table 3: Engagement with real life scenario to achieve desired outcomes

Course Outcome (CO)	Real life Scenario	Assessment Methodology
CO1: Applying effective principles of teaching in classroom	Choose a topic/lesson to teach in the class. Apply effective principles of teaching in the classroom, these are: making an interconnected knowledge base of students, arousing their interest in the topic by explaining the worth of the task and presenting various illustrations/cases/real life situations, make an appropriate teaching context and give them engaging and authentic activities to be performed. Take a reflection of your teaching from your peer (who is sitting in your class) and students.	Write an essay of about 800 words explaining about your teaching and motivational context you made in the class, feedback given by your peer and students. Critically reflect on the suggestions given by your peer and students. How would you like to incorporate their suggestions to improve your teaching? OR Record your class. Send it to teacher sharing a you-tube link.
CO2: Designing authentic teaching and assessment for encouraging deep learning	Choose a topic / lesson from your teaching subject to teach in the class. Group the whole class into two sections. In each section there are students of mixed variety in terms of ability, interest, intelligence and other differences. Teach one section with the traditional method of teaching that is by direct instruction. And	Write a project report of about 1000 words about two methods of teaching adopted by you, students' motivation to learn, interest aroused their study approach and learning outcomes in both methods of teaching. Present the report in

in students	take assessment traditionally, this may be a three hour exam. Teach another section with the constructive method of teaching. That is by inculcating authentic activities to be done or performed by students. For example, presenting the information to students in various ways, discussing the topic with teacher/peer, explaining / teaching to other student etc. Assessment has to be done through report writing, e-portfolios, presenting the results / findings in the class etc. Assess/evaluate the difference in learning outcomes in the two sections.	the seminar. OR Make a video of about 20 minutes explaining about two methods of teaching adopted by you, students' motivation, interest aroused, study approach and learning outcomes in both methods of teaching. And share the you tube link of video with teacher
CO3: Evaluation of teaching for further improvement in students' learning	Choose a topic or lesson from the subject you are teaching. Teach and take the assessment of the topic. As a teacher, you can only think how it could be delivered and assessed best. After teaching take a feedback from students about the lesson taught: that is the clarity of the material you taught, aims of doing the task, connectedness of the material to their previous knowledge, interest created during learning, how feedback given during learning helped in construction of knowledge. Assess/evaluate students' feedback about teaching. Also give a reflection on your teaching and assessment.	Write a report of about 1000 words writing first the summary of the topic / lesson/module you taught in the class. Give reflection on your teaching and assessment methods you used in the class. Then explain different aspects of students' feedback you got. Reflect critically how would you like to improve your teaching next time and get a more positive response from students. 2-3 draft reports could be presented before submitting final report. OR Make a video or podcast of about 15 minutes explaining about your teaching and assessment methods you used for teaching a topic, feedback given by the students on the clarity of the topic explained to them, their level of interest aroused during learning, quality of feedback and aims of the task you gave for assessment

Conclusion

Quality of teacher education has been a hot debated issue in India since long time. Improving quality of education in schools calls for quality teacher education programmes. Various commissions and committees held after independence in India has given suggestions to improve teacher education (NPE-1986; NCTE-2009,2014; NPE-

2020). Srinivasan (2016) while doing a study with 30 teacher educators found that Indian teacher education curricula does not support the integration of theoretical knowledge and classroom practices. Further, this researcher has also found that majority of teacher educators (about 60% in this study) were using lecture method of teaching and a few were using discussion and cooperative teaching methods. NCTE in their accessibility guidelines (2022) recommended to use universal design of learning (UDL) which also fosters for cooperation and collaboration in learning. NEP (2020) of India also recommends social engagement and criterion referenced assessments in teacher education colleges to improve quality of learning.

Furthermore, applying theories of educational psychology in classroom is more important rather than memorizing and reproducing these theories in exams. Teaching educational psychology in a constructive learning environment would be better than teaching the subject traditionally through lecturing with reference to student teachers' conception of learning and their teaching practices in future. Further scope of research in this study suggests to assess student teachers' approach to study and their perception of this learning environment

Acknowledgment

I pay my sincere gratitude to my teacher, mentor and guide Professor Santosh Panda from STRIDE (IGNOU) for his continuous encouragement, support and motivation.

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A Study on Technological and Pedagogical Skills of Student-Teachers

Munisha Thakur¹ & Mool Raj²

Abstract

In the present era, the role of educator is changing with the expansion of information and skills. For introducing teaching and learning activities in the classroom, teachers have to become techno-pedagogues. Teacher must be well versed with the technology, methods of teaching and content so that they can provide knowledge to the learners effectively and efficiently. Teachers with appropriate technological and pedagogical skills can make teaching a congenial experience without feeling of pressure, as it would facilitate effective teaching and learning and make teaching and learning more pleasurable. Teacher training institutions are expected to prepare educators who can meet the needs and cope with the challenges of the present classroom. The present research paper is based on a research which is an attempt to study the technological and pedagogical skills of student-teachers. The present descriptive study is basically quantitative in nature. A standardized tool namely TTPACKS by Sharma and Sharma (2017) was used for studying the technological and pedagogical skills among student-teachers. A sample of 150 student-teachers enrolled in the B.Ed. and M.Ed. programmes of Government and Private institutions have been selected through Simple Random Sampling technique. The data collected was analyzed by using Percentage and t-test. The results of the study revealed that 5.33% student-teachers have extremely high, 40.66% have high, 52.66% have above average and 11.33% have average technological and pedagogical skills. Results of the study revealed no significant differences in the technological and pedagogical skills of student-teachers with respect to the type of institution they are studying in (Government and Private) and semester of the programme they are studying in (III and IV) but found significant differences in the technological and pedagogical skills of student-teachers with respect to programme they are enrolled in (B.Ed. and M.Ed.), in favour of M.Ed. group.

Keywords: Student-teachers, Technological skills, Pedagogical skills

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Introduction

The role of technologies in the classroom is becoming gradually prominent; both because of the need for students to advance skills that will empower them in modern society and because of the potential value of such technologies as tools for learning. One of the challenges for teacher educators at present is to ensure that student-teachers have the necessary combination of technological skills and pedagogical knowledge that will enable them to both effectively use today's technologies in the classroom as well as continue to develop and adapt to new technologies that emerge in the future. Knowledge of technologies and skills to use technologies in teaching-learning has gained huge importance for today's teachers. Educators are expected to successfully integrate technologies into the subject areas to make learning more effective and meaningful. This knowledge development during pre-service training has gained much importance with the notion that exposure to technologies during their training is helpful in increasing pupil teachers' willingness to integrate technology with classroom teaching. Pre-service teacher educators need to plan to use computers in their classrooms. In order to increase the technology proficiency of new teachers in class rooms, teacher training institutions should increase the use of technology integration in their own academic programmes (Grove, 2008).

Technological skills are very important for the teachers and teacher educators in 21st century to survive in the working world. With the advancement of ICT, the way of teaching and learning has also changed. Earlier, teaching learning was teacher-centered and lecture-based methods were dominant; but with the advancement of technology now it becomes student-centered and more interactive and interesting for students. Today a classroom without technology is incredible. As a consequence of development and with the passage of time, education system is much more advanced in 21st century as compared to 20th century. In order to prepare the prospective teachers for 21st century world they must be exposed to technological-based instructions at pre-service level. Student-teachers must be taught technological skills during their training so that they can use various technological tools like projector, laptop, LCD etc. in the classrooms while teaching the students and make teaching and learning process more interactive and effective. Student-teachers at pre-service level should master different technological tools and resources and their application software, to integrate various technological tools in teaching learning process (Paul, 2018).

Teaching is a comprehensive term; it is about covering the syllabus by providing information and knowledge to the learners. In the present era, the role of educator is shifting on account of expansion of information and skills. In order to teach the students effectively, teachers have to be techno-pedagogues. Teacher must have knowledge of different technological tools and resources used in teaching and learning process, methods and strategies of teaching and the content in order to make teaching learning more congenial and conducive because technology provides thorough knowledge to the students in every aspect of the content. Last but not the least, we can say that every educator must have sound knowledge of technology, methods of

teaching, subject matter and use latest technology in teaching and learning to improve the classroom teaching and to make it more effective and result oriented (Paul, 2018).

Various technological resources are being used by the teachers during teaching learning process to make teaching interactive and effective and some of the recent technology resources are being presented in the following paragraphs which were considered as technological skills in the present study.

Technology in the classroom

There are so many students that do not have browser skills, they don't know about various search engines. Teachers need to teach the students how to search the web more effectively so that they can easily access the information. If students want to search something, they should know the credible resource like under "Edu" or "org". Students need to learn the basics, how to do search as well as learn keyword searches.

Use Microsoft Office and Google Docs

With the advancement of technology *Microsoft Office* and *Google Docs* are widely used tools. Word, Excel, PowerPoint presentations are used in today's classrooms for teaching leaning as well as for other purposes in the educational institutions. These tools are used to create, store, edit and share file with others.

Collaborate with Other students Online

Technology allows students to collaborate with their teachers and fellows online. Students share and receive creative ideas by using several technological tools and resources in the classroom. They can visit a teacher's blog to connect, or connect with educators via social media or online. Technology can make a teacher's job much easier when they have access to a few quick tools with which they can collaborate with others.

Video Conferencing and Sharing Videos

Individuals these days seem to be more visual than in the past. This might be because of all the advanced technology that is at our fingertips. Video learning is among the top skills that today's teachers as well as students need to have. Teachers must know how to create a video and share it so that they can pass this skill to student-teachers. Many teachers are now posting their lessons on YouTube, while others are using video conferencing to connect with other classrooms from across the globe. Video teaching and learning is gaining so much momentum that all teachers and students must have this skill if they want to keep up with the times and connect with video conferencing.

Blogging

Blogging is another important technology skill to have. Blogging allows users to share their thoughts and ideas in an online format without having to visually see anybody and user also can create a free website if they want to blog about their lessons or connect to other users. Classroom websites are also becoming increasingly popular. In today's

college courses, prospective teachers are now being taught how to build a classroom website and use this platform for posting their reflections.

Use of Smart Board

Smart technology takes the form of an interactive whiteboard that many teachers use in their classrooms. Technology provides different ways and means for teachers to teach and for students to learn. Teachers find it easy to teach because this technology is able to support a wide variety of learning styles. It is also interactive, and can easily access online resources. This is a piece of technology that teachers as well as students need to learn if they want to grow in their field.

Use of Tablet

Many educational institutions across the world provide their students tablets or laptops or allow them to bring their mobile devices in the classroom. Many students think these devices are just for texting, taking pictures, listening to music, playing games and being on *Facebook, Twitter, and Instagram* etc. Teachers can show their students how these devices can be used to access various information that will help them in their learning (Turner, 2005).

TPACK FRAMEWORK AND ITS COMPONENTS

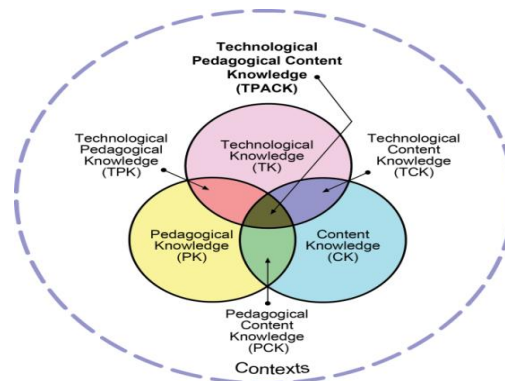


Figure 1: Mishra and Koehler's (2006) TPACK Model

(Retrieved from <https://matt-koehler.com/tpack2/using-the-tpack-image/>)

Technological Pedagogical and Content Knowledge refers to the knowledge about the utilization of technological tools and resources in different contents and practicing instructional strategies. Knowledge of TPACK helps educators to make learning of the subject simpler for learner by selecting appropriate teaching method and technological tools. TPACK helps the educators to update their knowledge and skills which leads to improvement in their professional growth and development. TPACK classroom environment helps the educators and pupils to communicate with others locally and worldwide (Sharma & Sharma, 2017).

Review of Related Literature

Cuckle, Clarke, and Jenkins (2000) conducted a study on teacher trainees' technological skills and its usage throughout their training and found that teacher trainees had good technological skills but did not use them properly to teach their students. Yurdakul (2011) recommended that pre-service educators must be given an opportunity to utilize advanced technologies throughout their training to develop their technological competency. In order to develop technological and pedagogical competency among pre-service educators' courses on technological and pedagogical must be started in teacher training colleges. Balgalimis, Cakiroglu, and Akyuz(2012) found that information and communication technology-based courses help teacher trainees to acquire technological and pedagogical skills and also develop conceptual understanding associated with the usage of ICT in teaching and learning process. AdeoyeandOjo(2014) conducted a research and investigated that pre-service educators' technological pedagogical and content knowledge. They found that 50% of the educators surveyed in the study had no basic awareness regarding technology. About half of participants involved in the study were conversant with technologies that can be applied in their field of the study. Kazu and Erten (2014) found that educators' self-efficacy views on TPACK did not change due to gender, age, duration of service, availability of internet in the school but educators' self-efficacy views on TPACK changed according to the faculty graduated from the institution. Monsivais, McAnally and Lavigne (2014) conducted a research and revealed that the integration of technologies in the teaching learning process depends on the educator's capability to support the learning atmosphere by utilizing effective technology-oriented pedagogies. Ozdemir (2016) found that pre-service educators' TPACK competency in the basic school teaching and kindergarten teaching was found to be high and found that technology and content development courses taken by the pre-service educators had favourable effects on their TPACK. Sathya and Venkateswaran (2017) found that B.Ed. pupil-teachers do not differ significantly in their technopedagogical skills with respect to subject they studied but differed significantly with those who have joined any computer course and who did not join any computer course. Jeyaraj and Ramnath (2018) found that TPACK of B.Ed. teacher trainees were average. Findings showed that B.Ed. teacher trainees differed significantly in their TPACK based on degree, access of e-content and use of technologies in teaching learning process. Kumar (2018) studied technological and pedagogical skills of educators teaching in secondary schools and found that educators teaching in secondary schools had good level of technological and pedagogical skills. Findings revealed that male educators had more technological and pedagogical skills than female educators. Guru and Kumar (2019) found that most of the educators had technological and pedagogical competencies but differ significantly in their technological and pedagogical competencies with respect to locality, and gender. Singh and Kasim (2019) recommended that pre-service teachers must have knowledge about technological pedagogical content knowledge approaches which help them to make their teaching more interesting, joyful and effective for students. Anderson and Putman (2020) found that educators who had good confidence level were better able to handle challenges

associated with usage of technologies and support their pupils than educators who had low confidence level.

