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From the Desk of Editor-in-Chief

The undersigned takes pleasure in bringing out the 13th issue of 'JOURNAL OF EDUCATION AND DEVELOPMENT'.

This issue contains articles on various aspects of different subjects of the changing world. To keep the length of the issue within reasonable bounds, it has been necessary to be very selective in the incorporation of articles. Some of the articles still remain in the queue to get appropriate place in the next issue of the journal. The editor acknowledges his debit and gratitude to all members of the editorial board and to all contributors.

Suggestions for further improving the journal are earnestly solicited and will be cordially received.

Kalyani, West Bengal
31st December, 2023

Editor-in-Chief

JOURNAL OF
EDUCATION AND DEVELOPMENT

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The purpose of the journal is to foster inter-cultural communication among educators, teachers, academicians, administrators, researchers. nationwide coverage transactional collaborative effort in research and development and to promote critical understanding of educational problems in a global perspective.

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JOURNAL OF EDUCATION AND DEVELOPMENT

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ACADEMIC ACHIEVEMENT OF STUDENTS IN RELATION TO EMOTIONAL INTELLIGENCE AND SOCIAL INTELLIGENCE AT SECONDARY LEVEL OF EDUCATION

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ABSTRACT

Education is the process of acquiring knowledge skills values beliefs and habits through various forms of learning such as schooling training and experience. It is an essential component of personal and societal development enabling individuals to achieve their full potential and contribute to the progress of their communities and nations. Education has various objectives including the development of cognitive emotional, social and physical skills as well as the acquisition of knowledge and competencies that are necessary for personal growth career success and active citizenship. The parents and the neighbours perform a unique role in development of child. The period of adolescence not only brings physical change but psychological changes that make the child a completely different individual. Studies show that this stage is mostly assets of our nation but full of helplessness and insecurity too. Secondary education provides students with life skills such as problem-solving critical thinking and decision-making which are essential for their personal and professional growth. Similarly secondary education provides students with the opportunity to interact with people from diverse back grounds and cultures thereby helping them to integrate into society and feel a sense of belonging. In this stage schooling is a powerful tool to break the cycle of poverty. By completing secondary education students can improve their earning potential and in turn help their families and communities. Furthermore students may experience emotional and psychological challenges such as feelings of abandonment loss and insecurity which can negatively impact their academic achievement. They may also struggle with developing social skills and forming meaningful relationships which are essential for overall growth and development. Emotional intelligence refers to the capacity to recognize understand manage and use emotions effectively in a variety of situations. It is a key factor in determining an individual's success in both their personal and

professional life. This often seen as a subset of general intelligence but is distinct from it. It is composed of four main components self-awareness self-regulation empathy and social skill. Self-awareness is the ability to recognize and understand one's own emotions and how they may affect others. Self-regulation is the ability to control one's emotions and behavior while empathy is the ability to understand and recognize the emotions of others. To address these challenges various initiatives have been undertaken to improve the status of secondary education for students in India. For instance the Indian government has implemented policies and programs aimed at providing financial assistance scholarships and other forms of support to students.

Key Words: Academic Achievement, Students, Emotional Intelligence, Social Intelligence, Secondary Level.

INTRODUCTION

Government of India have been organising different programmes for students. There are several strategies and interventions that can be implemented to support the secondary education of students in India. Some of them are students often face financial barriers in accessing education. Therefore providing financial assistance in the form of scholarships fee waivers and educational loans can be a useful intervention to support their education. Institutions such as schools colleges and universities need to be more inclusive and accommodating to students. Special provisions can be made for them such as flexible schedules extra academic support and counselling services. NGOs can play a crucial role in providing support and resources to students. Collaborating with NGOs to provide mentorship tutoring and career guidance can be beneficial for their academic and personal level. Providing vocational training to students can equip them with the necessary skills to find employment and lead a self-sufficient life. Vocational training can also help in their personal development and boost their confidence. Creating awareness and sensitization campaigns can help in reducing the stigma and discrimination faced by orphan students. Educating the public and promoting inclusivity can help in creating a more supportive environment for their education. The government can play a vital role in supporting the education of students. Initiatives such as providing free education text books and uniforms can help in reducing financial barriers to education. The age between 13 to 19 years is a critical period marked by self-discovery and transformation. It's characterized by a surge of energy and curiosities as individuals strive to define their identities interact with others and nurture their

talents. This phase is all about autonomy and self-exploration with profound physiological and psychological changes that shape future emotional stability social relationships and academic success. For teenagers this transition from childhood to adulthood carries unique challenges. Living in condition may lack the family support system leading to feelings of loneliness uncertainty and anxiety across cultures but it often results in stress and emotional responses ranging from anger to withdrawal. Despite their potential senior secondary students face obstacles such as the loss of a stable home environment and an increased risk of dropping out of school. Understanding these challenges is crucial to developing tailored solutions that empower them to navigate their academic and emotional environments successfully. A Secondary School student is a formative time in everyone's life characterized by a burst of development introspection and hope. Especially girls and women in today's patriarchal culture face a number of social and cultural obstacles and biases. Senior secondary students endure significant challenges throughout life many of which are worsened by social and economic disadvantages. Uncertainty about their circumstances and their prospects permeates much of their lively hood experience. Some are able to find home in hostel but the vast majority of them are left to face the prejudice slavery and exploitation of society on their own. Relationships between academic achievement emotional intelligence and social intelligence are complex and they all play a role in this dynamic environment. While previous studies have thrown some light on these factors they have been restricted in scope and quantity. The current research aims to fill this void by investigating the lives of kids and examining the emotional and social intelligence alongside their academic success. Multiple studies highlight the importance of emotional intelligence in overcoming obstacles in life and its reciprocal relationship with academic success. The students, who must often persevere through extraordinary obstacles might benefit greatly from research on emotional and social intelligence. The significance of this research lies in its potential to illuminate the interplay between academic achievement emotional intelligence and social intelligence among orphan students. These results have important implications for the design of programmes and policies targeted at improving the lives of this marginalised group. The objective of this research was to address the specific difficulties experienced by students while simultaneously making a contribution to the larger conversation about education emotional development and social integration.

SIGNIFICANCE

The significance of the study lies in its potential to address the needs of students who are a vulnerable group facing significant challenges in their personal and academic lives. By understanding the connection between emotional intelligence social intelligence and academic achievement educators and policymakers can better support these students and promote their academic success. This study fills a crucial knowledge gap by investigating the relationship between emotional and social intelligence and academic performance specifically among students. The findings will provide valuable insights that can inform targeted interventions and initiatives aimed at supporting students in both their academic and personal development. By recognizing and addressing the unique challenges faced by students the study contributes to promoting equity and inclusion in education ensuring that all students regardless of their back ground have equal opportunities for academic achievement.

STATEMENT OF THE PROBLEM

Academic Achievement of students in relation to Emotional Intelligence and Social Intelligence at Secondary Level of Education.

DELIMITATION OF THE STUDY

Keeping in view of the time and financial constraints at the disposal the study was be delimited in the following manner.

1. The study was delimited only to the students of Jharkhand state.
2. Only girls of class 11th and 12th included in the research process.
3. The sample constituted by taking 350 students of 11 and 12thclass.
4. The study delimited to only three variables i.e. academic achievement, social intelligence and emotional intelligence.

OBJECTIVE OF THE STUDY

1. To study the Academic Achievement of children in senior secondary school.
2. To study the Emotional Intelligence of children in senior secondary school.
3. To study the Social Intelligence of children in senior secondary school.
4. To study the relationship between Academic Achievement and Emotional Intelligence of children in senior secondary school.
5. To study the relationship between Academic Achievement and Social Intelligence of children in senior secondary school.

HYPOTHESIS

- H₀1: There is a significant negative relationship among science arts and commerce students showing emotional intelligence in senior secondary school.
- HA1: There is a significant positive relationship among science arts and commerce students showing emotional intelligence in senior secondary school.
- H₀2: There is a significant negative relationship between Academic Achievement and Emotional intelligence of students in secondary school.
- HA2: There is a significant positive relationship between Academic Achievement and Emotional intelligence of students in secondary school.
- H₀3: There is a significant negative relationship between Academic Achievement and Knowing Emotions dimension of Emotional intelligence of students in secondary school.

METHODOLOGY

The researcher used the descriptive survey method a common approach to gather and analyze data. It involved collecting information about the current state of the topic specifying research goals and designing data collection strategies. Ethical considerations were upheld and data was analyzed systematically to gain a comprehensive understanding of the subject. This methodology enabled the researcher to achieve their goals and provide valuable insights.

METHOD

The researcher used the descriptive survey method for conducting this research. This method is commonly employed to gather data analyze it and report on the research findings. Descriptive surveys aim to provide a clear understanding of the current situation or phenomena under investigation. The researcher has collected three types of information through the descriptive survey method.

POPULATION

This research studies all the secondary students of Jharkhand are regarded as the population of the study. This refers to all students who are classified as students and are currently enrolled in secondary schools within the state.

SAMPLE

These were collected at the secondary school level from four regions in Jharkhand.

TOOLS USED

In order to collect data from the selected samples following tools were used:

- (1) Academic Achievement test: Previous class result will be taken.
- (2) Developed and standardized by Dr. Uddham Singh and Kishore Ojha (2013).
- (3) Social Intelligence scale developed and standardized by S. Mathur (2007).

DATA COLLECTION PROCEDURE**A. Permission and Preparation**

1. Seek permission from school authorities.
2. Identify students with the help from teachers and peers ones.
3. Complete list of schools.
4. Build rapport with respondents.

B. Questionnaire Administration

1. Use of social and emotional intelligence test.
2. Provide clear instructions in Hindi and English.
3. Inform participants about the questionnaire duration.

C. Data Collection

1. Collect completed questionnaires.
2. Follow questionnaire guidelines.
3. Ensure data confidentiality and students privacy.

RESULTS**Demographics and Academic Streams**

The equitable gender distribution among students with (50%) males and (50%) female's students. The 11th grade had higher enrollment (56.5%) compared to the 12th grade (43.5%). This shows balanced regional distribution of students across Jharkhand. Subjects such as Arts was the most popular major (50%) followed by Science and Commerce (25% each).

Emotional Intelligence Analysis

The students displayed varying levels of emotional intelligence across dimensions. Generally they were proficient in managing relationships and recognizing their own emotions.

Academic Achievement and Emotional Intelligence

There was a significant positive relationship between overall academic achievement and emotional intelligence among students. Significant positive relationships were found between academic achievement and each dimension of emotional intelligence. Higher emotional intelligence was linked to higher academic achievement across different dimensions of emotional intelligence.

Social Intelligence Analysis

Social intelligence varied across academic streams with science students having higher scores. The strong association was found between academic streams and social intelligence scores. The choice of academic stream influenced social intelligence outcomes among students.

Academic Achievement and Social Intelligence

There was a significant positive relationship between academic achievement and social intelligence. Each dimension of social intelligence showed a significant positive relationship with academic achievement.

Relationship between Emotional and Social Intelligence

A significant positive relationship existed between emotional intelligence and social intelligence among students. Gender had a significant association with both emotional intelligence and academic achievement among students. This study highlights the importance of emotional and social intelligence in the academic and social development of students with different academic streams influencing the outcomes. Gender also plays a role in emotional intelligence and academic achievement among students.

DISCUSSION

Academic qualification measures our ability to be intellectually effective Intelligence Quotient. It does reflect an individual's Emotional Intelligence. Emotional Intelligence is a key factor to building career success. Academic achievement is therefore no use if we cannot instigate the Emotional Intelligence to assist it. In spite of an academic subject learning assessment there is not moving a necessity to further investigation the Emotional Intelligence to scholastic achievement most especially in a country like India where most investigators are now or then to show interest in the learning. The relationship between academic achievement and social intelligence of students is a complex one. On the one hand students often face significant challenges in their educational pursuits due to lack of resources and family support. This can lead to

lower levels of academic achievement compared to non-peers. These social skills may help them to overcome some obstacles they face in school by allowing them better understanding how best to interact with peers and teachers alike thus leading higher levels of academic success than would otherwise be possible without such interpersonal abilities. In addition recent studies have suggested that students who experience greater emotional stability tend also experience improved intellectual performance at school than those who do not have this same level of security or stability in their lives outside the class room environment. This suggests an additional connection between emotional well-being and educational outcomes among these vulnerable populations which should not be over looked when considering strategies for improving student performance overall. In addition the social intelligence of kids is thoroughly evaluated across a variety of domains to learn more about their interpersonal and communication abilities. The goal of this research is to determine how effectively academic performance can be predicted by participants' levels of social intelligence. The study will also examine whether there is a correlation between the academic performance psychological well-being and social competence of students who have a parents.Regular meetings with parents or guardians to discuss students' emotional and social growth should be scheduled. Foster group efforts aimed at helping pupils in all areas. Mentoring Initiatives set up programs where upper class teacher or instructors work with underprivileged kids as mentors offering them advice for encouragement. Workshops on conflict resolution can help students learn to communicate and work through differences in a positive and productive way. Teacher education programs should include instruction on how to foster pupils' emotional and social intelligence. Spend money on creating grade-spanning all-encompassing programs that teach students emotional and social intelligence. To help studies that investigate how students' emotional and social intelligence affects their performance in school. Promote measures that provide pupils' emotional and social development the attention they deserve in order to ensure their overall health and success in school. This will help them free exchange of ideas to encourage the students for talking nicely honestly for the feelings experiences and difficulties ones. Create a warm and accepting atmosphere at home that promotes sharing feelings and talking to one another. Do things that help us to connect with others and become more self-aware emotionally. Work closely with schools to coordinate approaches to fostering kids' personal and social development. Learn effective techniques for raising children with high emotional IQ by participating in a

workshop or training programme. Integrate social and emotional Learning work to include social and emotional learning (SEL) in formal educational plans. Encourage teaching students how to manage their emotions and interact with others as part of formal education. Invest in the professional development of educators so that SEL programs can be implemented successfully. Make sure that class rooms have easy access to resources that can help students build their emotional and social intelligence. Allocate funding for further research on the relationship between emotional intelligence social intelligence and academic achievement. With the proliferation of online and distant education it is important to examine the role that technology plays in shaping students' emotional and social intelligence. Determine if these skills can be developed successfully in virtual classrooms. Methods from the field of neuroscience such as brain imaging can be used to investigate the biological bases of emotional and social competence. This can shed light on the cognitive underpinnings of these abilities and their implications for training. Examine how students' peer ones connections and relationships affect their development of emotional and social intelligence. Investigate the impact of social relationships on learning and performance. The effects of emotional and social intelligence on students' health and happiness including their psychological and social well-being realize the significance of these abilities in achieving a happy and healthy lifestyle. Examine whether or not there are distinguishing elements in the development of emotional and social intelligence among adolescents by comparing their scores to those of their non-peers in comparative studies. By focusing on these questions we can gain a more knowledge of the complex links between students' emotional and social intelligence and their academic success. This in turn can inform more well-rounded approaches to the students' education and development. Furthermore emotionally intelligent teachers are better able to understand the needs of their students and foster a positive relationship. Finally emotionally intelligent teachers are better able to recognize and manage their own emotions enabling them to remain calm and professional under difficult circumstances.

CONCLUSION

This highlights the importance of nurturing emotional and social intelligence in all students. By implementing the suggested strategies and conducting further research stakeholders can contribute to the holistic development and academic success of students. It will help in building up more inclusive and emotionally

intelligent for educational environment. This can help the guardian in understanding the need of the child so that can be fulfilled. The study can help the educators in handling the emotional child so that their mental health can be balanced. The can contribute in the balancing the mental health of child which can directly give positive impact on their achievement. This will help in understanding the impact of emotional and social intelligence of students on their learning achievement and it will help the educational system curriculum planner governmental department in proper planning of education setups according to need of the students. It will help the society in letting to know the emotional and social intelligence difference between students. Teacher or educators can identify and respond to students' emotional and social needs through professional development. Provide them with tools to make the classroom a safe and welcoming place for all students. Students with differing degrees of emotional and social intelligence can benefit from individualized support if they are identified. Mentoring counselling and other individualized interventions can make a huge difference in a student's ability to succeed in school and in life.

SUGGESTIONS

The findings of this research offer valuable insights that can guide various stakeholders in making informed decisions to enhance the well-being and academic success of students in senior secondary school. Here are some suggestions for different stakeholders. Create evaluation strategies that take into account not only academic progress but also pupils' emotional and social development. Include elements such as introspective writing group discussion and self-evaluation. Foster social connection mutual support and skill sharing by having students engage in co-operative learning activities that require them to co-operate with their peers. Campaigns addressing emphasizing empathy and promoting a culture of compassion and respect among kids ought to be launched. Create a curriculum that takes into account the connections between students' emotional and social intelligence as well as their academic performance. Make sure that students see how these talents may be used in the actual world in our classes. By implementing these suggestions educational institutions and teachers can play a pivotal role in fostering the emotional and social development of students ultimately contributing to their overall well-being and academic success.

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A study on attitude of the student teachers' towards the two year B.Ed. curriculum among the selected B.Ed. colleges of the district of Cachar in Assam

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Abstract

The researcher intends to measure the attitude of the student teachers' towards the two year B.Ed. curriculum (B.Ed.) among the selected B.Ed colleges of the district of Cachar in Assam. From the literature review it is found that hardly any work has been conducted on the attitude of the student teachers' towards two year B.Ed. curriculum in the district of Cachar in Assam. The student teachers' of the three B.Ed colleges of the district of Cachar have participated in this descriptive survey study. Self developed questionnaire has been made and standardized for the proposed study. Descriptive and inferential statistics have been used for analyzing the collected data. The mean attitude score of the male females and rural urban student teachers have been analyzed for exploring the significant difference among the respective groups by using t test. The results revealed that 14.3% student teachers have moderate level and 85.7% student teachers have high level of attitude towards the two year B.Ed. curriculum. It is also clear that female student teachers have more favorable attitude than the male student teachers and there is no significant difference in attitude among the rural urban student teachers. Above all, the study reveals that majority of the student teachers have high favorable attitude towards the two years B.Ed. curriculum.

Keywords: Attitude, student teachers, curriculum, questionnaire

Introduction:

The curriculum is one of the important components of a programme; likewise, it is true for the teacher education programme. So the development of an appropriate curriculum for the long run is an investment towards national development. It will aim at developing professionalism in the teacher education programme and uplift the quality of teachers of various categories like elementary or secondary education. The developed countries have proposed the standards of course of studies for various levels of school teachers from elementary to secondary. But in India formulation of a curriculum is an academic exercise because there is no notified standard for various levels of school teachers. The secondary teacher education curriculum is usually developed on the recommendations of the National Education Commission (1964-66) and the National Policy on Education (1986). After the independence, a lot of attempts have been taken to modify teacher education curriculum on the basis of the recommendations of several commissions and committees and all the developments are the result of subsequent change in the recommendations of Education commission (1964-66) and National Policy on Education (1986). Teacher education curriculum ensures greater professionalism to teachers and improvement of school education, i.e., for National development.

Incorporation of twenty weeks internship programme is an important landmark of the two-year B.Ed. curriculum. It is imperative to know the attitude of the student teachers towards the two year B.Ed. curriculum. Considering the situations, the researcher has felt to undertake a study on attitude of the student teachers' towards the two year B.Ed. curriculum among the selected B.Ed. colleges of the district of Cachar in Assam and delimited within the three B.Ed. colleges of the district of Cachar.

Objectives:

- i) To ascertain the level of attitude among the student teachers towards two year B.Ed. Curriculum.
- ii) To find out the difference in attitude between male and female student teachers towards the two years B.Ed. curriculum.
- iii) To find out the difference in attitude between rural and urban student teachers towards the two years B.Ed. curriculum.