In the review of literature, most of the studies show that student-teachers have average and moderate levels of technological and pedagogical skills. It has also been found from the review of literature that knowledge of TPACK help educators to select suitable teaching methods and strategies using technology to deliver the subject matter, teaching content appropriately, applying skills to encourage active involvement by students and make teaching interactive and effective.

Need and Significance

The role of technologies in the classroom is becoming gradually more prominent, both because of the need for students to advance skills that will empower them in modern society and because of the potential value of technologies as tools for learning. One of the challenges facing teacher educators at present is how to ensure that student-teachers' have the necessary combination of technological skills and pedagogical knowledge that will enable them to use technologies effectively in the classroom as well as continue to develop and adapt to new technologies that emerge in the future. Knowledge of technologies and skills to use technologies in teaching-learning has gained huge importance for today's educators. Educators are expected to know how to successfully integrate technologies into the subject areas to make learning more effective and meaningful. This knowledge development during pre-service training has gained much importance with the notion that exposure to technologies during their training is helpful in increasing student-teachers' willingness to integrate technology with classroom teaching. In order to increase the technology proficiency of prospective teachers, teacher training institutions should increase the level of technology integration in their own academic programmes.

The present study is significant because it is the first time that the technological and pedagogical skills of student-teachers have been studied in different institutions of Jammu District of J&K UT. The outcomes of the present study could be helpful for improving the student-teacher technological and pedagogical skills, as it would present clues about student-teachers technological and pedagogical skills, and it would be useful for all stakeholders who are directly or indirectly involved in teacher education system.

Objectives of the Study

1. To study the level of technological and pedagogical skills among student-teachers.
2. To study whether differences exist in the technological and pedagogical skills of student-teachers with respect to the
 - a. type of institution they are studying in ;
 - b. programme they are enrolled in; and
 - c. Semester of the programme they are enrolled in.

Hypotheses of the Study

1. Student-teachers' have average level of technological and pedagogical skills during their training.
2. There is no significant difference in the technological and pedagogical skills of student-teachers with respect to the
 - a. Type of institution they are studying in;
 - b. Programme they are enrolled in; and
 - c. Semester of the programme they are enrolled in.

Methodology

Methodology is an organization of methods used in a particular area of study and design is the conceptual structure within which research is conducted. The current study was based on a Descriptive Survey research design.

Sample

Population of the present study comprised all the student-teachers of Jammu District of Jammu and Kashmir UT (India). Sample for the present study comprised 150 student-teachers' of B.Ed. and M.Ed. programmes. Simple Random Sampling technique was used to select 150 student teachers from Colleges of Education of Jammu District of Jammu and Kashmir UT (India)

Tool used for Data Collection

A standardized tool namely "Teachers Technological Pedagogical Content Knowledge Scale" (TTPACKS) by Sharma and Sharma (2017) has been used to study technological and pedagogical skills among student-teachers for the present study.

Statistical Techniques Employed

After the collection of data, organization and presentation of data related to different aspects investigator has analyzed data by using the following statistical techniques;

- I. Percentage
- II. t-Test

Findings of the Study

Objective 1

To study the level of technological and pedagogical skills among student-teachers.

In order to study the level of technological and pedagogical skills among student-teachers, frequencies and percentages were computed for the data collected through Teachers' Technological Pedagogical and Content Knowledge Scale (TTPACKS). The results are presented in Figure 1.

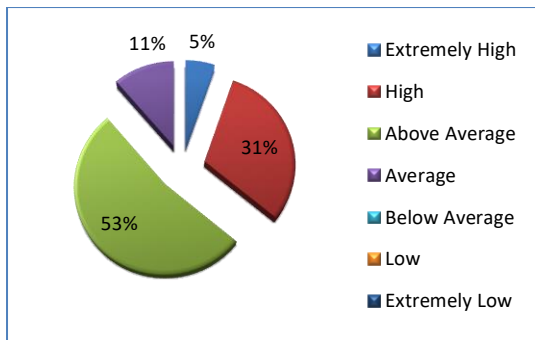


Figure 2: Percentage wise distribution of technological and pedagogical skills among student-teachers

Figure 2 depicts that 5.33% student-teachers have extremely high level of technological and pedagogical skills, 30.66% student-teachers have high level of technological and pedagogical skills, 52.66% student-teachers have above average level of technological and pedagogical skills and 11.33% student-teachers have average level of technological and pedagogical skills. Hence, the Hypothesis 1, i.e., student-teachers have average level of technological and pedagogical skills required for their training has been accepted.

Overall, it is concluded that student-teachers have the average or above average level of technological and pedagogical skills required for their training.

Objective 2a

To study whether differences exist in the technological and pedagogical skills of student-teachers with respect to type of institution they are studying in.

Mean, Standard Deviation and t-value for scores were computed to study whether differences exist in the technological and pedagogical skills of student-teachers with respect to type of institution they are studying in. The results are presented in Table 1.

Table 1

Type of Institution	N	Mean	SD	Std. Error Mean	df	t-value	Level of significance
Govt.	62	221.03	23.85	3.02	148	1.12	NS
Private	88	225.64	25.63	2.73			

Table 1 depicts that the mean score of student-teachers’ studying in Government institutions is 221.03 and Private institutions is 225.64, and the calculated t-value (1.12) is not significant. Thus, it can be inferred that there were no significant differences exist in the technological and pedagogical skills of student-teachers studying in Government and Private. Hence, the Hypothesis 2a i.e., there is no significant difference in the technological and pedagogical skills of student-teachers with respect to type of institution they are studying in has been accepted.

Thus, from the results it can also be seen that student-teachers’ studying in Private institutions have approximately same mean scores than the student-teachers studying in Government institutions.

Objective 2c

To study whether differences exist in the technological and pedagogical skills of student-teachers with respect to programme they are enrolled in.

Mean, Standard Deviation and t-value for scores were computed to study whether differences exist in the technological and pedagogical skills of student-teachers with respect to programme they are enrolled in.

Table 2

Programmes of study	N	Mean	SD	Std. Error Mean	df	t-value	Level of significance
B.Ed.	77	219.87	25.75	2.93	148	1.97	0.05
M.Ed.	73	227.82	23.53	2.75			

Table 2 shows that the mean score of student-teachers enrolled in B.Ed. programme is 219.89 and M.Ed. programme is 227.82, and the calculated t-value (1.96) is statistically significant at 0.05 level. Thus, the results reveal that significant difference exist in the technological and pedagogical skills of student-teachers enrolled in B.Ed. and M.Ed. programmes. Hence, the Hypothesis 2b i.e., there is no significant differences in the technological and pedagogical skills of student-teachers with respect to programme they are enrolled in has been rejected.

Thus, from the results, it can also be seen that student-teachers' enrolled in M.Ed. programme have comparatively higher mean score than the student-teachers' enrolled in B.Ed. programme. This means that student-teachers' enrolled in M.Ed. programme have acquired more technological and pedagogical skill as compared to the student-teachers enrolled in B.Ed. programme.

Objective 2c

To study whether differences exist in the technological and pedagogical skills of student-teachers with respect to semester of the programme they are enrolled in.

Mean, Standard Deviation and t-value for scores were computed to study whether differences exist in the technological and pedagogical skills of student-teachers with respect to the semester of the programme they are enrolled in.

Table 3

Semester of the Programme	N	Mean	SD	Std. Error Mean	df	t-value	Level of significance
III	90	222.98	25.06	2.64	148	0.45	NS
IV	60	224.86	24.91	3.21			

Results in Table 3 shows that the mean scores of student-teachers enrolled in semester III and IV of the programme is 222.98 and 224.86 respectively and the calculated 't' value (0.45) is not significant. Thus, the results shows that no significant differences exist in the technological and pedagogical skills of student-teachers enrolled in semester III and semester IV of the programme. Hence, the Hypothesis 2c i.e., there is no significant

difference in the technological and pedagogical skills of student-teachers with respect to semester of the programme they are enrolled in has been accepted. As, the mean score obtained by student-teachers' enrolled in semester IV of the programme found to be same than that of the mean score obtained by student-teachers' enrolled in semester III of the programme.

Educational Implications of the Study

In the present study, majority of student-teachers have average and above average levels of technological and pedagogical skills, therefore, there is a need to either maintain or enhance the student-teachers technological and pedagogical skills irrespective of types of Institution (Govt./Private), and semester (III & IV) of the programme they are enrolled in so that they can face their pupils belonging to digital age and also to face the challenges in the modern classroom. However, in case of B.Ed. students more efforts have to be made to make them more tech-savvy as compared to the M.Ed. students. For this, teacher training institutions and their stakeholders need to use latest technologies and modern teaching methods in the classrooms and provide theoretical as well as practical orientation to student-teachers regarding pedagogical approaches, encourage student-teachers to use technology from grass-root level so that their technological skills develop from grass-root level, teacher educators should encourage student-teachers to use online resources by providing internet and computer facilities. Training should be given to student-teachers in basic technological tools like MS-Excel, MS-Word, MS-PowerPoint etc. Seminars and workshops should be organized for student-teachers in order to develop their technological and pedagogical skills.

Suggestions for Further Research

1. The sample consisted of 150 student-teachers belonging to three institutions of Jammu District of J&K UT only. It would be worthwhile replicating the present study involving a large sample selected from other districts of Jammu and Kashmir and from other states and union territories of the country.
2. Present study was conducted on technological and pedagogical skills of student-teachers. The study can be further conducted on technological and pedagogical skills of teacher educators.
3. Present study was conducted on variables as type of institution, programme and semester. Study can be further conducted on variables as locality and gender etc.
4. Teacher educators' use of technological pedagogical content knowledge for instructional practices can be studied in relation to other variables.
5. The relationship between the availability of technological tools and the student-teachers interest and aptitude towards technological tools may be studied.
6. This study has been conducted only on B.Ed. and M.Ed. student- teachers. Similar study could be conducted on students of D.El. Ed. and integrated programmes (ITEP) students.

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Cyber Safety and Security Awareness through Student Education on the Digital Frontier

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Abstract

Our Prime Minister Shri Narendra Modi said, "I dream of a digital India where cyber security becomes an integral part of our National Security".

Today the internet has a profound impact on humans, facilitating advanced communication, interactions, and information exchange at global level. Online learning offers numerous educational opportunities. However, along with these opportunities, there are significant negative consequences. The ubiquitous availability of the internet has led to an increasing threat to cyber safety and security. In the era of digitization and online learning, it is essential to sensitize each and every individual to cyber threats. To ascertain that internet users, especially young people, need awareness and knowledge of cybersecurity. Education on safe practices in cyberspace is crucial.

This paper focuses on significance of educating students and other stake holders about cyber safety. It also provides knowledge for various initiatives and programs aimed at promoting cyber safety. Initiatives such as the Indian Cyber Crime Coordination Centre (I4C), G20-Stay Safe Online Campaign, Cyber Jaagrookta Diwas, provisions of students' rights and safety in NEP-2020, and Safer Internet Days and many more which aim at promoting cyber safety.

The study provides strategies for educators to promote cybersecurity education in learning institutions. The study identifies the roles of parents, teachers, schools, and the government in facilitating cyber safety and security. Furthermore, it focuses to identify best practices and strategies for cyber sensitization. The results of this study provide insights into directing and supporting individuals in managing the online world safely and responsibly. The findings of the study also inform policies and practices related to online safety and security.

Keywords: Cyber Safety and Security, Indian Cyber Crime Coordination Centre (I4C), G20-Stay Safe Online Campaign, NEP-2020, Online Bullying, Cyber Jaagrookta Diwas, Safer Internet Day.

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Introduction

The entire nation came together to celebrate Azadi ka Amrit Mahotsav and 75 years of Independence. It is a moment of pride for India as it got the opportunity of the Presidency of the G20 for a year, starting from 01 December 2022 to 30 November 2023. India's G20 Presidency under the theme of - "Vasudhaiva Kutumbakam" or "One Earth, One Family, One Future" - drawn from the Sanskrit phrase of the Maha Upanishad, which means "The World Is One Family".

The information and communication technology has become an integral part of our life. Education and the online world have become closely intertwined in recent years. After pandemic the alteration from online classes to offline has revealed change in the learning pattern of students and the teaching methodology of teachers too.

Currently, children have a tendency to use the internet frequently in order to expand their knowledge and learn about various informative subjects. It is also important for parents to not only offer books to their children but also monitor their online activities, such as the websites they visit and the type of personal information they share on different applications and websites. Both physical and virtual supervision is necessary to ensure the safety of children. Additionally, educational institutions also rely on online platforms, which expose valuable data of students, teachers, and administration on the internet. Hence there is increased challenge in maintaining and protecting them from cyber-attacks.

The integration of Information and Communication Technology and the internet has become an integral part of the education system. Various online platforms, search engines, online libraries, and different educational websites have revolutionized the ease and accessibility of knowledge from any location worldwide. The internet provides an extensive range of information on almost any imaginable topic. Many educational institutions have adopted a blended learning approach. This approach enables students to access course materials, collaborate with peers, and submit homework, projects and assignments online while still benefiting from face-to-face interactions with teachers and classmates. However, it is crucial to recognize the potential challenges associated with online education, including the digital divide, privacy concerns, and the necessity of digital literacy. Ensuring cybersecurity is of utmost importance in the realm of online education. As the online world becomes increasingly integrated into educational practices, it is vital to prioritize the security and privacy of students, teachers, and educational institutions.

Cyber Crime

Cybercrime is a type of offences involving internet or mobile technology. The computer may have been used in committing the crime, or it may be the target. Cybercrime may harm someone's security or finances. Cyber criminals use online platforms to target victims. Children are more vulnerable to cyber threats. So, the cyber security concerns arise.

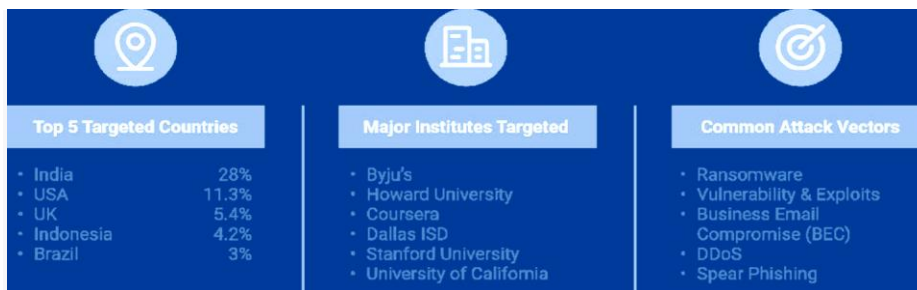
Encouraging youth to switch off or avoid technology however, is impossible and overall unrealistic and ineffective in long-term practices (Hinduja & Patchin, 2009). Technology is universal and now integrated virtually in all aspects of their lives (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013).