Hypothesis:

1. It will may have favorable or unfavorable attitude of the student teachers towards the two year B.Ed. Curriculum.
2. There will be significant difference in attitude between the male and female student teachers towards the two year B.Ed. Curriculum.
3. There will be significant differences in attitude between the rural and urban student teachers towards the two year B.Ed. curriculum.

Research Methodology:

The researcher has conducted descriptive survey research. The aim of the researcher is to examine the attitude of the student-teachers towards the two years B.Ed. curriculum. The researcher has developed a questionnaire and it has been standardized accordingly. The theoretical framework of the study has been framed.

Theoretical Framework:

Objective	Tool used	Nature of data
i) To ascertain the level of attitude among the student teachers towards two year B.Ed. Curriculum.	Self developed standardized attitude questionnaire	Quantitative
ii) To find out the difference in attitude between male and female student teachers towards the two years B.Ed. curriculum.	Self developed standardized attitude questionnaire	Quantitative
iii) To find out the difference in attitude between rural and urban student teachers towards the two years B.Ed. curriculum.	Self developed standardized attitude questionnaire	Quantitative

Validity of the questionnaire:

Initially the researcher has developed a attitude questionnaire with 35 items. It was sent to language expert for modification. The language expert has deleted 03 items. The remaining (35-03) =32 items were sent to three subject experts for expert opinion. Based on the agreement of two subject experts items were retained. Two items were deleted based on expert's judgment. Therefore (32-02) =30 items were selected for pilot study. After pilot study it is found that the items 19, 25, 26, 28 and 30 are non-significant, shown in the table

Item No.	t value	Comment
1	-2.11	Significant
2	-3.6	Significant
3	-3.8	Significant
4	-3.87	Significant
5	-4.51	Significant
6	-3.25	Significant
7	-3.77	Significant
8	-2.96	Significant
9	-3.83	Significant
10	-2.25	Significant
11	-2.43	Significant
12	-2.73	Significant
13	-3.11	Significant
14	-3.60	Significant
15	-4.01	Significant
16	-2.11	Significant
17	-2.13	Significant
18	-2.33	Significant
19	-2.77	Significant
20	-3.77	Significant
21	-5.43	Significant
22	-3.97	Significant
23	-3.04	Significant
24	-2.5	Significant
25	-1.29*	Non-significant
26	-1.37*	Non-significant
27	-3.31*	Non-significant
28	-1.83*	Non-significant
29	-3.51	Significant
30	-1.37*	Non-significant

So, the number of significant items are $(30-05) = 25$.

Reliability of the questionnaire:

Reliability Statistics	
Cronbach's Alpha	N of Items
.780	25

The reliability of the 25 items has been calculated with the SPSS software, and found that the reliability of the attitude questionnaire is 0.780.

Finally, it is found that the attitude questionnaire tool is standardized with respect to content (face) validity and sufficient value of reliability. It is a five point Likert type scale and will be score accordingly as strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1). In the present attitude questionnaire all are positive items and scoring has been made as 5-4-3-2-1.

Population

There are three B.Ed. colleges in the district of Cachar district of Assam. The population of my study is the 238 student teachers of the three B.Ed. colleges namely, T.T College, Silchar and Dr. Shayama Prasad College of Education, Silcorie, Silchar college of Education Nagatila.

Sampling

Among the 238 students of the respective three B.Ed. colleges, the researcher has selected 77 student teachers randomly as the sample for the preset study.

Analysis and interpretation of the data:

The researcher has analysis the data objective wise.

To ascertain the level of attitude among the student teachers towards two year B.Ed. Curriculum.

Maximum scores obtained for an individual student-teacher is $25 \times 5 = 125$, as there are 25 significant items in the attitude questionnaire. Similarly, minimum scores obtained for a student-teacher is $25 \times 1 = 25$. The difference between maximum and minimum score is $(125 - 25) = 100$. The researcher likes to categories the extent of attitude into 3 levels high, moderate and low. The range score is divided by 3, i.e., $100/3 =$ almost 33. Now, the low attitude group means score in the range 25 to $(25 + 33) = 58$, moderate attitude group indicates the range 59 to $(59 + 33) = 92$ and the high attitude group indicates the range 93 to $(93 + 33) = 125$ respectively.

The attitude grouping of the student teacher:

Attitude grouping	Frequency	Percent	Valid percent	Cumulative percent
Low attitude group (25-58)	0	0	0	0
Moderate attitude group (59-92)	11	14.3	14.3	14.3
High attitude group (93-125)	66	85.7	85.7	100.0
Total	77	100.0	100.0	

Grouping of attitude score with respect to high, moderate and low attitude levels

So, from the table it is found that out of 77 student-teachers, 66 (85.7%) have high level of attitude towards the curriculum of two years B.Ed. curriculum programme and the rest 11 student-teachers (14.3%) have moderate level of attitude towards the two years B.Ed. curriculum. It is also mentioned that, there is not a single student-teacher having low level of attitude towards the two year B.Ed. curriculum.

There will be significant difference in attitude between the male and female student teachers towards the two year B.Ed. Curriculum.

Attitude _total	Gender	N	Mean	Std Deviation	t value	Level of significance
	Male	23	97.65	11.085	-2.88	Significant at 0.05 level
	Female	54	103.94	7.592		

Grouping of attitude score with respect to gender

From the table 3, it is found that mean attitude score of the male student-teachers are 97.65 and female are 103.94. To analyze the significant difference in attitude with respect to gender the researcher has performed 'independent samplest test'. It is found that the $t = -2.88$, $p.005 < 0.05$. The result is significant so null hypothesis is rejected. It is found from the table 3 that the mean attitude score of the females are higher than the mean attitude score of the males. Therefore, female student-teachers have more favorable attitude than the male student-teachers towards the two years B.Ed. curriculum programme among the selected B.Ed. colleges of the District of Cachar in Assam.

To find out the difference in attitude between rural and urban student teachers towards the two years B.Ed. curriculum.

Attitude _total	Location	N	Mean	Std. deviation	t value	Level of significance
	Rural	36	103.53	8.150	1.31	Not significant
	Urban	41	100.78	9.908		

Grouping of attitude score with respect to rural urban location

To analyze the significant difference in attitude towards the two year B.Ed. curriculum among the rural and urban student-teachers the researcher has performed 'independent sample t test'. From the table 4, it is found that mean attitude score of the rural and urban student-teachers are 103.53 and 100.78 respectively. From the result it is found that $t = 1.317$, $p = .192 > 0.05$. The result is insignificant hence null hypothesis is retained. Hence, there is no significant difference in attitude among the rural urban student- teachers. The result of the present objective is corroborated with the results of Gorain, R.(2017), Sushma, R.(2016) and Halder , K.C.(2021).

Major findings:

The findings of the present study are given below.

The attitude score of the student- teachers of the selected B.Ed. Colleges of district of Cachar in Assam are high towards the two year B.Ed. curriculum programme i.e., it reveals the favorable attitude towards the two year B.Ed. curriculum.

The present study shows that there is significant difference in attitude scores between the male and female student-teachers in the selected B.Ed. colleges of the district of Cachar in Assam towards the two year B.Ed. curriculum. The attitude score of the female student-teachers' is favorable than the attitude of male student teachers towards two year B.Ed. curriculum.

The result found that there is no significant difference in attitude score between rural and urban student- teachers towards the two year B.Ed. curriculum.

Conclusion:

Based on the results, it is found that 85.7% of the student teachers' are in highly favour of two years B.Ed. Curriculum. The female student teachers are in more favour of the two year B.Ed. curriculum than the male student teachers. Finally the rural urban dichotomy has no influence on the attitude score of the student teachers. Hence, it is concluded that the extension of B.Ed. curriculum from one year to two years was an appropriate decision for enhancing the quality aspects of the B.Ed. programme.

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Innovative and Best Practices in Open and Distance Learning: An Analytical Review

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ABSTRACT

Open and Distance Learning (ODL) has become imperative to meet the demands of the 21st century, and its key components include blended learning, extensive use of technology, self-driven learning and flexible schedules. This paper aims to identify the innovative and best practices followed by the well-known ODL establishments worldwide, in order to facilitate other universities/organizations meeting the bar of excellence. The findings of the study were deduced and articulated through a systematic analysis of the existing literature on best practices in ODL. The study unveiled the exemplary practices implemented by ODL institutions to generate distinguished outcomes, categorized under headings namely Policy Initiatives, Designing Curriculum, Student Support Services, Use of Information & Communication Technology (ICT), Assessment & Evaluation, Staff Training, and Management & Finance. The study suggests fostering collaborations and partnerships among educational institutions for delivering quality education, prioritising staff training, and incorporating innovative ICT platforms.

Keywords: ODL, Best Practices, Student Support Services, ICT, Staff Development Training

1.1 Introduction

United Nations Educational, Scientific and Cultural Organization (UNESCO) defines ODL as an educational approach in which instructors and learners are separated by space or time or both, integrates multimedia and technological innovations, provides a customized learning experience and includes two-way communication and collaborative interaction. ODL incorporates e-learning, blended learning, correspondence education, distance education, Free and Open-

Source Software (FOSS), Massive Open Online Courses (MOOCs), Open Educational Resources (OERs), digital library and technological development. ODL has been contributing significantly to achieve Sustainable Development Goals (SDGs) worldwide by providing equitable access to education to the learners for whom conventional education was inaccessible for any reason. ODL has been demonstrating prodigious glory for a long time and to sustain, it must meet the high standards of quality consistently. It is becoming increasingly important to exert cutting-edge techniques and strategies to raise the benchmark of quality in ODL. In order to improve the quality, ODL institutes ought to collaborate on the best practices being followed. Best practices are the recommendations that ensure a successful outcome and can be shared with others to produce the optimal or comparable results. Balfour et al. (2015) stated that there is a strong relationship between best practices and the quality of teaching & learning. Best practices in ODL refer to the praxis of bringing fruitful output in:

- policy initiatives
- designing and delivering curriculum
- student support services
- use of ICT
- assessment and evaluation
- staff training and professional development
- management and finance

In order to ensure quality, best practices should be researched, documented and modified according to the needs of the institutes, then they may also be used as benchmarks. It is not mandatory to consider the best practices from the ODL institutions only, the practices implemented by conventional higher education institutes may also be adopted. Identifying and documenting the best practices will enable the ODL institutes to raise the standards of quality by refraining from replicating the same efforts to cut cost and save time.