According to Source required “Cyber threats targeting the global education sector on the rise”, the report shows the cyber-attacks on the education sector in 2021. A study by CloudSEK revealed a 20% increase in cyber threats pointing towards the global education sector in the first quarter of 2022, as compared to the same period in 2021. The growing global education and training area is a nurturing environment for cybercriminals targeting all stakeholders and institutions in the sector. Remote learning, digitization of education, and prevalence of online learning platforms are key triggers that enlarged the attack surface.

According to XVigil data, approximately 5% of detected threats in 2021 specifically aimed at educational institutions. The primary causes for this trend are outlined below:

- In response to the disruptions caused by the pandemic, schools, universities, and institutions transitioned to online learning.
- Extensive digitization of educational materials, student records, and administrative processes.
- Online learning platforms that cater to diverse age groups, from preschoolers to retired professionals.

In summary, the data from XVigil highlights that a small but significant portion of threats targeted the education sector in 2021. This can be attributed to the widespread adoption of online learning, digitization efforts, and the inclusive nature of educational platforms.



Source: Cloudsek, “Cyber Threats Targeting the Global Education Sector on the Rise”

Indian educational institutions and online platforms bore the brunt of cyber threats in the Asia-Pacific region, accounting for 58% of the detected attacks. Prominent entities such as Byju's, IIM Kozhikode, and Tamil Nadu's Directorate of Technical Education were specifically targeted in these malicious activities.

Data gathered by XVigil, indicates that the majority of cyber incidents in 2021 targeted educational institutions in Asia & Pacific, followed by Europe, North America, South/Latin America, and the Middle East.

CloudSEK's investigation reveals that, the threats detected in Asia & Pacific, 58% of them were targeted at Indian or India-based educational institutions and online platforms. This included attacks on Byju's, IIM Kozhikode, and Tamil Nadu's Directorate of Technical Education.

By investing in robust cybersecurity measures and promoting cybersecurity awareness, educational institutions can create a secure and trusted online learning environment for their students and staff.

Cyber Safety and Security

Cyber safety, also known as e-safety, involves the efforts to enhance users' knowledge and understanding of potential threats to personal information and property when using the internet. It encompasses measures taken to safeguard oneself against computer crimes and ensure personal safety and security. Cyber safety means taking measures to protect oneself and others from online risks, such as cyberbullying, identity theft, information hacking, malware, and other forms of online exploitation.

Cyber safety and security, indicate safe and responsible utilization of the internet accompanying other digital devices, tools and technologies. It is associated with taking actions to safeguard oneself and others from unauthorized access, theft or disruption. It is about keeping information safe and secure coupled with being responsible and respectful for others.

Cyber bullying

Online abuse/ Cyberbullying refers to harassing, noxious behaviors that are directed towards an individual or a group of individuals via digital devices and communication technologies such as online and social media, messaging or email platforms. Cyberbullying may possibly include threats, hacking, insults, derogatory and offensive comments, stalking, or hate speech.

In several ways, cyberbullying may be anticipated as more dangerous than "off-line" (i.e., traditional or in-school) bullying since these attacks can be more potent, frequent, unsuspecting, and seemingly never ending (Hinduja & Patchin, 2009).

Online bullying may have serious negative repercussions for the victims, ranging from emotional affliction, apprehensions, anxiety, concerns, self-punishment, human trafficking and even self-annihilation. The invisibility and the easy transmission on the internet can make it easier for offenders to involve in such behaviors with hidden identity.

Cyber bullying also can undoubtedly be even more ferocious than off-line bullies because, along with words, they can incorporate as part of their attacks a rich array of media including sounds, modified photos, text, video, slide shows, and polls (Li, 2007, Sabella, 2008).

Few cases reported by students of class 10th from reputed schools of South Delhi, are given below:

CASE 1: Nimisha, a student of class 10th from a reputed school of South Delhi reported that during pandemic her password was hacked by unknown and the hacker started sending weird messages in the classroom chat box.

CASE 2: Shivangi, a student of class 10th from a reputed school of South Delhi reported that during pandemic her school ID was hacked and the hacker joined the online classroom with her name and start abusing in the classroom. Her teacher reported to their guardian and they scolded her for something she had not done. This is more severe behavior of cyberbullying.

CASE 3: Vivan, a student of class 10th from a reputed school of south Delhi reported that during pandemic he was removed from the online classroom by unknown ID, while giving answers to the teachers. He missed many classes due to this issue. This is also a more severe case of cyberbullying.

CASE 4: Deepak (name changed), himself admitted that he used to join the online class with different ID and disturb the whole class by playing songs and remove other students from the online class.

It may be difficult to sense if a child has been abused online, since many children do not report such incidents due to unease, anxiety, discomfort, or embarrassment. Although, there are some manifestations and conducts that may indicate that a child has been bullied online. These may include sudden changes in behavior, seems to be hiding something, withdraws from activities they previously enjoyed, unexplained physical symptoms, spending more time online etc. may hint that they are experiencing online harassment.

If it occurs, it is crucial to take action. This may include speaking with the child and offering assistance and means, reporting the abuse to administration, and looking for professional help and taking legal actions if necessary.

Online abuse is unacceptable, and no one deserves to be targeted or harassed. It is important to create a safe and respectful online environment for all users.

Significance of Educating Students about Cyber Safety

Cyber safety education and awareness is of utmost importance in today's digital world. With the advancement of technology and the widespread use of the internet and technology, students are more exposed to various online risks and threats. Here are some key reasons why educating students about cyber safety is significant:

1. Protection from online hazards: Students should acquire knowledge about possible perils like cyberbullying, online predators, identity theft, phishing scams, and malware. By understanding these risks and acquiring the necessary skills to shield themselves, students can reduce the possibility of becoming victim to these threats.
2. Responsible digital citizenship: Educating students about cyber safety encourages them to act responsible online. They gain understanding about the significance of respecting others' privacy, avoiding plagiarism, and adhering to ethical principles

while using online resources. This cultivates a tendency of digital citizenship and promotes positive online interactions.

3. Preventing cyberbullying: Cyberbullying has become a prevalent issue among young individuals. By teaching students about cyber safety, they can identify the signs of cyberbullying, comprehend its impact on individuals, and learn strategies to prevent and address such occurrence. Empowering students to be active supporters rather than passive observers can help foster a safer and robust online environment.
4. Protecting personal information: Many students unknowingly disclose personal information online without realizing the potential repercussions. Educating them about the importance of safeguarding personal details, such as passwords, addresses, and phone numbers, we can mitigate the risk of identity theft and other forms of online fraud.
5. Critical thinking and media literacy: Cyber safety education also highlights the importance of critical thinking skills and media literacy. Students acquire the skills to assess the credibility and trustworthiness of online information, recognize misinformation or fake news, and cultivate a healthy skepticism towards online content. These skills are crucial in an era of information overload.
6. Balancing screen time and well-being: Educating students about cyber safety involves highlighting the significance of maintaining a healthy balance between screen time and other activities. It promotes awareness about the potential negative effect of excessive screen time on physical and mental well-being, sleep patterns, and family-social interactions. Students develop the ability to make informed decisions and practice self-control regarding their digital media consumption.
7. Future employability: In the modern era, proficiency in digital literacy and cyber safety knowledge are becoming essential skills in the workplace. Through cyber safety education, schools prepare them for future careers that demand responsible and secure online practices. These skills provide chances of their employability and protect their professional reputation.

In a nut shell, educating students about cyber safety can prepare them with the required knowledge and skills to navigate the online world in a safe, responsible, and ethical way. It empowers students to make informed decisions, protect themselves and others, and become responsible digital citizens.

Existing Initiatives and programs aimed at Promoting Cyber Safety in Schools.

- Indian Cyber Crime Coordination Centre (I4C)
- Cyber Safety booklet for Children (CBSE)
- A Handbook for Adolescents/ Students on Cyber Safety
- Cyber Safety and Security: Guidelines for School (NCERT)
- Safer Internet Day (Annual Global Event)
- NEP-2020 and cyber safety
- G- 20 India's Presidency and Cybersecurity

- Stay Safe Online Campaign
- G20 Cyber Security Exercise and Drill
- Artificial Intelligence (AI) role in Cyber Safety

Indian Cyber Crime Coordination Centre (I4C) – A 7-Pronged Scheme to Fight Cyber Crime

Ministry of Home Affairs GOI initiated Indian Cyber Crime Coordination Centre (I4C) in 2018, to combat Cyber Crime effectively in our country, in a coordinated and effective manner.

The 7-Pronged Scheme to Fight Cyber Crime are:

1. National Cybercrime Threat Analytics Unit.
2. National Cybercrime Reporting Portal.
3. Platform for Joint Cybercrime Investigation Team.
4. National Cybercrime Forensic Laboratory Ecosystem.
5. National Cybercrime Training Centre.
6. Cybercrime Ecosystem Management Unit.
7. National Cyber Research and Innovation Centre.

The Indian Government has also initiated Cyber crime reporting Portal to allow citizens to intimate online content pertaining to Child Pornography (CP)/ Child Sexual Abuse Material (CSAM) or sexually evident content such as Rape/Gang Rape (CP/RGR).

This portal provides a platform to register any cyber-crime. The parents can also use this portal to report there with or without their names. Experts and lawyers are working in this field to deal with various cyber issues. For each kind of abuse there is a different section like 65A, 66B, 66C etc.

The Indian Cyber Crime Coordination Centre (I4C) has put forth a proposal to observe "Cyber Jaagrookta (Awareness) Diwas" on the first Wednesday of each month, starting from 6th October 2021. The aim is to raise awareness among students, teachers, and parents in schools, colleges, universities, Panchayati Raj Institutions (PRI), and Municipalities by involving District Magistrates Police Authorities, Officers of Education Department, etc. to deal with cybercrimes in a coordinated and comprehensive manner.

The Indian Government also has taken measures to spread awareness on cyber-crime issues, cyber related alerts/ advisories, capacity building/ training of law enforcement officers/ judges/ prosecutors, improving cyber forensics facilities etc. to prevent cyber-crime and expedite investigations. The Law Enforcement Agencies take legal action as per provisions of the law against the reported cyber-crimes (Source: Minister of State for Home Affairs, Shri G. Kishan Reddy minutes in RajyaSabha).

Cyber Safety booklet for Children (CBSE)

The CBSE (Central Board of Secondary Education) has developed a handbook called "Cyber Safety booklet for Children" that focuses on enhancing the digital experiences of

children and young individuals. The primary objective of this book is to raise awareness about the functioning of digital devices and technologies, including their potential opportunities, risks, and threats. It emphasizes responsible use of technology to maximize benefits while minimizing potential harm. The booklet talks about nine key aspects of digital citizenship, including digital access, digital literacy, digital communication, digital commerce, digital etiquette, digital health and wellness, digital rights, freedom and responsibility, digital security, and digital laws.

The objective of the "Cyber Safety booklet for Children" is to instill the principles of digital citizenship, enabling children to become smart and safe users of technology. The booklet emphasizes that not only children but also teachers, school administrators, and parents should be aware of the potential cyber threats. It aims to impart knowledge, skills, and the capacity to be responsible digital citizens. The booklet also raises awareness among children about their rights and responsibilities in online behavior. It provides comprehensive guidance for secure digital access, digital literacy, and effective digital communication. Additionally, it offers valuable information on digital commerce, digital etiquettes, and digital health and wellness. The booklet delves into the topics of digital rights, freedom and responsibility, digital security, and digital laws. It ends with a checklist to help children be smart online, along with useful contacts for assistance. Ultimately, the purpose of this handbook is to equip children and young people with the ability to use modern technologies and digital devices in a smart and safe manner, while promoting responsible and rational online behavior.

A Handbook for Adolescents/ Students on Cyber Safety

MHA, GOI, has prepared a handbook for Adolescents/ Students on Cyber Safety and security in consultation with cyber security experts. This handbook intends to create awareness among citizens specially students about cyber safety. This book is only for general guidance.

The book highlights that children are particularly vulnerable to cyber-attacks due to their limited understanding of cyber threats and protective measures. As children often use the internet for educational purposes, there is a crucial need for proper guidance to protect them from cyber-attacks. The main goal of the book is to help children comprehend the cyber world and equip them with the knowledge and skills to become responsible and cautious cyber citizens in the future. It explains the techniques employed by cyber criminals, particularly focusing on the risks associated with email usage, and provides safety tips to help children securely use email. Additionally, efforts are being made to incorporate financial education in schools to prepare students for the future.

The book emphasizes the significance of cyber security as a pressing concern. It outlines various cyber threats that can have a significant impact. The booklet specifically addresses issues such as cyber bullying, cyber grooming, online gaming risks, email fraud, and online transaction fraud. It also provides guidelines on safeguarding social networking profiles. It emphasizes the dynamic nature of the digital world, which

continuously evolves, leading to changes in cybercrime cases. Therefore, it becomes the responsibility of every individual to stay updated with new technologies to ensure safer internet usage. As agents of change, students are encouraged to share their knowledge with peers and parents, contributing to a safer cyber space.

Cyber Safety and Security: Guidelines for School (NCERT)

“Cyber Safety and Security: Guidelines for School” this booklet is developed by CIET, NCERT. The booklet focuses on five important steps to guarantee cyber safety for children.

1. Identify threat vulnerability and assess risk exposure.
2. Develop protection and detection measures.
3. Protect sensitive data.
4. Respond to and recover from cyber security incidents.
5. Educate your stakeholders.

The booklet explains how to identify cyber-attacks. Booklet suggests how to develop protection for data online and how to protect sensitive data like password, contact number, Aadhaar number etc. This also directs initial assessment to respond, how to recover systems and data, and how we can investigate incidents. Finally, it also suggests how to prevent re-occurrence. Finally, booklet says about how to educate your stakeholders.

Thus, the booklet focuses on the safe and responsible use of information and communication technology along with internet. On the last page a complex figure is presented which shows the major threats to cyber security, various means to protect the data online and what are the safe practices that should be followed while being online.

Safer Internet Day (Annual Global Event)

Safer Internet Day, celebrated on 7 February 2023, is an annual global event observed on the second day of the second week of February. Its primary objective is to raise awareness about online safety concerns and foster good practices for internet users, especially among young individuals. Initially started in 2004, this day has gained international recognition, with over 170 countries participating in its festivities.

It gives an opportunity for individuals, organizations, and governments to join and share means, resources, strategies, and initiatives for enhancing cyber safety. Every year, the day has a different theme, and various activities are organized revolving around that theme. Previous themes have included "Together for a Better Internet" and "Create, Connect, and Share Respect: A Better Internet Starts with You."

By commemorating Safer Internet Day, individuals and various organizations contribute to the advancement of a safer, secure, and respectful online environment for all.

NEP-2020 and Cyber Safety

The National Education Policy 2020, in paragraph 8.11, emphasizes the significance of giving utmost priority to the safety and rights of children and adolescents in the school system. This includes special consideration to the well-being of girl children and addressing challenging issues faced by adolescents, such as substance abuse, discrimination, harassment, and violence. The policy highlights the establishment of dependable reporting mechanisms to report and address any violations or infringements against the rights and safety of children and adolescents, ensuring clear and efficient processes.

G- 20 India's Presidency and Cybersecurity

With India's G-20 presidency, the world looks up to India for leadership, policy and collaboration. Countries need to collaborate to tackle cybercrime. The prime focus of the G20 is economic cooperation and financial stability, it also recognizes the importance of cybersecurity in today's interconnected world.

With the increasing reliance on digital technologies, cybersecurity has emerged as a critical issue for governments, businesses, and individuals. Recognizing the significance of this issue, the G20 acknowledges the necessity for collective efforts to tackle the ever-evolving cyber threats and promote cybersecurity measures worldwide. Here are several essential aspects of the G20's engagement in the field of cybersecurity.

1. Important agenda: The G20 recognizes cybersecurity as an important agenda. Member countries exchange information and share best practices to enhance cybersecurity capabilities and resilience.
2. International cooperation: The G20 promotes international cooperation and information exchange among member countries to deal with cyber threats effectively. This includes sharing threat intelligence, best practices, and capacity-building initiatives.
3. Policy development and coordination: The G20 encourages member countries to develop and implement robust cybersecurity policies and frameworks. It emphasizes the importance of coordination between governments, private sector entities, and other stakeholders to address cyber threats collectively.
4. International norms and rules: The G20 fosters international norms and rules for responsible state behavior in cyberspace. This includes promoting discussions on issues like cybercrime, data protection, and the protection of critical infrastructure.
5. Capacity-building and awareness: The G20 identifies the value of building cybersecurity capacity and raising awareness among governments, organizations, and individuals. It encourages the development of training programs, educational initiatives, and public-private partnerships to enhance cybersecurity skills and knowledge.
6. Public-private cooperation: The G20 acknowledges the significance of public-private cooperation in addressing cybersecurity challenges. It encourages collaboration

between governments, businesses, and civil society to develop innovative solutions, share expertise, and promote cybersecurity best practices.

7. Cross-border cybercrime: The G20 focuses on combating cross-border cybercrime through international cooperation and legal frameworks. It promotes efforts to strengthen law enforcement cooperation, information sharing, and extradition processes for cybercriminals.

By recognizing cybersecurity as a priority and fostering international cooperation, the G20 aims to enhance global cyber resilience and ensure a safer digital environment. The forum provides a platform for discussions, sharing and exchange of knowledge, and collaborative efforts to address the evolving cyber threats that impact economies and societies worldwide

The anonymity of cyberspace is being abused by cyber criminals to launch cyber-attacks against governments, industries, energy companies, and financial and educational institutions. Even critical sectors like health are not spared. India has also refocused on the significance of creating strength, secure, and user-friendly digital platforms.

Stay Safe Online Campaign

During India's presidency of G20, Ministry of Electronics and Information Technology is running a campaign titled 'Stay Safe Online' that aims for developing awareness among each and every citizen including specially-abled persons to stay safe in online world on the increasing use of online platforms and rapid use of digital and online payments. This campaign focuses on cyber sensitization of all users for online threats & safety measures and promoting cyber safety thereby reinforcing the cyber safety of citizens.

Citizens of all age groups, covering rural and urban areas, with special emphasis on children, students, women, teachers, faculty, senior citizens, specially-abled persons, officials of Central & State Governments etc. are invited to participate in the Stay Safe Online campaign.

G20 Cyber Security Exercise and Drill

As cyber threat escalates, G20 took it as an opportunity to devise security plan. The Indian Computer Emergency Response Team (CERT-In) conducted this Cyber Security Exercise and drill in hybrid mode.

According to the [Global Cybersecurity Outlook](#) report 125% of cyber-attacks increased between 2021 and 2022 – and this trend continued in 2023. There are incidents of ransom-ware attacks in India in 2022.

The recent ransom-ware attack at a medical institute in India and a similar attack in hospitals in Europe and the US show that in cyberspace, threats are not isolated to a specific country. Countries need to collaborate in tracing and unmasking the perpetrators of cyber threats. India will endeavor to build consensus among G20 members and effectuate a multilateral cooperation framework for a safe, trusted and

resilient cyberspace, while building capacity for cyber education among students, youth and all stakeholders.

Artificial Intelligence & Cyber Safety

AI also worked as a good resource for cyber safety. AI works as a protecting shield to secure and protect users from getting connected to malware/trojan/phishing/fraud or other malicious or destructive sites. AI defends by special features like using cases, including face and voice recognition, analytics, decision-making and autonomous driving. AI is being used in cyber security for offensive and defensive roles. Conventional security threats like ransom-ware, phishing, social engineering, and security misconfigurations will continue to exist as cybercriminals become more advance.

“There is an urgent need to work collectively to build joint resilience to counter cyber-attacks.” Shri Alkesh Kumar Sharma

Implications

In today's world, cyber security has become synonymous with internet. During pandemic, the whole world witnessed an increase in cyber-attacks. In the post pandemic era, cyber security has emerged as a key area of focus in government and private sectors. With the success of 'Digital India', India has come a long way in digitization. In our rapidly evolving world, new and advanced technologies such as AI/ML, cloud computing, digital banking and currency, online education, virtual and augmented reality have become integral parts of our lives. These technologies have interconnected various aspects of our lives to the internet, making everything accessible with just a single click. However, this widespread connectivity also creates opportunities for cybercrime on a global scale. To address this challenge, the launch of the "stay safe online" campaign aims to empower individuals to protect themselves and maintain security while using the internet.

Conclusion

Along with the swift advancements in technology, online world and the increasing the potential risks of cyber threats, it is imperative for individuals, agencies, institutions and governments to prioritize cybersecurity measures. By developing a habit and culture of awareness and providing global education on cyber safety, we can provide individuals with the knowledge and skills to navigate the digital world responsibly. This includes understanding inherent threat, practicing good digital hygiene, secure personal information, and promoting ethical online behavior.

Under the inspiring leadership of our Prime Minister Shri Narendra Modi, India has actively embraced the worldwide technological revolution. In the course of India's G20 presidency, the country has earnestly joined international endeavors to enhance awareness and convey the global imperative of cybersecurity. Through cumulative efforts, collaboration, and ongoing learning, we can create a safer and more secure digital frontier for everyone.

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Mitigation of Academic Anxiety: A Psycho-Social approach of Optimizing Learning

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Abstract

Like cognitive factors, non-cognitive factors also influence learning. Emerging new learning trends are posing new challenges to teachers and learners both. Each individual has his or her own optimal approach to learning. Today, in globalised world, academic excellence has become secondary to academic grades. Under the pressure of information technology 'Human beings are going to be mechanized'. We measure learners by their output, efficiency and academic productivity. This approach produces the academic anxiety. The impact of academic anxiety on school achievement is well known. It interferes with learning in all conditions. Learning along with anxiety is transitory and not permanent. Mitigation of anxiety and in result, optimizing the learning is not a mechanical process. It has psycho-social orientation of teaching-learning. This paper highlights these teaching learning orientations for optimizing learning and mitigating the academic anxiety.

Key words: Academic anxiety, Psycho-Social approach, Learning

Introduction

We judge intellectual abilities of learners in the form of personal learning. Learning and anxiety are complementary to each other. Both have wide connotation in education system. Our learning system is passing through a phase of rapid change and fundamental reconstruction so that the outcomes seem uncertain. After the advent of chat-GPT, differences between human cognitive learning and computer cognitive capabilities have blurred. Today, cognitive abilities like creativity, learning and thinking across domains not remained a unique human attributes. To manage new changes in learning system, teachers had to make change in their philosophy of teaching, methods of teaching and treatment to learning. Biesta, et. al.(2011) acknowledge that unless we

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have a clear concept of what we mean by 'learning' we cannot usefully optimize it and different approach of 'learning' for instance, as changing behaviour, as processing information, as acquiring knowledge have different areas of focus (p.233). In such condition, teachers had to take responsibilities to change the approach to understand the learning process of learners. Ottaway (2018) suggested that "teachers to-day cannot succeed unless they are able to adjust, adapt and rethink their methods to meet the changing demands of a changing world". Printed and non-printed media is considered invaluable means of learning. As we know that learning is complex and sensitive process that is immensely affected by both kinds of media. Use of information technology in media led revolution in access and use of it in learning process. Internet has made immense amount of information easily available on Google. Easy reach to content with the help of IT, produces psychological changes in learner about it. Immense availability of non-print media led in-attention and diversion in thinking. In this strange situation, learner is not in position to organize the available information and then transform it into knowledge and understanding. This dilemma creates 'source use anxiety' or 'excess availability anxiety' in learners. There is no dearth of subject information, but "how to use it" is the source of anxiety and producing negative outcomes in academic achievement. This situation seems difficult to control. Result is lack of learning and rising anxiety among learners. Media has become 'uncontrolled monster' and it is sapping the ability of critical thinking and creativity. As (Olson & Hergennahn, 2017) mentioned that "learning is one of the most important topics in contemporary psychology, yet it is an extremely difficult concept to define". No doubt, learning is a continuous process in human life. Simple learning is not sufficient, but 'what' and 'how' in regard of learning is also important. NEP-2020 endorsed this idea in these words, "it is becoming increasingly critical that children not only learn, but more importantly learn 'how to learn'".

What is academic anxiety?

Anxiety is the most popular buzzword of our times. Anxiety is a universal aspect of human existence. It is an inescapable part of life. Everyone has some bit of experience of it. For understanding the true nature of academic anxiety; a certain construct should be identified. In educational context, anxiety is a situation specific. Immediate environment of educational institution, teacher's behavior, personality and curriculum activities may create academic anxiety. Disturb attention, diverted learning and difficulties in retrieval of information are result of anxiety. Mechanically memorization of content induces anxiety just before examination that badly affect examination result. An adolescent believes that exam result is the only criteria for success in life. Pressure, to deliver outstanding performance from the side of parents, school administration, relatives and peer group, causes the extreme anxiety. The narrative of competition fills the surroundings with negativity and stress. Academic anxiety produces irrelevant thoughts that initiate academic difficulties with reduction in attention and concentration. Any change or slight disturbance in school system (in all components) initiates the academic anxiety.

Anxiety is a fact to be acknowledged and preparation must be in place to deal with. The effects of anxiety on school learning are well observed. Anxiety can be the cause or effect of poor learning. Anxiety is a 'general uneasiness and sense of tension'. It has both cognitive and affective components, worrying about failure and rising heart beat are its symptoms respectively. Any academic activity that threatens the well-being of a learner is termed as stress whereas constant stress gives rise to academic anxiety. In general, there are two types of anxiety trait and state anxiety. State anxiety is specific and aroused by specific situation with which individual deals. Academic anxiety is a kind of state anxiety. Anxiety has flexibility in degrees. A mild level of academic anxiety is good thing because it encourages learner to accomplish academic task. That is why; anxiety is not always considered a harmful thing unless it crosses the plimsoll marks. It also has environmental base like poor instruction and inefficient teaching methods. Bad school environment induces anxiety disorder among learners when they experience overwhelming sense of fear about teacher's behavior and certain others activities in school. Child develops fear of going to school that directly hampers school learning. A general stereotype in regard to girls is that they perform less in math than boys. Teacher's stereotyping behaviour towards particular subject, discriminatory attitude and prejudices are the causes of anxiety. These kinds of behaviour increase academic anxiety and reduce working memory capacity and also decrease interest and engagement in learning task. Academic anxiety is also the result of biochemical changes in the body and the brain of learners.

Psycho-social approach and learning

Learning is change in behaviour as a result of experience. It is natural instinct of human being. Effective learning is the result of both cognitive and non cognitive factors. With intelligence and capacities (cognitive), motivation (non-cognitive) also impact learning. Cohen, et al.(2018) argued that "effective learning is influenced by interrelated non-cognitive elements of personality such as motivation, self-esteem, self-image, disposition and attitude towards learning, interest, sense of responsibilities" (pp.70).

Life is a constant process of teaching and learning. In one sense, every child is exceptional, that is why, learning process is also complex in the same line. Slavin (2018, p.302) argue that "no two children are exactly alike in their ways of learning and behaving, in their activities and preferences, in their skills and motivation". Learning is a kind of exploration. It happened in multidirectional and at rare moment. Krishnamurti (2021, p.121) observed that "this happens at rare moments when there is exploration, when both the teacher and the student are exploring together". Optimize learning happened when both; teacher and learner become complementary to each other. Freire (2017, p.45) accepted that "both are simultaneously teachers and students". Teacher as an adult companion in learners' life has plenty opportunities in learner's personal and social development. When learner faces emotional and interpersonal problems, chaotic and disturb home lives, teacher care in school save learner to be suffered from anxiety. Teacher's specific and general 'life and teaching' style like reinforcing inputs firmly but not punitively, show respect and genuine concern towards learners mitigates anxiety

and optimize all kinds of learning. When a learner is prevented by teacher, from engaging in learning activities and assuming responsibilities for which he is ready, in result the inner reaction is that of resentment, anger and anxiety. It has the potential of further aggravating the trust deficit among learners and teachers. Learners do not easily master skills with high proficiency. They take long time. Learner experiences sympathy and support from teacher that leads to intimacy between teacher and learner. Partial or total failure in task does not have to make the learner feel inadequate and anxious. Learner's growth and development should not to be dominated by the teacher's need and expectation of efficiency. As Ginott observed that "efficiency is the enemy of infancy". It is harmful in terms of emotional economy. Stress on efficiency saps learner's energy, prevents growth, stifles interest and may push him into constant anxiety. Learners need opportunities to experiment and learn without being pressurized. School is a social institution and possesses multiple capacities to influence learner. Schools can be regarded as 'complex adaptive system' (Kaufmann, 1995). The school has a special environment to facilitate the maximum learning of learner. School provides conditional environment to motivate learner to take initiative for learning. Dewey (2019, p.20) argued that "we never educate directly, but indirectly by means of the environment". School environment is nurtured through psycho-social orientation of all stake holders of school. In school, learners are connected to families, teachers, peers, society and other social groups. Teachers are connected with other teachers, support agencies, policy making bodies and also funding bodies. In this way, child is not isolated island, but is associated externally and internally in several directions. A stubborn parent thrust their pre-determined goals on children and becomes the constant cause of anxiety. Marks below eighty per cent are treated as symbol of academic carelessness of learners. Reaction of parents and society to exam result is the most defining to nurture the exam trauma. 'Increased aspiration' of the students belonging to marginalized section of society has turned into academic anxiety and fear when their big academic dreams were not materialized due to teacher's biased approach towards them in the classroom activities. Frequent change of subject teachers produces stranger anxiety that minimize the normal subject learning. There is also a relationship between the quality of sleep and degree of anxiety. Quality sleep is related with eagerness to learn and poor quality sleep induced debilitating anxiety and low school learning. Before the coming of the exam result, distress has increased. Phase of anticipation of any entity is very vulnerable to increase the anxiety, and severe anticipatory anxiety can grip the minds. Consequently, some gullible students tend to succumbed to exam fear and take extreme step in life.