1.2 Objectives of the Study

- To review the innovative practices in Open and Distance Learning across the globe
- To analyse the initiatives and best practices of the prominent open universities

1.3 Review of Related Studies

Trindade, Carmo & Bidarra (2000) noted the expansion of ODL, its best practices, and explained the modes of operation, structure & functions of ODL, similarities between ODL & Conventional Education System (CES), practical experiments & activities, student support services, curriculum development, internet-based learning and evolution of virtual universities with relevant examples. The study revealed an urgency for collaborations & partnerships between conventional institutes and ODL institutes to enhance the quality of distance learning and facilitate widespread access to education. The paper threw light on the quality concerns in ODL, suggested the measures to address them and highlighting the pivotal role of technology in the success of ODL. The findings indicated that self-evaluation and peer evaluation in terms of customer satisfaction are effective tools to address the challenge of quality in ODL.

Ansari (2002) identified the factors that lead to the growth of ODL system and listed the strategies to overcome the challenges in ODL. The research categorized the best practices of ODL system into ‘government and institutional policy initiatives’, ‘design and development of courses’, ‘methods and strategies to deliver content’, ‘use of ICT’, ‘student support services’ and ‘management and finance’. The role of Distance Education Council (DEC) has been highlighted in the evolution of ODL in India. The paper listed the best practices followed by the well-established open universities like Indira Gandhi National Open University (IGNOU), Yashwantrao Chawan Maharashtra Open University (YCMOU), Madhya Pradesh Bhoj Open University (MPBOU) and The Karnataka State Open University (KSOU) for strengthening curriculum development, teaching strategies and management of the open institutes. The study delineated the importance of interaction, interactivity, staff training, reaching the disadvantaged groups and networking.

Deshmukh (2006) documented the best practices utilized at YCMOU that led to the thriving success of the university, including ‘institutional commitment and support’, ‘curricular flexibility’, ‘flexibility in learning strategies’, ‘learner support’ and ‘assessment and evaluation’. The study reflected that the university is sensitive towards the needs of the learners and works continuously to enhance the quality of learning. The research highlighted the challenges faced by the university, including competition from the private institutes, financial assistance & technical constraints. The researcher proposed to shun one size fits all approach and listed some strategies for the open institutions in order to assure a

culture of quality. The university fosters the culture of multidisciplinary education and research in its faculty and learners, scholars are required to deliver three presentations as a prerequisite to submit their dissertations.

Jung (2007) documented the best practices of ODL institutes in Asia and the Pacific region, survey method was employed to collect data from the nineteen ODL institutions across the globe including IGNOU & Netvarsity from India, and content analysis was utilized to analyse published documents and websites. The study identified the best practices of select universities in quality assurance, student support services & ICT, and highlighted the crucial role of ICT in the expansion of ODL. It laid emphasis on developing Quality Assurance strategies & frameworks, and recommended the measures to be adopted for enriching the quality in ODL programmes in the AP region. The findings of the study align with the perspectives of Trindade, Carmo & Bidarra (2000), highlighting the pivotal role of collaborations & partnerships in ODL. In order to attain global recognition, several ODL institutes like University of Southern Queensland (USQ), Athabasca University & Monash University have sought accreditation from international councils.

Kilfoil (2008) aimed to document the best practices and initiatives in ODL to improve and strengthen the existing system of University of South Africa (Unisa). The researcher threw light on the history & background of Unisa, highlighted the challenges & scope of the ODL system, and opined that the strategies, process and infrastructure need to be integrated as a whole in ODL to develop a strong foundation. The research laid emphasis on improving teaching and learning approach, student support services, extensive use of ICT and figuring out international ODL best practices. The findings of the study revealed that ODL embraces a cohesive approach, and integration of diverse learning resources & interactive learning platforms leads to a dynamic & flexible learning environment.

Hussain, Mehmood & Sultana (2011) conducted a study to assess the significance of reflective practice in ODL using survey method. The research was descriptive in nature, and data was collected from thirty-five students by employing a self-designed questionnaire. The study revealed that reflective practice is beneficial for students and teachers as it enables learners to criticize themselves and improve their learning. It allows teachers to reflect upon their teaching, assess students' performance critically and foster a constructive learning environment in the classroom. The respondents opined that counselling,

feedback, and observation are extremely beneficial in developing problem-solving skills among the students.

Woo (2011) emphasized on the need to provide high quality learning resources for an effective teaching-learning environment in ODL. The study documented the best practices to be followed while designing online modules, and provides a framework to evaluate online modules. The study employed document analysis and listed twelve characteristics of an effective online module to enhance learning experiences. The paper talks about the proliferation of ODL institutes, raising concerns for the quality of learning, and discussed the features and challenges of HTML modules developed by Open University Malaysia as an e-learning initiative to strengthen the quality of ODL. Some of the prominent characteristics of these modules are encouraging interaction & interactivity, exploratory learning, respecting different learning styles and immediate feedback.

Hansra & Jain (2012) noted the significance of ODL in developing and delivering programmes of Extension Education (learning imparted to people residing in rural areas). The study mentioned the need-based programmes offered by School of Agriculture, IGNOU to promote development and sustainability in rural areas. Study materials of these programmes are supported by a range of ICT tools including Gyan Darshan, teleconferencing, Touch Screen Kiosk and audio-video programmes. These need-based programmes are considered beneficial in reducing unemployment rate as they develop skills among learners to run an agricultural business and manage farming in an effective way. The researcher opined that delivering extension education through ODL mode will boost the success of ODL as it enables poor people to upgrade their knowledge who can't afford conventional education.

Nsiah (2013) reviewed the best practices in distance education, and underscored the relevance of technology, planning, finance and instructors for providing access to education. The findings indicated that planning plays an integral role in ODL and it is dependent on human & capital resources which should be utilized optimally. The classroom facilitator has a crucial role in motivating and enabling learners intellectually, socially, technologically and managerially. Instructional design needs to be executed effectively and presented precisely, considering the distance between the teachers and the students. Ownership and fair use of intellectual property must be defined clearly in order to ensure transparency, accountability, and fairness in the development process, minimizing the risk of

conflicts and fostering a harmonious relationship between all the parties engaged in developing the study materials.

Sharma & Goswami (2014) explored the concept of ODL, quality issues in it and opined that skill-based courses are required to reduce the unemployment rate in India. The researchers spotlighted the role of communication, optimal use of ICT, and suggested some measures to enhance the quality in ODL. The study threw light on virtual learning, e-learning & alternative learning and discussed the potential of their integration into ODL. The recommendations of the study include introducing students' handbook to orient them, establishing staff development programmes to enhance teaching skills, providing high-quality education, competing in the international market, preparing a budget to secure financial resources, involving experts for the course development, and collaboration between programme coordinators and teachers.

Gbenoba & Dahunsi (2014) threw light on the values and principles to be considered while designing instructional material at National Open University of Nigeria (NOUN) and documented the best practices, achievements and challenges in the development of instructional material. The researchers stated that Self Instructional Material (SIM) is required be learner-centred and delivered through different media considering its cost and effectiveness. NOUN follows a rigorous seventeen steps process for developing SIMs and is majorly dependent on print materials as the country lacks innovative technology, leading to poor distribution of SIMs. The challenges in developing and delivering SIMs include inadequate facilities, lack of expertise, transportation, irregular power supply and printing press. Outsourcing from different universities is suggested to overcome the challenge of creating material from the scratch. The study recommended that NOUN must follow the best practices of other universities by adopting e-learning and decentralization of the central warehouse of SIMs.

Nisha & Senthil (2015) reviewed the studies related to MOOCs and stated their significance in distance learning. The study documented the challenges and future of MOOCs in India. The study listed the free MOOC platforms for distance learners including Alison, Coursera, EdX, EduKart, Iversity, Open Learning, The Open University and Udacity. The researchers opined that collaboration of Indian institutes with the western MOOC platforms will play a crucial role in providing rich learning experiences to the students for free of cost. Evaluation is a major challenge in MOOCs as it is difficult to provide immediate feedback and assess a large number of learners in a limited time span. An

additional challenge faced by MOOCs involves the lack of technological expertise in learners in India, and access to MOOCs could be challenging for such learners. The study portrays MOOCs as an exemplary means of education in India to achieve quality education, and accelerate social cohesion & sustainable growth.

Owusu-Mensah, Anyan & Denkyi (2015) examined staff development practices of University of Education, Winneba using survey method. The researchers developed a questionnaire to collect data from thirty-nine administrators, who participated in the capacity building workshop, utilizing purposive sampling. The findings revealed that the university doesn't organize training programmes frequently and the content of the workshop/seminar is not relevant for distance education staff as the themes are not distance education centric. The respondents desired to engage in workshops & seminars that create an impact on their roles & responsibilities. Some of the preferred themes for the workshops include communication, features of DE students & their complaints, filing process, and resolving students' queries. The study recommended that the university should conduct effective staff development programmes to enhance the quality of ODL in Ghana.

Balfour et al. (2015) highlighted the challenges in blended learning (BL) and documented the best practices of BL & ODL using document analysis. The study noted the significance of documenting the best practices in any field/profession. The researchers discussed the challenges in implementation of the policy frameworks of South Africa in ODL. The study explored the researches conducted about BL thoroughly and provided suggestive measure to address the challenges of BL in ODL. BL includes a wide range of delivery modes, teaching methodology & learning styles, in order to enhance the role of educators, experiences of the learners and social environment. It is crucial to analyse the availability of technology to learners and their awareness about it. Curriculum should be designed to integrate diverse technological resources that facilitate the learning outcomes and learners' experiences in blended and distance learning environment.