Mechanism of Mitigation of Anxiety

Teacher has profound influence on learner's learning. This relationship has a direct effect on the student's self-concept. Teacher's words, attention and action express the nature of relationship. When learner feels valued and respected in classroom and his individuals differences are accepted, this supportive environment encourages academic learning. The emotional climate of the classroom is determined by the relationship, the

teacher has with learners. Good relationship increase learner's motivation for academic learning. Strained relation induces hostility, punishment and rejection. As Hurlock contended that "Many underachiever are the product of a hostile teacher–student relationship", (pp-339). For optimizing the learning, teachers must have belief that learners are agents. They have capacity to manipulate learning skills to reach goals. Teacher must encourage and nurture intrinsic learning motivation. Unfortunately, students are treated as receiver and teacher has become narrator. In this regard, Freire (2017) contended "Education becomes an act of depositing, in which the students are the depositories and the teacher is the depositor" (pp, 45). Generally, learners receive memorize, repeat and store subject content. If a learner shows hesitation of speaking in front of the class, allow him to speak or read before small group in sitting position then read it while standing position. Most of the teachers are not in position to identify the source of anxiety among learners in class-room situation.

Suggestions

Learning is not simply cognition of reasoning and problem solving. Learning is stressful and learners have the additional pressure to learn more. It is also influenced by emotions. In teaching learning process, the teachers concern about particular emotions that are related to school achievement. Success or failure provokes achievement emotion such as hope or anxiety. As Woolfolk, mentioned "emotions are both cause and consequences of learning process".

For maximizing the learning, a holistic approach is required from the side of all stakeholders of teaching-learning system.

- Teachers must ensure that every learner has a share of fear and anxiety.
- There is need to diagnose the learning styles of students and try to adjust teaching method for maximum benefit.
- With the advent of digital learning, traditional methods have become outdated, so teachers must find innovative ways to teach learners.
- A strong bond with children is needed for mitigating the anxiety.
- Teachers and parents should be trained to identify the sign and symptoms of depression and anxiety.
- By allowing learners in determining the evaluation criteria and mechanism of their own work also facilitates to reduce the anxiety by giving learner a sense of confidence and control.
- To dilute the mathematics' prejudice in regard to girls, teacher should make understanding of girls student that academic achievement (specially math achievement) as the part of their gender identity.
- Believing that mathematical ability can be improved, might prepare students (girls) against stereotype.

Conclusion

Anxiety could be both a cause and an effect of learning deprivation. The behaviour of parents, teachers and peer group plays key role in controlling or strengthening the anxiety. To unlock the full potentials of country's future, nation has to optimize the learning of its learners. It is crucial to acknowledge that tackling the complex issue of maximum learning in learner is not a learning concern, but is an investment in the future of country. The strength of a nation is measured by its ability to nurture its future generations. It is the responsibility of nation as well as opportunity to schools and parents to ensure maximum learning of learners. It is imperative to acknowledge the pressing need for optimizing learning through internal and external motivation of learner. Teachers have to nurture diverse skills to ensure that students become responsible learners. Self direction is a vital skill for optimizing learning. The prime concern is that learners need to learn how to organize their thinking to deal with all available information. Control over learning process helps to use time efficiently. New curriculum requirement, new teaching technology and lesson planning needs new teaching style from the side of teachers for optimizing learning. As far as, learning gets interesting and engaging, optimizing it becomes reality in learner's life. There is high time for contemplation that parrot learning will never be better than learning with understanding.

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Online Physics Practical Activities during the Covid-19 Pandemic – An Exemplar for Practices to be followed for Assessment

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Abstract

The current scenario of education in our country is confronted with an unprecedented challenge in the post-pandemic period. As a hangover of the nightmarish time for the entire humankind, the student community across the country has been struggling to regain their pre-pandemic spirit of learning, in so much that the practical curricula, for which the physical presence of the learner at the institution is necessary, has become very adversely affected. In this connection, our experience of online practical seems to be worth sharing. In the first phase of the pandemic situation, the teaching-learning process all over the country got impeded in confusion shrouding online education, but with the passage of time there was some semblance of order in the process across the institutions. The pandemic inter alia provided an opportunity to rethink about the strategies to be adopted for education dissemination, in particular, for laboratory based subjects. In this regard the successful completion of the experiment-based component of the National Graduate Physics Examination (NGPE) may be treated as a landmark in respect of conducting online tests in practical papers, where the candidates were allowed to do experiments at their homes under proper proctoring. This paper narrates the experience of holding such practical examination and establishes its conformity with the National Education Policy, 2020, and further makes a case for replication of such effort for testing the experimental skills in physics of undergraduate and senior secondary level students and those aspiring for admission in engineering courses or opting for research work in experimental physics.

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The Dilemma

Every year, the Indian Association of Physics Teachers (IAPT) conducts a prestigious all-India public examination called 'National Graduate Physics Examination' (NGPE), maintaining a reasonably high standard. Even some top research institutes in the country, like the S N Bose National Centre for Basic Sciences (SNBCBS), Kolkata, extends the scope of direct admission to the five toppers (gold medallists) of NGPE to their Integrated Ph D courses. This examination has uniqueness when compared to other selection tests: The introduction of a practical examination along with the theoretical test makes the difference.

Generally, the theory examination (Part A and B) is held in January while an examination on Experimental skill (Part C) is conducted in June every year for the toppers in the theory part. In the current year we are observing the birth centenary year of Late Dr D P Khandelwal, the founder of IAPT. It is significant that the introduction of this experimental component (Part C) of the test was the brainchild of this great visionary. He argued that evaluation of a student in science is incomplete if it is devoid of any test on experimental skill. But we know that all-India examinations like JEE, NET etc. do not have provisions for such test. Many students embark on the journey of experimental research, without appearing for any test of experimental skill. Such a situation provoked him to think that the introduction of a test in practical physics, based on a question paper set by external paper-setters, could remove such a shortcoming. With this possibility in mind, he added the experimental component to NGPE in the form of Part C of the test. It was expected that the model of NGPE Part C would be replicated some day at some if not all the competitive examinations. But the fact remains that the age-old practice is still prevalent in different all-India examinations (as, for example, JEE, JAM, JEST, NET, SET etc).

Thus by way of this step-motherly attitude towards practical, its importance has got relegated, and the situation got worsened due to the pandemic. Unlike previous years, in 2021 it was not possible to call the eligible students for the Part C examination to some college / university campus which were under stringent warnings and advisories issued by the Government of India to combat the spread of COVID-19. So the IAPT was in a dilemma regarding how to conduct the practical examination.

The Solution

Against this backdrop, some enthusiastic members took an initiative in designing a question paper on the practical component of the test which can be physically performed by the students with very common household and cheap components sitting at home. Seven teachers and a PG student with reasonable experience in laboratory work and digital communication formed a group and identified some experiments for the stated purpose. The IAPT- Midnapore College Centre for Scientific Culture (CSC) provided the necessary laboratory facilities for trying out the experiments and P K College, Contai offered their online platforms to conduct frequent meetings among the group members for shortlisting a group of three experiments out of fifteen experiments

(chosen initially) to be included in the question paper for the practical examination and prepare a small experimental kit to be sent to each candidate. IAPT appointed a Group of Experienced Teachers (GET), over and above the seven teachers mentioned above, to see that:

1. The designed experiments are really new and yet compatible with the UG syllabi of all Indian Universities so that not a single student gets any extra favour.
2. The experiments should involve highly inexpensive equipment and materials so that any candidate sitting at home, even in an extreme rural set-up, can purchase or collect them to appear for the examination.

The question paper for the practical examination received the approval of the GET on both the counts. The IAPT decided to conduct the Part C Examination on August 23, 2020. Altogether 27 students were called for the Part C examination out of 11637 participants who appeared for the theory examination. Experimental kits were sent to each of them for the sake of maintaining uniformity by speed post / couriers. Only 21 students appeared in the Part C Final Examination. Still, three of them did not get the kit but they did not find any difficulty in appearing for the examination as they could easily collect the equipment and materials needed.

Table: 1

NGPE 2020: At a glance

Total students	National Toppers	State Toppers	Selected for Part C Final Exam	Reported in the Mock Test	Reported in Part C Final Exam	Recipients of NGPE 2020 Gold medals	Teachers involved
11637	118	127	27	21	21	5	20

We present the relevant data of NGPE in a glance in a tabular form (Table-1)

Illustration of the Exercise

1. The Mock Test

Before the actual examination on experimental skills a mock test was organised on August 21, 2020 to make the students familiar with the procedural details of conducting an examination using an on-line platform (Google Meet). The students were asked to perform the experiment with cameras 'on' while several groups of teachers kept vigil over the proceedings utilizing the Google Meet App. The Google classroom platform was used for the purpose of on-line evaluation. Question uploaded to the classroom was opened for access by the students at the scheduled time. Note that the sanctity of the examination was maintained as a result of proctoring which was simply one kind of surveillance with a student friendly approach. It did not cause any intimidation to the students. Within a very small span of time the answer scripts were checked through online access of the Google Classroom and results were communicated to the candidates as per plan. One model answer set framed and approved by the GET was uploaded for ensuring uniform evaluation and also for guiding the examinees.

In the mock test, the students were asked to initially prepare a simple pendulum using a nearly 2m long thin but strong and inextensible thread, usually available at home, and an almost round shaped lemon/potato as its bob. The examinees used their mobile phones in the stopwatch mode to find the time period (T) for that particular initial length (L) of the pendulum. Subsequently they collected data using different values of L . The question also required the students to consider that $L = L(T)$ and draw a parabola based on the relation between L and T , choosing the units suitably. They were to find the acceleration due to gravity (g) after identifying the focus of the parabola by a geometrical method.

All the examinees performed the pendulum experiment well with a lemon/potato as the bob. They adopted their methods in measuring the angular displacements of pendulum. But the task for determining g was given with a little twist, which differs slightly from the conventional task. In different ways, many participants tried to address the last task, i.e. locating the focus of parabola and then calculating the value of g using the expression of the focus. Herein lies the main source of variation in error associated with the experiment. In their feedback, all the examinees wrote satisfactory comments regarding the innovation induced in the setup and tasks allotted in the question paper framed for the mock test.

It is also interesting to note that the fun of performing the experiment with a lemon/potato as the bob could perhaps have not been attempted, though possible, in a normal laboratory environment. Working at home provided the learners with opportunity of making innovations. No one prevents them from doing that in the laboratory, but perhaps they do not feel inclined to do so as readymade apparatus are available.

After the examination was over, the examinees prepared 'pdf' files of the answer scripts with short videos (at most two, on the mentioned tasks) and uploaded them on Google classroom for on-line evaluation. An extra half an hour was allocated to them for the completion of this process. A ppt presentation and a mock video were also uploaded in the Google Classroom to make the participants accustomed with the online submission of scripts and short videos. Everything went on very smoothly and nicely.

2. One Experiment from the Final Part-C Question Paper – Determination of coefficient of restitution and acceleration due to gravity

Same procedures, as were followed for question access, proctoring, model answer preparation, and evaluation in the mock test, were repeated at the time of the Final Part-C examination also. Only one experiment selected out of the three questions in the paper (see the Bulletin of IAPT, October Issue, 2020) is presented here as a model experiment.

Determination of coefficient of restitution and acceleration due to gravity

2.1 Introduction:

The concept of physics related to elastic and inelastic collision or the degree of elastic collision can be achieved by measuring the coefficient of restitution (COR) [1-3]. The COR is unity for completely elastic collision and zero for perfectly inelastic collision. There are number of processes for measuring COR in case of a bouncing ball using sound recording facility by sound cards in computers [4,5], by measuring total elapse of time [6], finding the time interval between two successive collisions by digital storage oscilloscope [7], also using software [8]. Motivated by the work [6] we designed this experiment with a ball bouncing on a hard and smooth floor without any requirement of distinctive apparatus. It involves careful measurement and graphical analysis by using smart phone for the estimation of COR in case of different bouncing balls. It is to be noted that special care must be taken to avoid unwanted spinning while releasing the balls.

This experiment requires a smart phone, a steel ball (which can be collected from a bicycle repairing shop), a ping-pong ball, and a metre scale or a measuring tape to be pasted vertically on a wall. A ball is allowed to fall freely from a height h_0 in front of the suitably adjusted camera of a smart phone to be used for recording a short video. It then bounces off the floor several times and finally stops after a total time t . The time interval (t_{total}) between the moment of releasing the ball and that required for coming to rest is measured directly using the mobile phone in the stopwatch mode. The audio available from the recorded video can also help to find t_{total} .

In the experimental session examinees have recorded all the data from the videography and analysed the data to find the required quantities as suggested in the objectives.

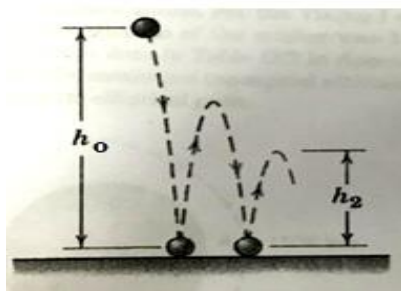


Fig. 1: Ball bouncing experiment

2.2 Theory:

We can use the principle for conservation of mechanical energy $\left(\frac{1}{2}mv^2 = mgh\right)$ to show that the COR (e) in terms of the ratio of the final velocity of ball after a collision

(v_f) with floor to that before the collision (v_i) becomes equal to the square root of the ratio of the initial height (h_0) from which it is being dropped and the height (h_1) reached at its first rebound. It looks like:

$$e = \frac{v_f}{v_i} = \sqrt{\frac{h_1}{h_0}} \tag{1}$$

The value of acceleration due to gravity (g) can be determined using the given relation:

$$e = \frac{s\sqrt{g/2} - 1}{s\sqrt{g/2} + 1} \tag{2}$$

$$\text{or, } g = \frac{2}{s^2} \left(\frac{1+e}{1-e} \right)^2 \tag{3}$$

The average value of e can be calculated (from either height or time calculation) using the video recordings for bouncing motions of these balls. The examinees have recorded the total time t_{total} for four different initial heights, h_0 for each ball. After plotting the t_{total} versus $h_0^{1/2}$ graph (essentially a straight line) from the (h_0 - t_{total}) data they have found the slope S for each ball. For both the steel and ping-pong balls they have calculated the value of the acceleration due to gravity (g) using the values of e (already measured) and the slopes S , using the expression (3).

2.3 Tabulation:

i) Determination of the value of e :

Table – 2

No. of Obs.	Steel Ball		e	Average e	Ping-Pong Ball		e	Average e
	Initial height (cm)	Final height (cm)			Initial height (cm)	Final height (cm)		
1	87	39	0.67	0.665	87	66	0.871	0.864
2	72	31	0.66		72	53	0.858	

ii) Record the (h_0 - t_{total}) data:

Table – 3

No. of Obs.	Initial height (h_0 in cm)	$h_0^{1/2}$ ($\text{cm}^{1/2}$)	Total time in sec	
			Steel Ball	Ping-Pong Ball
1	70	8.4	1.93	5.23
2	60	7.7	1.67	4.71
3	50	7.1	1.51	4.42
4	40	6.3	1.45	3.92

iii) Calculation of 'g' by measuring slope from the curves

Table-4

Balls	Slope (S) measured from the st. lines	COR (e)	$g = \frac{2}{s^2} \left(\frac{1+e}{1-e} \right)^2$ (cm/sec ²)
Steel	0.229	0.665	942
Ping-Pong	0.612	0.864	1002

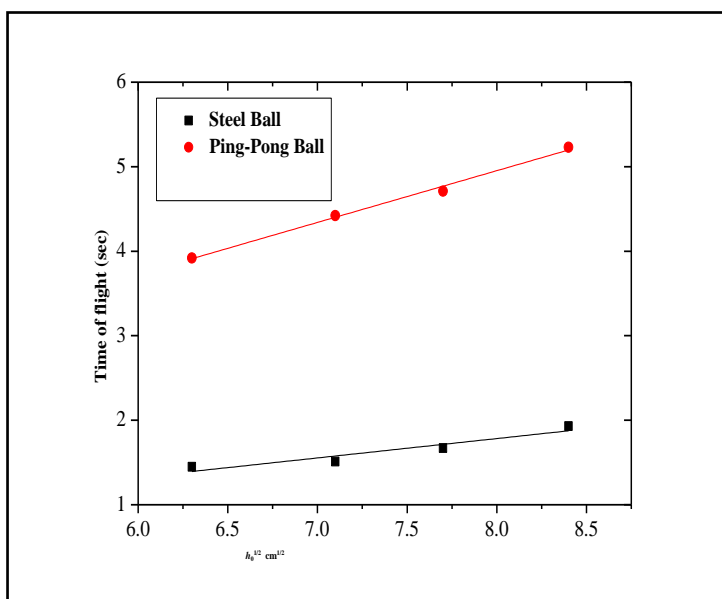


Fig 2: The variation of total time of flight with the square root of different initial heights.

2.4 Result analysis:

It is to highlight that the straight lines for t_{total} versus $h_0^{1/2}$ plots [Fig. 2] do not compromise with the theory i.e., they are not passing through the origin. We have found non-zero intercepts, which represent the presence of systematic error (2-4%) in the measurement. Such error can be optimized by giving attention to careful measurement and taking data several times. We need to take utmost care about the dropping of ball so that no spin can be induced. A rigid and flat surface on which the ball is allowed to drop is a pre-requisite for the experiment. It will be better if we conduct these experiments with different balls over a wide range of initial heights. Above all, this activity is very much simple and provides fun to perform.

Critical Look

To summarise, this endeavour appears to be a really unique exercise in digital communication because of the following salient features:

- i) In the previous years IAPT spent more than Rs 1.5 lakh to conduct the practical examination but this time less than Rs 10,000 has been spent;
- ii) Time requirement was also minimum because everyone worked safely sitting at home;
- iii) Large physical space, laboratories or costly equipment were not required;
- iv) Synchronous participation of a large number of participants from different geographical locations was possible;
- v) Participants enjoy an exposure to do practical not using conventional/traditional setups. Thus an innovative aptitude can be inculcated among the participants.
- vi) A provision for proctoring was put in place. It was by no means any kind of policing, as it would have been intimidating for the students who were taking examination in such a pattern for the first time. The step acted as a mix of surveillance and friendly guidance for creating a feel-good situation for the test-takers.

In view of the points mentioned above, it emerges that this digital communication approach for evaluation of practical work has a lot of potential, namely cost effectiveness in administration of the test, judicious budgeting of time, space and labour and most importantly, creating a possibility of participation of a large number of candidates transcending the geographical barrier. To ensure the success of such a pattern of examination, the question paper should be set on the basis of availability of proper devices (including Smart phones / laptops). The coverage area of internet connectivity and data exchange speeds are crucial factors for such examinations. But upgradation of the on-line facilities is underway and one may expect better days ahead.

The NEP 2020 Connection

Some of the recommendations of National Education Policy 2020 (Item No. 23) [9], as regards use of technology are worth considering in respect of the effort taken by us which was primarily targeted towards making meaningful assessment of the students, in particular their competence in experimental aspect of physics. In clear terms NEP 2020 has highlighted the potential of technology in nurturing the creativity of tech-savvy teachers and students, whom it chose to give the status of “entrepreneurs”. It has observed that technology would be impacting education scene, “...only some of which can be foreseen at the present time” (23.2) [10]

One of the banes of our education system is the issue of evaluation. There are multiple instances to establish that an aura of dissatisfaction prevails in the mind of the clientele, be it the students or the guardians, about the processes in vogue. In particular, the preparedness of the authorities as regards holding practical examinations at all levels, followed by evaluation of the examinees has always raised several questions. The pandemic has made the situation further complicated. It is significant that NEP 2020 has *inter alia* laid emphasis on the use of technology in the process of evaluation (23.5 and 23.6)[11] In this backdrop the strategy taken by us should be treated as a significant intervention.



Fig 3: Participants are busy with experiments at their homes under proctoring by teachers.

Conclusion

In view of what has been stated above, while we do not claim a resounding success, but with whatever little has been achieved one gets tremendous impetus to go further ahead. This pattern of conducting practical work can be replicated elsewhere. We again fall back on NEP 2020, Item 24.4(a) [12], where it states that agencies such as IGNOU, IITs, NITs, NIOS and the National Educational Technology Forum will conduct pilot studies *inter alia* to evaluate the benefits of integrating online education with the ongoing offline components. With this experience of holding practical examination, IAPT can definitely stake a claim for being a partner in this pilot study.

Specifically, the replication is being recommended for the following purposes:

- i) At HS and UG levels, physics practical examinations can be conducted with sanctity even during natural or man-made calamities;
- ii) Orientation Workshops involving school/college physics teachers can be organised with minimum fund and logistics.
- iii) For national level entrance examinations like JEE, JEST, JAM, etc, after an initial screening through theoretical tests, the authorities concerned can think of conducting practical examination following the suggested strategy.

It may be noted further that, while providing feedback, some teachers wanted the questions to be more challenging (open-ended) for competitive practical examinations. Rather than being told what to do in a step-by-step fashion, they expected the candidates to 'invent' the appropriate procedure for carrying out a measurement. Evidently, one criterion for identifying the more capable experimenter can be based on suchability.

It is worth mentioning that IAPT dedicated the success of the on-line test for Part C of NGPE, 2020 to Dr Khandelwal to pay tribute to him in the year of his birth centenary and also to his initiative in introducing the Part C of NGPE.

Acknowledgement

We gratefully acknowledge Dr Chinmoy Kr Ghosh, Dr Subhash Ch Samanta, Dr Debapriyo Syam and Mr Susanta Majumdar for their value suggestions and input in preparing the manuscript.

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Well Being and Perceived Social Support among Students with Disabilities in Inclusive and Special Schools: A Comparative Study from Gender Perspective

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Manjit Kaur³

Abstract

The main goal of the present study was to investigate the well-being and perceived social support among students with disabilities concentrating on the differences between students who receive their education in inclusive settings and those who attend special schools. A sample of 140 disabled students, both boys and girls studying in inclusive as well as in special schools were selected. The participants filled in two questionnaires: Psychological Well-Being Scale by (Sisodia & Choudhary, 2012) and Social Support Scale by (Dhull & Godara, 2016). The results show that type of educational institution and gender affect wellbeing and perceived social support among disabled students. A positive correlation can also be observed between well-being and social support. The results therefore reveal that inclusion of disabled students receiving education in inclusive settings have better well-being and receive more social support than their counterparts attending special schools.

Keywords: Well Being, Social Support, Students with disabilities, Inclusive schools, Special schools

Introduction

All nations of the world are making focused efforts and striving to achieve the sustainable development goals (SDG'S) by 2030. The goal 4 states, "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" which reaffirms the belief that education is one of the most powerful and proven vehicles for sustainable development. Further, to achieve this goal, one of the targets is to, "Build

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and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all". Building on the principle of "leaving no one behind", the new Agenda of UNDP emphasizes a holistic approach to achieving sustainable development for all.

The Government of India is also strongly committed to the 2030 Agenda and keeping in line with the goal 4, 19.3% persons with disabilities (15 years and above) have completed at least secondary education (SDG India- Index & Dashboard 2020-2021). NEP (2020) also reiterates that, "Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation".

The changing perspective from being compassionate and sympathetic towards children with disabilities to becoming providers of support and opportunities, and a rights-based approach has given rise to the concept of Inclusive Education. It is a system of education wherein students with and without disability learn together and the system of teaching and learning is suitably adapted to meet the learning needs of different types of students with disabilities. It is a process that involves transformation of schools and centers of learning, caters to all children – boys and girls, able and disabled, the marginalized and less privileged alike. "Some key values of inclusive education are equality, participation, non-discrimination, celebrating diversity and sharing good practices" (UN,2013).

School is and should be an important part in the lives of all children and youth. The intention of including disabled children in "regular" schools is primarily to give these children a chance to socialize and build long-lasting relationships with children without disabilities. Inclusion should not be limited to physical presence of the students in the class. It has become apparent that mere attendance of students with disabilities in mainstream classes does not in itself mean that the curriculum is universally shared (Obiakor, Harris, Mutua, Rotatori & Algozzine, 2012). Some research has demonstrated that a degree of exclusion also occurs in what are ostensibly inclusive classes, in which learners with disabilities show signs of feeling low acceptance in class (D'Alessio, 2011; Zanobini, 2013; Benigno, Ferlino, & Trentin, 2019).

An increased focus on monitoring the well-being of youth can also be found at the policy level. Particularly since the United Nations (1989) articulated the Convention on the Rights of the Child, there have been numerous calls to include well-being in national and international statistical accounts (for example, Cameron, 2010; Diener, Kesebir, & Lucas, 2008; Huppert, Marks, Clark, A Siegrist, J., Stutzer, Vittersø, & Wahrendorf, 2009; New Economics Foundation, 2009; Stiglitz, Sen, & Fitoussi, 2009; United Nations, 2009). Over the past decade, there has been growing interest in students' well-being, not only in relation to how it may impact on their learning, but also at policy level, examining whether and how education systems that prioritize student well-being foster positive and fulfilling life experience (Pollard & Lee,2003).

Psychological well-being is a multifaceted concept (Kahneman & Krueger, 2006). It is generally believed that psychological well-being is made up of five key psychological aspects. These are autonomy and choice, having a purpose in life, positive relations with others, personal growth and self-acceptance (Dolan, Layard & Metcalfe 2011; Kahneman & Deaton, 2010). Well-being is a dynamic state characterized by a reasonable amount of harmony between individual's abilities, need and expectations and environmental demands and opportunities (Levi, 1987). Well-being is generally viewed as a description of the state of people's life situation (McGillivray, 2007).

Social support refers to the prosocial behaviours or attitudes that individuals receive from their family and social environment with the aim of enhancing social functioning and social interactions (Nolten, 1994 as cited in Elliott et al., 2001). These behaviours contribute to the development of the feeling of being valued and accepted. Social support also refers to the guidance and practical assistance which help individuals cope with the challenges they face in their social interactions (Pavri & Monda-Amaya, 2001). According to Berndt and Hestenes (1996), there are four types of social support: (1) esteem support, which refers to enhancing individual's self-esteem and includes compliments, appraisals, and the development of close social relationships; (2) informational support, which refers to the advice and guidance that individuals receive in order to solve their problems; (3) instrumental support, which is defined as the provision of practical assistance in order to help individuals face challenges; and (4) companionship which consists of the close social relationships that individuals develop with their family and peers as well as their joint participation in pleasant activities.

The development of the sense of belonging and acceptance in the school environment, and the provision of instrumental and emotional support from teachers and peers (key parameters of social support) have a positive impact on students' well-being and they are considered fundamental components of inclusive education (Pavri & Monda-Amaya, 2001). Through social support children with disabilities have greater developmental opportunities as inclusion is welcomed and embraced. Zipper and Simeonsson (2005) said that children's achievement and well-being are promoted when school policies give priority to placing children with disabilities with skilled, enthusiastic teachers; allow for gradual transition into the regular classroom; and maintain relatively small class sizes. Social support allows for the recognition and strengthening of academic talents or abilities by providing minor adjustments that accommodate special needs both in and out of the school setting. Keeping in view the above background, the present study was undertaken to study the well being and perceived social support among disabled students in inclusive and special schools.