Das (2017) documented the innovation and systematic barriers in ODL, and posited the urgency to implement existing and creating new innovations in Indian ODL system to address the issues of quality learning. The researcher threw light on the best practices of some Indian open universities including YCMOU, IGNOU and Bhim Rao Ambedkar Open University (BRAOU), and

listed the barriers for innovation in any ODL system. Utilizing a multimedia instructional approach, YCMOU is committed to delivering top-notch professional development programs for its staff. Meanwhile, IGNOU has curated a database containing 125 innovative ideas for enhancing the ODL system. Despite these efforts, administrative obstacles pose a considerable challenge in the creation and implementation of innovative practices. Additional barriers include delay in implementing changes and resistance to embracing new ideas. The study recommended to sensitise the administrative staff in the ODL institutes regarding innovation through workshops and training programs.

Mole & Ofodu (2017) explored the global best practices to categorize library collections in ODL. Classification plays a pivotal role in ensuring that a collection is not just a random assortment of items, but a well-organized repository where materials are grouped systematically, facilitating effective information retrieval for researchers, students, and other users. This process, coupled with cataloguing, forms a complementary framework crucial for efficient information management. The researchers highlighted the importance of library for offsite learners and stated the use of ICT in establishing an e-library for easy access to the learners. The study also listed the challenges faced by cataloguers in classifying e-resources, involving copyright issues, limited awareness about the latest technology, lack of technological expertise, shortage of workforce, inadequate basic infrastructure & amenities, and unqualified library staff. These constraints may lead to loss of learning, and seminars/workshops are recommended for cataloguers to overcome these challenges.

Ali (2018) provided the historical background of ODL in Jammu & Kashmir (J&K), analysed the status of ODL institutions in J&K and documented the best practices in ODL. The researcher collected the data from the regional centres of IGNOU in Jammu & Srinagar, Camp Office and Directorate of Distance Education. The study employed content analysis to analyse books, websites and census handbooks of J&K. The findings revealed that IGNOU provides free education to Scheduled Caste (SC), Scheduled Tribe (ST) and transgender students but there is no access to the study centres for the students residing in rural areas. The ODL universities in Jammu & Kashmir are using ICT innovations optimally and IGNOU has collaborated with some NGOs to reach the maximum learners. The researcher suggested collaboration of ODL institutions with NGOs to establish ODL centres in Kashmir, creating rural

libraries and providing adequate infrastructure & amenities to improve the existing ODL system in Jammu & Kashmir.

Singh & Das (2019) analysed the gap areas of the ODL system in India using document analysis, and provided a framework consisting four components: evaluation of the institution, pinpointing areas of improvement, incorporating innovative measures & executing the plan, to enhance the quality of ODL. The study provided a detailed description of product benchmarking, performance benchmarking, process benchmarking & strategic benchmarking, and presented fourteen quality assurance parameters, which involves availability, accessibility, sustainability, reliability etc. The quality of IGNOU was assessed by Commonwealth of Learning (COL) toolkit using participant observation. The study identified 'the learners', 'infrastructure and learning resources', and 'research consultancy & extension services' as the areas where IGNOU lacks quality. The researchers suggested 'benchmarking', 'benchmarking and creativity tools' and 'creativity tools' for these gap areas respectively.

Jadhav (2020) examined the innovative teaching, learning and evaluation strategies to strengthen the higher education system. The researcher suggested the use of ICT, mind maps, humour, gamification, mnemonic words, role play and scenario analysis for teaching. The teachers should ensure that learners participate actively, construct their own experiences and raise questions in the classroom. The institutions should enable students to shape their career, design innovative courses, provide coaching for competitive exams and in-service training to the staff. Adopting the innovative child-centred teaching methodologies can significantly enhance the learning outcomes and student enrollment. Evaluation allows the institutes to critically assess their performance, and identify the scope of improvement.

Kant, Prasad & Kumari (2021) delineated the strategy to select a suitable Learning Management System (LMS) for learners in ODL and analysed several available LMSs like Moodle, CANVAS, Make My LMS, Open edX etc. in the market by describing their unique features. The study employed qualitative design to review the literature available about LMSs and quantitative design to analyse the perception of learners and academic counselors of IGNOU by developing two questionnaires. The coefficient reliability of the questionnaires was tested using Cronbach α . The findings revealed that the learners and the academic counselors have a favourable attitude towards implementation LMSs in the programme and opined that it will be a significant initiative to enhance the

learning outcomes. The study emphasised that LMSs need to be selected on the basis of their utility for the institution, learners and teachers.

The research trends in the ODL literature suggest that the realm of "best practices and institutional values" is dreadfully neglected. Consequently, there is an imperative to document the innovative and best practices employed by the prominent ODL institutes that have contributed to their success. Best practices signify identifying the activities or programmes that have been tested consistently and demonstrated effectiveness in yielding exceptional outcomes (Balfour et al. 2015). In the future, ODL has a significant journey ahead to meet the needs of diverse learners. Documenting the best practices can assist developing institutions in adopting the successful strategies from well-established ODL institutes. This approach helps prevent duplication of efforts, minimizes costs, and optimizes the utilization of resources. The literature review revealed the following innovative and best practices that have been categorized under different headings.

1.4 Findings of the Study

Following the identification of the top seven significant ODL areas (policy initiatives; designing and delivering curriculum; student support services; use of ICT; assessment and evaluation; staff training and professional development and management and finance), a review of those areas' best practices was conducted. In these specific areas, following findings were deduced and articulated.

a) Policy initiatives: Policies at the national and institutional levels are of the utmost significance considering they are utilised to raise educational standards and give instructions for accomplishing the roles and responsibilities of the institution, instructors and learners.

- Jung (2007) stated that institutes like Allama Iqbal Open University (AIOU), Athabasca University, Korea National Open University (KNOU) have framed policies on protecting human rights, equality and ethics. Only a few institutions like IGNOU and USQ have developed policies on international ODL activities. Some universities including Athabasca, USQ and The Open University of Sri Lanka (OUSL) have designed an instructional manual outlining the guidelines in each significant policy domain.
- New Education Policy (2020) also lays emphasis on access, equity and inclusion through ODL; encourages establishment of dual-mode

universities; developing a framework of quality for ODL; providing high-quality vocational courses, increasing Gross Enrollment Ratio (GER) and promoting lifelong learning. IGNOU has been working diligently to implement NEP recommendations by introducing vocational & skill development courses, fostering multidisciplinary & holistic education, promoting regional languages and developing Institutional Development Plan (IDP).

b) Designing and delivering curriculum: Balfour et al. (2015) have emphasized listing the best practices with respect to how to deliver curriculum effectively and stated the significance of implementing blended learning in ODL to cater to the different learning styles. The curriculum should be designed with a firm basis to integrate pedagogical knowledge, content knowledge and technical knowledge of the instructors. Ansari (2002) noted that the best practices should include the needs of learners & instructors and must refer to the technical issues in delivering the content.

- Trindade, Carmo & Bidarra (2000) suggest that ‘salami slicing concept’ should be employed to design innovative and demand-driven courses by incorporating the best elements from all the available courses that are offered in the relevant discipline/subject.
- Ansari (2002) observed that vocational courses are provided by IGNOU and YCMOU to generate employment among women and rural students. Staff Training Research Institute of Distance Education (STRIDE) organizes training for its faculty to enrich the teaching-learning process. Karnataka State Open University (KSOU) offers hostel accommodations and personal interaction programmes on campus to its learners. To support various learning styles, it has created an inventive feedback delivery method. He opined that curriculum should be learner centric and interactive. Co-curricular activities should be involved to lower drop-out rates and it must focus on special target groups. Instead of general courses, which contribute to graduates who are unemployed, emphasis must be laid on professional, employment-oriented, and need-based courses.
- Deshmukh (2006) stated that YCMOU has incorporated modularity in all academic programmes to promote learning flexibility and retain the consistency of the course material. The institution offers courses that are research-oriented for the highest level of learning and also geared at the lowest skill level to assist unskilled workers. In addition, the university

provides courses in agricultural education, teacher education, library science, technology programmes, and vocational education. By creating courses based on societal needs, such as Human Rights Education, it also helps students fit into society.

- Deshmukh (2006) also noted that for various courses and students, YCMOU uses a variety of instructional pedagogies. In agricultural courses, Prayog Pariwar, peer-learning methodology has been applied. While face-to-face counselling using the appropriate media is used in liberal education, it gives students in field and lab courses practical experiences. To impart knowledge throughout engineering and computer programmes, web-based communication tools are utilised.
- Das (2017) explored that BRAOU has implemented multimedia approach to deliver the curriculum using print materials, live counselling sessions, hands-on experience to learners and conducts formative assessment timely.
- Association of Indian Universities (2021) found that Dr. Babasaheb Ambedkar Open University provides self-learning material digitally using its platform, Open Matrix Knowledge Advancement Resource for Empowerment (OMKAR-e). Students can access the video lectures which are created in 'Chaitanya' studio from the website of the university. The institution implements 'four quadrants approach' to provide MOOCs to its learners.
- Association of Indian Universities (2021) explored that IGNOU learners can access self-learning material through its online repository 'e-gyankosh'. The university has adopted cloud-based service to provide copyright content to its learners through Ez-proxy software. Web Enabled Academic Support (WEAS) is utilized by the university to provide various e-learning sources to its learners and gives an opportunity to interact with their instructor and peers.

c) Student Support Services: It is the core of ODL and open universities must engage meticulously to keep it evolving. It includes counselling sessions, libraries, feedback, contact programmes, study centres, assessment, admission, learning resources, technological services etc.

- Jung (2005) stated that Hong Kong Metropolitan University, earlier known as Open University of Hong Kong (OUHK) provides online instructional support, face-to-face tutorials and telephone support through part-time

counsellors. IGNOU suggests timely delivery of learning materials, quick feedback and frequent interaction with teachers and peers.

- Deshmukh (2006) found that YCMOU has established study centres for professional programmes in each district and for mass education programmes, within 10km radius. The university circulates information through prospectus & mass media, ensures on time delivery of study material, aids learners financially and conducts various activities to retain learners.
- Chattopadhyay (2014) noted that IGNOU has adopted UK Open University Model to offer support services to its learners which includes Study Centres and Regional Centres. Study Centres are responsible for delivering curriculum, providing library and technological facilities, evaluating assignment and conducting term-end & entrance examinations. Regional Centres undertake maintaining students' records, conducting orientation & induction programmes for students & teachers, monitoring study centres and facilitating learners during admission and completion of the programme.
- STRIDE, IGNOU launched a handbook on 'Learner Support Services in Distance Education' in 2008 to assist distant learners, instructors and other stakeholders for an effective execution of ODL programmes. In order to offer learning opportunities to a wide a range of pupils possible, the institution conducts the admission procedure twice a year. It disseminates information through its website, social media platforms, radio, TV etc. and provides e-counselling sessions to its learners.
- Association of Indian Universities (2021) analyzed that the university has developed 'iGRAM' portal for addressing students' grievances and queries; **नव**VRIETI has been created to foster entrepreneurship, innovation and creativity among learners; conducts offline and online placement drives for students to ensure quality in the system.

d) Use of ICT: ICT has significantly contributed to the expansion of distance learning into rural/remote regions and to bolstering the desire of all categories of learners to pursue higher education. The influence of ICT cannot be neglected regarding the success of ODL.

- Trindade, Carmo & Bidarra (2000) highlighted the importance of internet in enhancing interactivity. It enables the open institutions to

supply learning material in all possible forms (synchronous and asynchronous), creating digital libraries, receiving immediate feedback, developing online repositories and establishing virtual universities.

- Jung (2005) explored that AIOU started a multimedia project to create learning materials using multimedia, carry out research activities and build e-learning capacity. OUM, Athabasca, KNOU, USQ etc. have developed their own LMS to give learners access to self-learning materials and allow them to learn at their pace. E-testing and developing e-books for learners have been implemented by Ramkhamhaeng, Athabasca, KNOU etc. The concept of 'Mobile University' also became popular and the first "Mobile University" in Thailand was developed by Ramkhamhaeng. Anadolu initiated the audio book project to serve visually impaired learners.
- Deshmukh (2006) noted that YCMOU utilizes the 'dotnet' platform to organize the university's academic and administrative activities from enrollment to certification. The institution implements web-based communication technologies, video-based animations, digital practical and audio & video components to cater to the needs of the learners. It has adopted ICT components in student support services and assessment & evaluation as well.
- Balfour et al. (2015) believed that blended learning approach should be adopted in open universities to facilitate learners with efficient learning resources.
- Association of Indian Universities (2021) mentioned that Dr Babasaheb Ambedkar Open University provides access to learning materials through its web television 'Swadhyay TV', web radio 'Swadhyay Radio' and five mobile application which are available on Google Play Store. The university has created a channel on 'Telegram' to disseminate information and connecting students with their instructors and peers.
- Association of Indian Universities (2021) also documented that IGNOU utilizes its Web Enabled Academic Support (WEAS) platform to facilitate learners with audio books, videos, OERs, e-learning resources, online quizzes, discussion forums etc. It also provides live counselling sessions through TV channel Gyan Darshan & Gyan Vani and information about these sessions is circulated through SMS, email and

websites of Regional Centres. Along with e-gyankosh repository, the university has created a repository of video lectures/ programmes on e-gyankosh IGNOU, YouTube. It has utilized ICT components in student support services, assessment & evaluation, placement drives, staff training and fostering entrepreneurship & creativity among IGNOU learners.

- Kant, Prasad & Kumari (2021) suggested the open institutions to choose from multiple number of open LMSs available in the market depending upon the needs of the institution.

e) Assessment & Evaluation: Assessment is a critical component of every educational system. A credible evaluation mechanism that can help in achieving the programme goals must be implemented in order to ensure quality of ODL system.

- Deshmukh (2006) documented that YCMOU assess its learners continuously using a valid and reliable question bank developed by the university, ICR technology is employed to evaluate objective tests and digital system is used to declare results and provide feedback to the learners. To promote self-assessment with immediate feedback, Online Self-Test Centre has been established. The university emphasizes on application-based questions and has been putting efforts to introduce on-demand and online examinations.
- Chaudhary & Dey (2013) found that IGNOU conducts self-assessment by exercises given in the learning materials, formative assessment through assignments, research proposal, internship reports, micro-teaching, field experience, seminars, workshops, group discussions, project work etc. in online & offline mode and summative assessment by conducting term-end examinations. The Open University, United Kingdom weighs summative assessment more than formative assessment. Bangladesh Open University and Allama Iqbal Open University also conduct formative and summative assessment. The Open University of China (OUC) promotes credit system and helps learners in creating portfolio and linking various learning accomplishments.

f) Staff Training & Professional Development: It is a vital component of ODL because the professionals are the outcomes of conventional education system. To acquaint them with the distant learners' expectations and issues, effective training should be provided to the staff.

- STRIDE, IGNOU launched a handbook on ‘Staff Training and Development in Open and Distance Education’ in 2007 to improve the quality of training programmes.
- Pulist (2017) found that IGNOU has implemented academic staff development policy which lays emphasis on capacity building, research activities, assessment of staff, skill development and career development activities. The university follows non-academic staff training policy that focuses on storing & delivering learning materials, admission process, ICT, office norms etc. STRIDE conducts training programmes for academic and non-academic staff regularly to develop relevant skills among the faculty.

g) Management and Finance: Considering the rapid success of ODL, it is crucial for the management of the institution to utilize the funds effectively and make right choices.

- Jung (2005) documented that University of the Pacific (UOP) employs part-time faculty members to save costs by paying them on hour basis. Reusing e-learning material and collaborating with other universities also help to reduce cost. BOU, AIOU, OUSL, IGNOU and COL designed executive MBA programme to enhance the quality of teaching and reduce the cost of technologies involved.

1.5 Educational Implications

The educational implications of the study are following:

- Effective staff training programmes should be organized for ODL faculty to acquaint them with the holistic perception of ODL system.
- Educational policies should be developed for ODL learners, promoting human rights, equality, ethics, global exposure, quality vocational education and lifelong learning.
- ODL curriculum should incorporate need-based courses and interactive activities to reduce dropout rates.
- Innovative ICT practices should be adopted to facilitate student support services, curriculum delivery, assessment and administration management.

1.6 Conclusion

ODL is a vital educational approach, catering to diverse learner needs by allowing self-paced learning and integrating innovative teaching strategies. With profound significance in education, ODL aims to deliver high-quality learning experiences to learners by implementing innovative strategies to enhance quality. Well-established Indian ODL universities like IGNOU, YCMOU, and BRAOU offer study materials through various channels and provide exceptional student support services. Leveraging ICT enables timely feedback, performance assessment, and encourages self-regulated learning. Efficient training for ODL staff is recommended to meet set benchmarks of quality, and increased use of technology ensures optimal learning experiences and quality assurance. Collaborations and partnerships play an integral role in enhancing the quality of ODL (Trindade, Carmo & Bidarra 2000; Jung 2007; Sharma & Goswami 2014; Nisha & Senthil 2015; & Ali 2018). Referring to the best practices of various educational institutions is crucial to prevent redundancy in efforts, optimal resource utilization, cost-effectiveness, time efficiency, and fosters a culture of continuous improvement & efficiency within the educational landscape.

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CULTIVATING CRITICAL THINKING THROUGH E-LEARNING ENVIRONMENT AND TOOLS

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ABSTRACT

The learning of programming using simulation involves unique educational environments and human factors. To address the gap this study facilitates evidence driven discussion on learning and teaching as well as their relationship in programming education. Research areas include virtual and physical environments of simulation sessions relevant to learning enablers and impediments and roles of students and faculty members in the process. Educational technology is the development of application and evaluation of systems techniques and aids to improve the process of human learning. This gives emphasis on development of human learning process which is very complex and difficult to understand as so many factors such as socio-economic educational cultural language which contribute a lot in whole learning process. This takes into account all the changes such as social cultural regional economic which contribute in process of human learning. It also takes into account its application which means the educational technology is basically an evaluation process where the participants of teaching and learning process such as teacher students and various members of the educational system are required to constantly evaluate and upgrade the teaching methodology to achieve result and bring desired changes in students. It also talks about the evaluation of the whole systems it means that we cannot study the impact of educational technology in pieces. We need to consider the prime objectives of educational system and how best educational technology can help to attain the desired objectives. Critical thinking is one of the main goals of higher education to develop dependent and reasonable thinker as an efficient citizenship in

modern society. Researchers and instructors in the world attempt to assess the level of students' critical thinking in order to foster it as a vital ability. They are use as different learning approaches and theories along with the technological progress to nurture critical thinking of students. On the other hand the advent of e-learning in education facilitates the difficulties through the learning and teaching paths. The provided models and strategies for developing critical thinking by e-learning tools with their specific characteristic and applications. This presents a review on e-learning approaches and models which are used to cultivate critical thinking with the aim of highlighting the importance of critical thinking and the role of e-learning. It also present the taxonomy of existing e-learning models based on their applications and efficiencies as well as presenting similarities and differences in such approaches and discuss open research issues.

Key Words: Critical Thinking, E-Learning, Environment Tools.