Objectives of the Study

1. To assess the well-being of students with disabilities studying in special schools and inclusive schools.
2. To compare the levels of social support provided to students with disabilities in special schools and inclusive schools.

3. To investigate whether differences exist in the well-being of male and female students studying in special schools and inclusive schools.
4. To investigate whether differences exist in the perceived social support of male and female students studying in special schools and inclusive schools

Hypothesis

1. There exist no significant differences in well-being of disable students studying in special and inclusive schools.
2. There exist no significant differences in social support of disable students studying in special and inclusive schools.
3. There exist no significant differences in well-being of disable students between male and female students.
4. There exist no significant differences in perceived social support of disable students between male and female students.

Type of Research

The study falls under the domain of descriptive research as it intends to study the well-being and perceived social support among disabled students studying in inclusive and special schools.

Sample

A sample of 140 disabled students both boys and girls studying in inclusive as well as in special schools of Amritsar district were selected. In order to conduct the study special schools were selected from All India Pingalwara Chartiabale Society, Manawala, from Amritsar and inclusive was selected from Central Khalsa Orphanage, Amaritsar. All the students were of age group 11-18 years and both male and female. Purposive sampling technique was used to select 140 disabled students, 70 from Central Khalsa Orphanage and 70 from All India Pingalwara Chartiabale Society, Manawala, Amritsar.

Tools used

1. Psychological Well-Being Scale by (Sisodia & Choudhary, 2012). This scale has five dimensions: satisfaction, efficiency, sociability, mental health and interpersonal relations.
2. Social Support Scale by (Dhull & Godara, 2016). This scale covers four dimensions: family support, teacher support, Peer support and online social support.

Rationale for Opting these Tools: The Psychological Well-Being Scale by Sisodia & Choudhary (2012) is chosen due to its comprehensive coverage of psychological well-being dimensions, which align with the objectives of this study. The scale's five dimensions (satisfaction, efficiency, sociability, mental health, and interpersonal relations) provide a holistic view of an individual's psychological well-being, making it suitable for assessing a broad range of factors contributing to mental health.

Social Support Scale by Dhull & Godara (2016): The Social Support Scale by Dhull & Godara (2016) is selected because of its focus on social support across various dimensions that are relevant to this study. The scale's coverage of family support, teacher support, peer support, and online social support aligns well with the interconnected social networks that can influence an individual's well-being.

Reliability and validity of Psychological Well-Being Scale by (Sisodia & Choudhary, 2012): The reliability of a scale refers to its consistency in measuring the construct over time and across different samples. The reliability of the scale was determined by (a) test-retest method and (b) internal consistency method. The test-retest reliability was 0.87 and the consistency value for the scale is 0.90. Besides face validity as all the items of the scale are concerned with the variable under focus, the scale has high content validity. The scale was validated against the external criteria and coefficient obtained was 0.94.

Norms: Norms for the scale are available for all the age groups. These norms should be regarded as reference point for interpreting well-being index scores. Norms are available for each of the five areas as well as for the entire scale.

An individual with score of 242-250 may be considered to have very high level of well-being. Score ranging from 217-242 represent high level of well-being. The scores from 83-217 would represent normal individuals with moderate well-being. The low score i.e. 58-83, would indicate people with low level of well-being whereas a score of 50-58 represents very low level of well-being. A person with lower level of psychological well-being needs counselling and psychotherapy. For each area, a score of 48-50 may be considered very high level of well-being. Score ranging from 43-48 represent high level of well-being. The scores from 16-43 would represent normal individuals with moderate well-being. The low score i.e. 12-16, would indicate people with low level of well-being whereas a score of 10-12 represents very low level of well-being.

Scoring: The responses collected using these two instruments was evaluated using a 5-point Likert scale, comprising the options: "strongly agree," "agree," "undecided," "disagree," and "strongly disagree." These response choices are assigned numerical values of 5, 4, 3, 2, and 1, respectively. It's important to note that for items with a negative orientation, a reverse scoring approach was applied.

Reliability and validity of Social Support Scale by (Dhull & Godara, 2016): The reliability of this scale was determined by test-retest reliability and split-half method. After an interval of 2 weeks the test was re-administered on the same subjects and calculated reliability was found to be 0.751 in test-retest reliability. The reliability of the scale was also calculated using spilt-half method. This method is also known as odd-even method. The scale was divided into two equivalent "halves". Odd number items were included in first half and even numbered items in second half. The measure of first half of the scale was then correlated with the measure of the other half using Spearman Brown Spilt Half method. The Spearman Brown coefficient was .861. Both types of reliabilities were found to be significant at .01 level of significance.

The validity of the constructed scale of 'Social Support Scale' was tested on the basis of face validity and content validity. The scale was validated against the criterion of content validity. All the 40 items (35 positive & 05 negative) were presented to six judges (renowned professors in the department of Education, Sociology and Psychology) for their opinion and the items were found consistent with social support. Therefore, on the basis of face validity and content validity, it appears that Social Support Scale' measures what it intends to measure i.e. social support perceived by the students.

The construct validity of the scale was worked out by calculating the inter-correlation of different sub-scales of the social support scale. The correlations ranged from .329 to .765. These high significant correlations demonstrate that the subscales have high validity.

Norms for interpretation of the level of social support (for both male & female population)

Sr. No.	Raw Score Range for Males	Raw Score Range for females	z-Score Range	Grade	Level of Social Support
1	116 & above	112+	+2.01 & above	A	Extremely High
2	109 to 115	105 to 111	+1.26 to + 2.00	B	High
3	101 to 108	99 to 104	+0.51 to + 1.25	C	Above Average
4	91 to 100	91 to 98	+0.50 to -0.50	D	Average/ Moderate
5	83 to 90	84 to 90	-1.25 to -0.51	E	Below Average
6	76 to 82	78 to 85	-2.00 to -1.26	F	Low
7	75 and Below	77 and Below	-2.01 and Below	G	Extremely Low

Analys and Interpretation of Data

TABLE 1:

Showing Mean, Standard Deviation, Significant T and P Value of Inclusive ASND Special Schools Students on well-being Scale

Variable	Category	N	Mean	S.D	S.ED	T	P-value
Satisfaction	Inclusive schools	70	32.37	8.038	1.341	1.897	.060
	Special Schools	70	29.83	7.822			
Efficiency	Inclusive Schools	70	33.50	7.324	1.285	2.380	.019
	Special Schools	70	30.44	7.866			
Sociability	Inclusive Schools	70	32.16	7.619	1.298	1.717	.088
	Special Schools	70	29.93	7.739			

Mental Health	Inclusive Schools	70	32.27	8.002	1.321	2.769	.006
	Special Schools	70	28.61	7.618			
Interpersonal Relations	Inclusive Schools	70	31.46	7.732	1.259	1.032	.304
	Special Schools	70	30.16	7.158			
Well Being (Total Score)	Inclusive Schools	70	161.76	34.886	5.867	2.179	.031
	Special Schools	70	148.97	34.530			

Table 1 shows that, calculated p- value was found to be less than 0.05 for Well-being (Total score), revealing significant difference in well-being of disabled students studying in special and inclusive schools. The mean of students studying in inclusive schools is higher than their counterparts thereby revealing that students in inclusive schools have better well-being than students from special schools. Further, the t-test on the various dimensions of well-being revealed that there is a significant difference in efficiency and mental health dimensions of well-being. An examination of the means of the two groups suggests that students studying in inclusive schools have better efficiency and mental health than the students studying in special schools. But, in the other dimensions of well-being such as sociability, satisfaction and interpersonal relations no significant difference was found.

TABLE 2:

Showing Mean, Standard Deviation, Significant T and P Value on Social Support Scale with respect to inclusive and Special School

Variables	Category	N	Mean	S.D	S.ED	T	P-value
Family Support	Inclusive School	70	21.23	2.798	.516	2.657	.009
	Special School	70	19.86	3.289			
Teacher Support	Inclusive School	70	20.81	2.318	.409	1.013	.313
	Special School	70	20.40	2.516			
Friends/Peer Support	Inclusive School	70	21.36	2.703	.449	2.257	.026
	Special School	70	20.34	2.615			
Online Social Support	Inclusive School	70	20.54	2.172	.374	.076	.939
	Special School	70	20.51	2.257			
Social Support Total Score	Inclusive School	70	83.94	6.413	1.146	2.468	.015
	Special School	70	81.11	7.131			

Table 2 shows that, calculated p- value was found to be less than 0.05 for family support and friends/peer support dimensions of social support. So, it reveals that there is a significant difference in family support and friends/peer support dimensions of social support of students studying in inclusive and special schools. An examination of the

means of the two groups suggests that students studying in inclusive schools perceive better family support and friends/peer support than the students studying in special schools.

But, in the other dimensions of social support such as teacher support and online social support, no difference in perception has been found among disabled students studying in inclusive and special schools.

TABLE 3:

Showing Mean, Standard Deviation, Significant T and P Value on Well-Being with Respect to Gender

Variable	Category	N	Mean	S.D	S.ED	T	P-value
Satisfaction	Male	70	32.39	7.986	1.340	1.919	.057
	Female	70	29.81	7.871			
Efficiency	Male	70	33.07	7.931	1.297	1.696	.092
	Female	70	30.87	7.409			
Sociability	Male	70	32.57	7.796	1.286	2.378	.019
	Female	70	29.51	7.413			
Mental Health	Male	70	32.00	7.478	1.331	2.341	.021
	Female	70	28.89	8.247			
Interpersonal Relations	Male	70	31.76	8.046	1.254	1.515	.132
	Female	70	29.86	6.731			
Well Being (Total Score)	Male	70	161.79	35.160	5.886	2.189	.030
	Female	70	148.94	34.239			

Table 3 shows that, calculated p-value was found to be less than 0.05 for sociability and mental health dimensions of wellbeing. So, it reveals that there is a significant difference in sociability and mental health dimensions of wellbeing of students w.r.t gender. An examination of the means of the two groups suggests that male students have better sociability and mental health than the female students.

But, in the other dimensions of well being such as satisfaction, efficiency, and interpersonal relations no difference has been found w.r.t gender.

TABLE 4

Showing Mean, Standard Deviation, Significant T and P Value on Perceived Social Support with Respect to Gender

Variable	Category	N	Mean	S.D	S.ED	T	P-value
Family Support	Male	70	21.51	2.685	.503	3.865	.000
	Female	70	19.57	3.237			
Teacher Support	Male	70	20.99	2.306	.405	1.868	.064
	Female	70	20.23	2.486			
Friends/Peer Support	Male	70	21.87	2.637	.423	4.825	.000
	Female	70	19.83	2.365			
Online Social Support	Male	70	21.04	2.156	.364	2.826	.005
	Female	70	20.01	2.150			
Social Support Total	Male	70	85.41	5.923	1,063	5.428	.000
	Female	70	79.64	6.638			

Table 4 shows that, calculated p-value was found to be less than 0.05 for family support, friends/peer support and online social support dimensions of social support. So, it reveals that there is a significant difference in family support, friends/peer support and online social support dimensions of social support of students w.r.t gender. An examination of the means of the two groups suggests that male students have better family support, friends/peer support and online social support than the female students. But, in the teacher support dimension of social support no difference has been found w.r.t gender.

Discussion

Findings showed that wellbeing of disabled students studying in inclusive school is better than those studying in special schools. Further, the analysis revealed that students in inclusive settings have better efficiency and mental health than their counterparts in special schools. Watson and Keith (2002) found that students with disabilities receiving special education services in public schools scored lower than non disabled students on four Quality of Life factors measured: satisfaction, well-being, social belonging, and empowerment/control. Canha, Simoes, Matos and Owen (2016) showed that students with disabilities who report a better health self-rating were happier and more satisfied with their lives. Therefore, school authorities, counsellors, teachers should work on improving the well-being of disabled students as Wolf-Branigin, Schuyler & White (2007) also suggest that it is critical to improve quality of life as it has impact on the future life of young people with disabilities. The result is also supported by the study conducted by Mpofu, Sefotho, & Maree (2017) who found that participants who were adolescents with physical disabilities living in inclusive community settings of

Makonde Urban in Zimbabwe were having high levels of autonomy and choice, purpose in life, positive relations with others and good personal growth and self-acceptance.

It was also revealed that perceived social support among disabled students in inclusive schools is higher than students in special schools. It was found that more peer support is provided in inclusive settings than special schools. Forouzan, Mahmoodi, Shushtari, Salimi, Sajjadi and Mahmoodi (2013) highlighted social support as one of the social determinants of health, plays an important role in improving psychological conditions in people's lives; therefore, being aware of social support and designing effective interventions to improve it for the disabled is very important. Hence, inclusive settings should be preferred and social support be generously provided by all.

It can also be observed from the results that female disabled students scored lower on the sociability and mental health dimension of wellbeing. Therefore, the special educators should give special attention to female students by engaging them in activities, giving them opportunities to work in groups which would help them to interact with their peers thereby improving their sociability. As regards social support, the female students receive less support from family as well as peers. The parents should be educated on the gender issues and encouraged to support their disabled children irrespective of the gender.

Educational Implications

On the basis of findings of the study the researcher proposed following educational implications:

1. Efforts should be made to enhance efficiency and mental health support in special schools to improve the well-being of students.
2. Teachers should receive professional development programs focused on inclusive pedagogies, differentiated instruction, and strategies for promoting positive well-being among students with disabilities.
3. Prioritize and enhance family support and friends/peer support for students with disabilities in both inclusive and special schools.
4. Emphasize the importance of strong teacher-student relationships and effective support from teachers for students with disabilities.
5. Encourage collaboration among educators, families, and peers to create a comprehensive support network for students with disabilities.
6. Gender-responsive approaches should be implemented to support the well-being of both male and female students.
7. Promote a comprehensive approach to well-being that encompasses both gender-specific and general factors for positive outcomes in all students.
8. Promote comprehensive social support systems that address the unique needs of male and female students, fostering positive social connections and relationships.

Conclusion

The results of the present study implies that environment in inclusive schools is more conductive, motivating as compared to special schools. So, inclusive schools should be preferred and teachers should make efforts to provide a motivating environment in special schools so that well-being of these students also improves. Further, the study also has implications that parents and peers of the students studying in special schools should be made aware of the importance of social support and at the same time parents should be encouraged to provide assistance and support to their children and children should be motivated to support each other in special schools. Also, it is suggested based on the findings of the study that family and teachers should equally involve female students in the social activities and motivate them so that they do not feel lack of social support.