INTRODUCTION

Life skills are the abilities that help to promote psycho-social competence and general well-being of individuals. To enhance the efficiency of prospective pre-service teachers and to convert them into individuals with high potential teacher education programmed should be reformed giving due importance to life skill education. Imparting life skills can empower prospective teachers to take positive an action promotes healthy and positive social relationships. It also entails being able to establish productive interpersonal relationships. The teacher education curriculum should encompass life skill education to impart diversity of skills among prospective teachers there by to build an open and flexible mind, not only to adapt to diverse classroom situations but also to develop life skills of their students in real teaching situations. Life skill education as a whole subject is necessary to enhance the efficiency and well-being of prospective teachers. Teachers being the facilitators of learning process in classrooms are responsible for overall development of the students (Qaisur and Tanwir 2020). Effective teaching in this century requires more than a basic understanding of educational theory and classroom management. One of the prime duties of the teachers apart from teaching the subject matter is to develop positive attitude among the students and enable them to think critically, make adjustments in adverse

conditions and to generate good decision makers. Teachers can also help the students to relate the learnt matter to the real life situation. Life skills are the abilities that help to promote general well-being and psychosocial competence of an individual. Life skills are abilities for adaptive behavior that enable individuals to deal effectively with the demands and challenges of everyday life. Training for life skills promotes mental health and general well-being of pre-service teachers which is vital as the teachers often work in diverse situations. It helps to improve the academic performance by enabling to translate acquired knowledge attitudes and values into actual abilities and there by facilitate to behave in healthy ways. Qualities like critical thinking effective communication, decision making and problem solving are imperative for quality teaching and that can be obtained through life skill education. It helps to build confidence and self-esteem among the pre-service teachers. Many a time teachers face job stress in the work place and quite often struggle with their emotions which affect their teaching. In order to cope with stress and emotions, a prior training in life skills will be boon for the teachers to carry on the teaching work efficiently (Qaisur and Tanwir 2020). It helps the teachers to tackle adolescents who are in a transition phase and quite often are found struggling due to inappropriate home and school environments and also assist teachers to impart the acquired knowledge of life skills to the students in a better way by employing different teaching methods. Cultivating critical thinking is an important goal of higher education as it is necessary for students to become a competent citizenship in modern society. To achieve this goal students should have abilities to evaluate evidence distinguishes false true and incomplete information and draw conclusions. The importance of critical thinking now is a global issue therefore some countries in the world such as the United Kingdom the United States and Australia in the western world and Hong Kong and Japan in Asia attempt to assess and foster it. Although this agrees with the cultivating critical thinking as one of the main purposes of higher education teaching for critical thinking has not been a simple task (Ku, 2009). There are two main approaches for fostering critical thinking one general skills approach in which educators design special courses for instructing critical thinking skills and second the infusion approach (Swartz, 1987) in which educators develop these skills by embedding them in the teaching of the set learning material (Aizikovitsh-Udi and Amit 2011). Regards to the vital role of the Internet in everyday life of recent year's educators use the advantages of online learning to develop students' critical thinking. In accordance with the educational approaches for critical thinking and the advent

of e-learning in different environments instructors used various methods or tools such as mobile laptop video or discussion forums to develop critical thinking which they have different applications. E-learning can be applied in two different environments based on the use of online tools which are synchronous and asynchronous environment. Also in these environments some educational approaches are used such as web-based approaches and collaborative learning. This presents a review on e-learning approaches to cultivate critical thinking with the aim of highlighting the importance of the role of e-learning. In addition taxonomy of existing e-learning methods with the basic significant parameters such as different applications in the various environments is provided.

MEANING OF CRITICAL THINKING

One has to evaluate the educational process in various lacunas where technology can be helpful to achieve desired results then one should create appropriate technology and use it to make better human learning process. Factors like conditions of learning teaching methodologies are talked about in the above context and hence we have to study one more use of educational technology. The establishment of technology is the backbone of improvement for student learning professional development and administration. With the help of integrating technology to prepare students for careers and keep students engaged in the teacher educators up to date on the latest technologies to help them be more effective in their teaching environments. Increasing support for pre-service education technology programs to help to produce more technologically by teachers in using technology to scale improvement and to accelerate reform (Qaisur and Tanwir 2020). Developing systems and strategies that will help educators to use assessment of data to improve student learning and investing in research and development focused on innovation in teaching and learning process and promoting in global digital citizenship through technology based collaboration. Critical thinking is a reflective and reasonable thinking which is based on being true or false final decision (Ennis, 1989). One of the most important aim of higher education is improving critical thinking of students and prepare them to be a competent citizenship and efficient in their work place. Therefore some researchers and educators have been working on this area and defined critical thinking in their views. The critical thinking is described by (Facione, 1990) as a purposeful and self-regulatory judgment which is concluded to interpretation analysis evaluation and inference as well as explanations of different types of arguments based on logical judgment. Although it has a

different description about critical thinking some of them agree that the definitions of critical thinking and instruments for its measurement are common in the ideas of analysis evaluation inference and interpretation. Teaching critical thinking needs to know its skills and dispositions which are described by most researchers. Critical thinking skills are as Interpretation is included categorization and understanding the meaning of the questions. The analysis is the identification of arguments or question and Inference is included evidence observations opinions and drawing a conclusion (Qaisur and Tanwir 2020). The evaluation is evidence observations opinions and drawing a conclusion. The explanation is expressing results to validate procedures and presenting arguments and self-regulation is controlling on the emotions to do self-correction and self-examination also critical thinking dispositions are being open-minded and fair-minded having the propensity to seek reason being inquisitive having the desire to be well-informed being flexible and respect for and willingness to entertain other's viewpoints.

E-LEARNING ENVIRONMENT

The e-learning is a new educational concept by using the internet and technology tools that are either web-based web distributed or web capable for the purposes of education. Indeed e-learning makes a revolution in distance education in which it transfers the digital content and provides a learner oriented environment for the teachers and students. The e-learning include the structure of life-long learning ideas and learning society (Senge, 2013). The e-learning is a means of education as opposed to a method of education. In other words e-learning involves the use of technological tools that can be applied in various contexts as it is not a distinctive education system in itself. Therefore e-learning cannot be compared with face to face delivery or distance education because it can be used within either of the models (Eisenstadt and Vincent, 2012). It is possible to apply different educational philosophy using e-learning for instance computers was applied in behaviourist modes who favoured teacher-centred education and constructivist mode who supported learner's role in education (Ravenscroft, 2001). Instructors by using the advantages of online learning encourage many trainees to continue their education. It is shown that students feel self-esteem when they use e-learning systems and familiar with technological skills. Educational centres also take advantage of technological equipment to foster active and creative learners in preparing them to go to the work places (Yang *et al.*, 2012).

ROLE OF E-LEARNING TO CULTIVATE CRITICAL THINKING

Today internet and online tools play a vital role in various domains such as health systems educational field work places and even in daily life. The significance of internet in educational systems and its effects on the teaching methods and learner's curriculum are obvious. On the other side critical thinking has been well-known as one of the key skills in the 21st century which results in success and competence in academic and employment responsibilities. The e-learning accompanied critical thinking skills encourage students to be ready for modern society. Some researchers insist on being students based e-learning system because they believe that it save students' time and they can think deeply when they have to answer to the questions and do their assignments (Benson and Samarawickrema, 2009). The synchronous and asynchronous learning are two educational approaches based on the leader in the learning procedure. Synchronous learning is instructor-led and it occurs in real-time with all participants while asynchronous learning is a self-paced approach and it can be happen every time when students want to share their opinions without necessity to attend at the same time. The synchronous learning environment can be included chat rooms or virtual classrooms where everyone is working or studying at the same time and asynchronous learning environment involves email blogs and discussion boards besides web-supported text books (Hrastinski, 2008). E-learning can be applied in two different environments based on the level of usage of the internet blended and distributed learning environment. Some researchers propose models to cultivate critical thinking in these environments such as project based and electronic curriculum for the blended learning environment and conference systems and online discussion for distributed learning environments. Furthermore several approaches are used in e-learning environments to cultivate critical thinking which includes collaborative learning and web based.

BLENDED LEARNING ENVIRONMENT

Blended learning is a combination of strengths of face to face and online learning in a co-operative manner to create a unique learning experience to achieve educational goals. It is a new and different philosophical approach to learning an incorporating classroom and communications technology with the capability to the transform higher education in a better quality. It provides deeper insight of learning and critical thinking through the integration of online courses and traditional classrooms (Garrison and Vaughan, 2007). In the other words

blended learning is the third generation of distance education systems which maximize the best advantage of face to face learning and multiple technologies after correspondence education via mail and radio and distance education through a single technology such as computer based and web based learning (Phipps and Merisotis 1999). Some researchers used blended learning environment to develop or teach critical thinking for instance (Akyuz and Samsa 2009) examined the effects of blended learning environment on the critical thinking skills of students and they showed that if students had enough time and computer access the blended learning environment which students used to discuss influences in a good way on students' critical thinking skills. However (Yang *et al.*, 2012) worked on the effectiveness of integrating critical thinking into individualized English listening and speaking instruction by using Moodle a virtual learning environment. The values of this study were critical thinking skills in listening and speaking proficiency. It was found that attending participants in the treatment improved their listening and speaking as well as critical thinking sub-scales and made a little change in the students' except open-mindedness. The project-based learning as online learning is one of the e-learning model which is used by (Kurubacak, 2007) to promote learners' critical thinking through reusable learning objects from global online resources. It can provide online learners with powerful digital reusable learning resources and also engage them complex reusable activities by thinking and solving problems critically. In the environments these learners can discover new logical strategies and specific procedures for producing ideas. Besides they can equip themselves with the critical thinking skills that they need to deal with unexpected communication in practical. It is one of the best methods to develop powerful means by providing their durability inter-operability accessibility and re-usability. The electronic curriculum in the other research was done by (Yuce *et al.*, 2011) to design an electronic curriculum to improve learning process. The values which were measured were about the behaviors of the students regarding the course and the relationship between gender and their success of their ability to use the knowledge that they had learned. The results showed that the electronic curriculum which is used affects students' long-term learning success in an affirmative way and also the students who are more responsible for the course had succeeded with higher grades in this blended learning environment.

DISTRIBUTED LEARNING ENVIRONMENT

The Distributed learning use multi-media tools for educational purposes that includes web-based instruction streaming video conferencing face to face classroom time distance learning through television or video and other combinations of electronic and traditional educational models. In the other words it uses blended learning components in an online format completely (Bates and Poole 2003). Educators and researchers attempt to use distributed learning environment in order to teach courses and encourage participants to be well-educated and critical thinker as well. The conference system involve designing the electronic conference systems to support and teaching critical thinking is one of the most important goals of (Duffy *et al.*, 1998). They found that computer based systems can prepare synchronous or asynchronous context for learning and also discussion is able to occur in real-time. Therefore these work proposed complex computer-based conference systems in design and use to promote critical thinking. The results showed that if students are forced to focus on issues and consider how their contributions relate to these issues they will be succeeding. It was revealed that the asynchronous conferencing environments afford the opportunity for students to engage in critical thinking in the domains to participate in the rational and professional discussions. In addition the asynchronous conferencing environment provides the contexts to understand the intellectual goals of higher education and exchange information to find the facts. The online discussion is another e-learning model was designed by (DeLeng *et al.*, 2009) to promote critical thinking about basic science topics in online communities of students during work placements in higher education. They used garrison's practical inquiry model of cognitive presence to evaluate the quality of the discussion and content analysis. The results showed that the model is a useful instrument for procedural facilitation of online discussion among small groups of students. The structure of the e-learning model was useful in making easy a sustained on the topic course involving critical thinking in a group of peers.