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Academic Resilience among Secondary School Students in Relation to Academic Achievement and coping Strategies

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Abstract

Academic resilience is the student's capability to deal efficiently with academic setbacks, anxiety, and study pressure. In the present scenario, students are facing a lot of problems in schools as well as in society. If adequate steps are not taken to overcome these problems, it will create pressure and stress among students. The Present study is designed to understand academic resilience among secondary school students in relation to academic achievement and coping strategies the study has been conducted on 300 students of Amritsar City studying in 9th grade (150 boys and 150 girls). The study falls under the domain of descriptive research. The technique of simple random sampling was used. The data were collected using the Academic resilience scale by Kaur and Singh (2016) and the Coping strategies scale by Frydenberg and Lewis (2011). Results indicate no significant difference exists in the academic resilience of adolescent students with respect to gender. The study also revealed that no difference was found in the coping strategies of adolescent students with respect to gender. Further, the results also indicate that high coping strategies have better academic resilience as compared to students with low coping strategies. But no interaction was found between academic achievement and coping strategies on academic resilience.

Keywords: Academic resilience, Coping Strategies, Adolescent students, Academic achievement, Stress

Introduction

Education is vital for individual and societal growth. Despite efforts to provide quality education, concerns arise about declining performance. Adolescence is a distinct phase

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requiring special care, as physical and mental changes occur (Costello &Angold, 1995). To improve academic outcomes, emphasis should be placed on students' strengths and fostering academic resilience.

Resilience is multi-dimensional in nature and encompasses various domains such as academic, social, and emotional resilience (Krovetz, 2008).Academic resilience is the student's ability to overcome academic setbacks, stress, and study pressure associated with the school as manifested by internal and external protective factors (Rojas, 2015). In today's educational literature, it is common to see the term resilience used when describing the characteristics needed by students to be successful. At the heart of this idea is the notion that resilient children have a greater potential to develop into healthy, productive, and competent adults despite experiences of severe stress (Edwards, et. al., 2016). Students face academic and social challenges every day in classrooms, universities, homes, and communities, those challenges and pressure may weaken their achievements and lead to drop out of education. But, despite obstacles and difficult circumstances, there are students who can adjust to difficulties and attain high levels of academic achievements and success, because they believe that successful learning is a product of effort and perseverance, not only ability (Shin,et. al., 2009). Those students are called academic resilient students. It is also defined as the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought by early trait conditions, and experiences (Wang et al., 1994).

Academic achievement refers to the level of success and accomplishments a student has attained in their academic pursuits. It typically involves the measurement of a student's performance in various educational activities, such as exams, assignments, projects, presentations, and overall grades (Steinmayr et. al., 2014). Academic resilience plays a significant role in academic achievement. Students who possess resilience are more likely to persevere through difficult circumstances, maintain their motivation, and continue to strive for success. They are better equipped to handle academic stress, setbacks, and failures, and are more likely to bounce back from adversity. Resilience allows students to maintain focus, develop effective study habits, and make the most of their educational opportunities, ultimately leading to improved academic performance and achievement (Novotny, 2016).

Rak and Patterson, 1996) defined an academically resilient child demonstrates an active, flexible, problem-solving approach, the ability to gain positive attention from others, an optimistic view of his/her experiences and of life in general, the ability to be autonomous, a tendency to seek novel experiences, and a proactive perspective.(Fallon, 2010) defined academic resilience as a student's ability to deal effectively with setbacks, challenges, and pressure in the school setting over time. (Mallick and Kaur, 2016) found that boys possessed more academic resilience as compared to girls. Students from the urban, locality-wise, urban students scored significantly high in the learning environment as compared to rural students. Significant positive relation was found between the learning environment and the academic resilience of senior secondary students.The findings of the study conducted by Tamannaeifar & Shahmirzaei (2019)

revealed that academic resilience had a significant positive correlation with problem-focused coping style and significant negative correlations with emotion-focused coping style and avoidance coping style. International students develop resilience strategies through group assignments, in classroom settings, and by seeking university and personal support services (Kaur & Singh, 2020). The results of the study conducted by Indriyana Rachmawati et al., (2021) showed that social support and self-efficacy had a significant relationship with academic resilience.

Stress is an integral part of human life, connected to various events and circumstances. Balancing work and home life, time constraints, and societal demands contribute to stress. People employ different methods to alleviate stress, such as yoga, meditation, or substances (Lazarus et al. 1987). Defining stress scientifically is challenging, as it is studied across multiple disciplines like medicine, psychology, sociology, and anthropology. Coping with stress is a focal point in various branches of psychology. Students in competitive academic environments face pressures related to personal aspirations, success, and meeting expectations from university, family, and community, impacting their daily coping strategies. Coping skills are crucial for resilience and reducing the impact of stress on the body and mind. Research on Indian and foreign students shows that resilience issues are linked to various sources of stress and coping strategies. Students with low coping skills face resilience problems. Coping efforts can protect and enhance resilience by reducing or modifying stress-inducing conditions. Studies indicate that emotion-focused coping, despite being passive, can increase a sense of control over life circumstances (Ahrens and Paulson, 2006). Active processes like experiencing, expressing, and regulating emotions are important for overcoming adversity. Another study found a positive correlation between focused coping and resilience, while there was no significant relationship between resilience and maladaptive coping (Lees, 2009).

Secondary education holds great significance both for individuals and society. It shapes future plans and entails challenges in self-adjustment, family dynamics, and societal integration (Holahan & Moos, 2000). The changing world and competitive academic environment pose difficulties for learners. The pressure to perform well and face competition can lead to psychological issues, affecting school performance. Students encounter various predicaments like learning difficulties, high expectations, peer exclusion, bullying, and teasing. Not all students possess the ability to handle such situations effectively. Coping strategies vary among students, and academic resilience plays a crucial role in perceiving and managing stress. (Puma & Cowthami, 2008) found gender differences in perceiving stress, but small differences in coping strategies and academic resilience after considering stress sources. This suggests that creating a caring and supportive school environment can promote resilience and counteract risk factors in students' lives. Teachers should focus on students' strengths to foster resilience. Research on resilience in social and educational environments is important for sustainability, but policymakers need to prioritize it. This study aims to explore how coping strategies and academic achievement impact academic resilience in secondary school students.

Type of Research

The study falls under the domain of descriptive research as it intends to study the academic resilience among secondary school students in relation to coping strategies and academic achievement.

Sample Description

A sample of 300 Govt. and private school students (150 boys and 150 girls) from 9th grade from eight randomly selected schools of Amritsar was taken for the purpose of the study.

Tools of the Study

Tool 1: Academic resilience scale by Kaur and Singh (2016).

Tool 2: Coping strategies scale by Frydenberg and Lewis (2011).

3. Cumulative academic scores of the previous class were used for academic achievement.

Research Design of the Study

In this study, coping strategies was independent variable whose impact on academic resilience was studied. The coping strategy was studied at two levels: high coping, and low coping. Academic achievement was studied in two types of categories: high achieving and low achieving were used for the purpose of classification and academic resilience was studied as a dependent variable. 2x2 factorial design was employed on the scores of academic resilience in relation to coping strategies and academic achievement of adolescent students.

Statistical Techniques

In this study, the following statistical techniques have been employed to analyze the data. Descriptive statistics is employed to understand the nature of data and to examine the difference in academic resilience of adolescent students with respect to gender, and academic achievement of the student. ANOVA (two-way) was used to analyse the interaction in scores of academic resilience in relation to coping strategies and academic achievement.

COMPARISON OF MEAN SCORES OF ACADEMIC RESILIENCE OF ADOLESCENT STUDENTS WITH RESPECT TO GENDER

TABLE 1.1: P-value of academic resilience of adolescent students with respect to gender

Gender	No. of Students	Mean	S.D.	Std. Error Mean	Std. Error difference	p-value
Boys	150	199.92	19.120	1.561	2.075	.104
Girls	150	203.30	16.744	1.367		

Table1. 1 reveal that the calculated p-value .104 was found to be more than at the .05 level of significance. So, it reveals that there is no significant difference in the academic resilience of adolescent students with respect to gender.

As shown in Table1.1 the mean of adolescent boys is 199.92 and that of girls is 203.30. It indicates that the mean scores of boys and girls have no significant difference. It was concluded that adolescent boys and girls were not different in academic resilience.

COMPARISON OF MEAN SCORES OF COPING STRATEGIES OF ADOLESCENT STUDENTS WITH RESPECT TO GENDER

TABLE 1.2:P-value of coping strategies of adolescent students with respect to gender

Variable	Gender	N	Mean	SD	T	p-value
Coping Total	Boys	150	216.55	35.373	1.179	.239
	Girls	150	211.78	34.665		

Table1.2 reveals that the calculated p-value was found to be more than at the .05 level of significance. So, it reveals that there is no significant difference in coping strategies of adolescent students with respect to gender.

As shown in Table 1.2 the mean of adolescent boys is 216.55 and that of girls is 211.78. It indicates that the mean scores of boys and girls have no significant difference. It was concluded that adolescent students’ boys and girls were not different in coping strategies.

1.3 2X2 ANALYSIS OF VARIANCE ON THE SCORES OF ACADEMIC RESILIENCE IN RELATION TO COPING STRATEGIES AND ACADEMIC ACHIEVEMENT OF ADOLESCENT STUDENTS

TABLE 1.3

MEANS OF SUBGROUPS FOR 2X2 DESIGN OF ANOVA ON THE SCORES OF ACADEMIC RESILIENCE IN RELATION TO COPING STRATEGIES AND ACADEMIC ACHIEVEMENT OF ADOLESCENT STUDENTS

Variables	FACTOR(B) COPING STRATEGIES	HIGH (B1)	LOW (B2)	TOTAL
FACTOR(A) ACADEMIC ACHIEVEMENT	HIGH (A1)	(A ₁ B ₁) N=79 Mean=203.52 S.D=19.179	(A ₁ B ₂) N=71 Mean=198.61 S.D=20.327	MM=3291.19
	LOW (A2)	(A ₂ B ₁) N=71 Mean=205.90 S.D.=11.991	(A ₂ B ₂) N=79 Mean=198.72 S.D=18.466	

	TOTAL	MM=204.65	MM=198.66	
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In order to analyze the variance in academic resilience, the obtained scores are subjected to ANOVA and the results have been presented as given in Table1.4

TABLE 1.4

**SUMMARY OF ANOVA FOR 2x2 FACTORIAL DESIGN ON SCORES OF
 ACADEMIC RESILIENCE IN RELATION TO COPING STRATEGIES AND ACADEMIC
 ACHIEVEMENT OF ADOLESCENT STUDENTS**

Source	Sum of squares	Df	Mean squares (MSS)	F-ratio	p-value
Academic Achievement (A)	116.011	1	116.011	.364	.547
Coping strategies (B)	2727.661	1	2727.661	8.566	.004*
Academic achievement x Coping strategies (AxB)	96.060	1	96.060	.302	.583
Within	12256852.00	299			

Significant at the 0.05 level of Significance

MAIN EFFECT

Academic Achievement (A)

Table 1.4 reveals that p-value for the differences in mean scores of academic resilience of high and low-achieving adolescent students was found to be not significant at the 0.05 level of confidence. It reveals that the two groups were not different beyond the contribution of chance. It was inferred that high and low academic achievement adolescent students were not different in academic resilience.

Coping Strategies (B)

Table1.4 reveals that the calculated p-value .004* was found to be less than the .005 level of significance. So, it reveals that there is a significant difference in the academic resilience of adolescent students with respect to levels of coping strategies (HIGH and LOW). It was concluded that high-coping and low-coping students were different on academic resilience. To probe deeper. F-ratio was followed by t-test. The p-value for difference in mean gain scores of academic resilience in relation to high and low coping levels have been placed in Table1.5

ACADEMIC RESILIENCE	HIGH (C.S) N Mean SD 150 204.65 16.172	LOW (C.S) N Mean SD 150 198.66 19.309
HIGH (C.S) N Mean SD	-----	.004*

150 204.65 16.172		
LOW (C.S) N Mean SD 150 198.66 19.309	-----	-----

Significant at the 0.05 level of Significance

As shown in table 4.9 the mean of the high coping strategies group is 204.65 and that of the low coping strategies group is 198.66. It indicates that the mean scores of high and low coping have significant differences. The p-value testing the significance of mean difference on academic resilience scores of high and low coping strategies is 0.04* was found to be less than the .005 level of significance. Hence, it was inferred that high coping strategies group has better academic resilience than that of low coping strategies group.

Discussion

The study aimed to study the significant difference in academic resilience of adolescent students with respect to gender. The above result is consistent with the result of the study conducted by Rao and Krishnamurthy (2017) revealed that the null hypothesis is accepted. There is no difference in male and female adolescents in their resilience attributes. Hence it is clear that in the specific context, resilience does not differ by gender.

The aim of the research was to study the significant difference in coping strategies of adolescent students with respect to gender. The above result is consistent with the result of the study conducted by Frydenberg and Lewis (1991) which revealed that there is no significant difference between male and female adolescent students on coping strategies.

Educational Implications of the Study

The result of the study indicates that there is a significant difference in academic resilience of groups of high and low coping strategies, which indicates that students with high coping strategies have better academic resilience as compared to the low coping strategies group.

The government may plan some special programs commonly for teachers, educational institutions, and parents to spread awareness about the importance of coping strategies in children as well as academic achievement and academic resilience.

Planning and organizing planned cultural activities, consistency of management at home, helping the child to differentiate and become aware of himself, and improving the nature of discipline are some of the other factors associated with coping strategies and academic resilience.

Teachers play an important role in the education and development of a child. As this study reveals that coping strategies and academic resilience affect the academic

achievement of children. Parents should be more aware of the environment provided to the children at home and even about the development of the child.

Conclusion

Academic resilience is the ability to handle academic challenges, problems or failures, and pressure at school or college due to excessive workload. The child will undoubtedly live a happier and better life with the aid of academic resilience. This will teach the child to cooperate, communicate, instil moral values, behave according to the situation, learn to be calm, and learn from experiences, among other skills that will aid in his growth and benefit him in both his personal and professional life. Academic resilience is a skill that will assist the youngster in overcoming his failures and worries so that they can have a profound experience. The study comes to the conclusion, that academic resilience improves the academic achievement of the students. Academically resilient students maintain high levels of academic achievement even in the face of stressful and complicated circumstances that lead to the risk of low grades in schools. Hence educational institutions may take steps to enhance the use of proper counselling techniques, appropriate mentoring, and implementation of suitable training programs and practices which will ultimately lead to better academic resilience and achievement.

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