COLLABORATIVE LEARNING

Collaborative learning is a method of teaching and learning in which students join in groups to work as a team to explore a significant question or create a meaningful project (Gokhale, 1995). Collaborative learning can be done in two type's one co-operative and problem based learning. The co-operative learning is kind of collaborative learning but with smaller groups of participants than the collaborative learning. In co-operative learning teams have less than five

members and they discuss and work together by teacher's supervision. In practice they think critically and develop their problem solving skills. The problem based learning is one of the most widely discussed models for supporting collaborative inquiry in the classroom is problem based learning. In this students working with a facilitator in teams of about five who presented a problem or issue that they must analyze and gather data to reach the goal and the solution. The teacher plays a facilitator role and coach students in order to ask questions from students and make students to gather information and analyze them to draw conclusions. The important point for learners is to be able to understand whether or not they are active contributors to their group's conversation. Problem based learning is a learning model to foster critical thinking which is used by educators and researchers. Unfortunately Problem based learning lacks a formal process or notation system for addressing the analysis of the problem though such analysis does arise as part of the problem solving process (Duffy *et al.*, 1998). However (Sendang and Odabasi 2009) worked on the online problem based learning approach for undergraduate students' critical thinking skills and content knowledge acquisition. It was found that learning in the online problem based learning group had a significant effect on increasing the critical thinking skills. Moreover it was revealed that the online problem based learning group improves instructor led group in terms of critical thinking. Online problem based learning can be an effective alternative approach implemented in distance education practices. To enhance students' critical thinking in an undergraduate general science course (Kim *et al.*, 2013) designed and implemented active to examine the levels of critical thinking in individual reports and students' critical thinking over time. The results showed that the active learning strategies are helpful to promote students critical thinking. Due to the nature of problem based learning structured problems and multiple answers are opportunities for students to thinking critically seeking solutions and considering other points of views (Jonassen, 1997).

WEB BASED LEARNING

The e-learning can be the synonym of web based learning computer based learning and online learning. In order to develop student's critical thinking design models or propose solutions in the web environment such as web-based simulation. The web based simulation is an online tool which was designed by (Honebein, 1996) to foster critical thinking skills. Afterwards the other researchers (Salleh *et al.*, 2012) examined the effectiveness of simulations on

students' critical thinking skills and the results showed that the implemented web based simulation learning frame work has a positive impact on students' critical thinking skills. Another model used by (Burgess 2009) to examine possible findings of developmental students' critical thinking and motivation to read when Web critical thinking as an online learning community was implemented. It showed that online communication methods such as chat and discussion board are more attractive than electronic communications. They have the potential to be key factor to increase motivation and the desire to learn and to think critically.

COMPARISON OF E-LEARNING MODELS

Researchers and educators propose different online models to improve critical thinking skills of participants in various positions which they have differences and similarities. In the blended learning environment project based of learning model and electronic curriculum are presented. These models which have positive impacts on critical thinking skills is able to discover new strategies for producing new electronic curriculum that is useful for student's long-term learning. If students have enough time and access to computers these models can efficient to cultivate critical thinking skills. Instructors use these environments to foster critical thinking according to their needs and facilities. For distributed learning environment it is proposed their models to nurture critical thinking. Although conference systems afford the opportunity for students to engage with critical thinking students they are complex in design and use and useful for critical thinking skills rather than. Online discussion is another tool to faster students' critical thinking skills that is effective for groups of peers due to the nature of it in small groups. Problem based learning can be another learning environment that is one of the learning types of collaborative learning. In Problem based learning students in small groups join with each other to solve the problem that is given by teachers as a facilitator. Students play key roles in Problem based learning and they can use online tools to evaluate evidence and judge them to conclude in addition they are able to contact face to-face relationships and share their experiences. In the web based learning environment the web based simulation and Web critical thinking are proposed as online tools which they are helpful to increase learner's motivation and interest as well as critical thinking skills despite of needs to much time and complexity in design of web based simulation.

POWER OF THINKING SKILLS IN PERSONALITY DEVELOPMENT

Personality is defined as the form of characteristic thoughts feelings and behavior that differentiate one individual from the other and it persists over time. It is the integration of biological and experienced behaviours of an individual that forms responses to environmental stimuli. Personality traits are different to each other and could be a mixture of both good and bad. It's always an individual's choice to choose change of traits provided we need to endure the desire to make changes in life. Personality development is a step towards improvement and development of talents and potentials enhancing quality of life realizations of dreams and aspirations and facilitating employability (Qaisur and Tanwir 2020). The stages include formal and informal activities and the leaders and program managers may realize the full potential of each individual in an existing group. Hence, this process of improving or transforming the personality is called personality development. Personality development encourages leading and motivating others towards achievement. A good leader will motivate their group in a positive way to reach success. This quality is a goal-oriented one which helps a person to achieve their ambitions. It will make them work hard lumps in achieving their goals. A leader should keep a vision and equal perspective on all humans. We can be an employee or a manager or a higher official but we must possess both leadership and motivational character in us. An efficient leader must have a fulfilled knowledge of motivation factors over others. Leaders should ensure following the moral and ethics and also to harmonies the sub-ordinate needs. A word of appreciation is always rewarding to motivate and influence a person to succeed in his vision. Good reward or exceptional behaviour with a token of appreciation certification or letter can be motivating to the peer groups. Problem solving capacity is a major character required for a leader to make his peers stronger-mentally and emotionally. Interpersonal skills are skills performed everyday which includes interaction with other people both individually and in groups. People with strong interpersonal skills are successful in their professional and personal lives. Interpersonal skills are more centered on communication listening questioning and understanding body language. It also includes the skills and attributes related to the emotional intelligence or being able to understand and manage our own and others' emotions.

CONCLUSION

The modern world and higher education need to have dependent and critical citizenships and efficient workforce for work places. To reach this goal the design models to teach and cultivate critical thinking by using various approaches such as embedding critical thinking in the other course for different grades or assign a specific course to teach critical thinking. Recently distance education makes learning and education procedure easy in the world by using online devices such as lap top mobile and discussion forums or video conferencing and virtual classes. Teachers prefer to teach and foster critical thinking to the students by applying the strength of online learning facilities in different environments such as blended distributed problem based and web based learning. Blended learning is useful for participants who tend to communicate face to face more than participants in a distributed learning environment. Furthermore in a blended learning environment participants used online tools like wise virtual classroom and chat room while distributed learning environment is online completely and it is good for busy participants who cannot present at the real time. Web based is a widespread phenomenon as a result of effective role of the internet in our life. Problem based learning is helpful environments where students are able to use the direct contact with peers with enough time to think discuss evaluate and solve problems to draw conclusion. Problem based learning is a very applicable approach to cultivate students' critical thinking due to the nature of its environment and some instructors recommend it as a good model to develop critical thinking. Considering the progress in the technological instruments in the education field using mobile as a general device is growing quickly therefore it is suggested to study the role of mobile in developing critical thinking by designing the model based on this theory.

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PERCEPTION AND AWARENESS OF SEXUAL HARASSMENT AMONG HIGHER EDUCATION STUDENTS

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ABSTRACT

The occurrence of sexual harassment is very common at every stage of workplace as well as in educational institutions also. Now a day it has taking place in significant way especially in higher education institutions. Though there are several distinct rules, regulations, laws and acts to stop these kinds of unwanted, unacceptable behaviour in the educational institutions or campus through zero tolerance act but lack of awareness and fear among the female students restrict them to take immediate and appropriate steps. There is much more needed the awareness of such kind of acts, laws and rules among the students as well as among the stakeholders also. The researchers here analyze the scenario in Visva Bharati, the Central University of West Bengal through case study method regarding the perception and awareness about sexual harassment of female students in campus.

Key words: Sexual harassment, Prevalence, Safe campus, Prevention, Sensitization

Introduction

Sexual Harassment (SH) can be defined as unwanted sexual gesture or behaviour whether directly or indirectly through physical contacts or touches, showing pornography or pornographical story, a demand or request for sexual favours; any other unwelcome physical, verbal or non-verbal conduct being sexual in nature. It is of serious concern since sexual harassment interferes with human rights as the victims experience stressful physical and psychological effects which may in turn prevent them from achieving their rightful place in

employment and education (Sigal, J,2006).

Any behaviour leading to or committed towards Sexual Harassment is unacceptable and the Institute shall strive through sensitization, awareness and prevention to create an environment that is free from such behaviour. SH is common at every stage of workplace as well as educational institutions. SH on campus commonly occurs among peers and most students who has experience but not reported what has happened. The dynamics of SH often involve an aggressor who holds a position of power over the victim, which include men against women, senior students against junior students, and in a teacher-student relationship or sometimes even higher authority in terms of indirect favour. Sexual harassment may get on various forms. It is able to grab or groping; whistles or leering; jokes or pranks of a sexual nature; desires for sexual favors or continual requests for dates; and other oral, visual, or physical conduct of a sexual nature.

Most SH is committed by male students against female students creates unsafe environment in campus. Awareness of sexual harassment protecting acts is almost unknown to the most of the students. Therefore a systematic study is highly needed which will show the present scenario of sexual harassment on campus and provide safe campus environment through effective measures.

Understanding of Sexual harassment (SH) in India

Sexual harassment at educational campus in India is generally termed as “Eve teasing” and is defined as unwanted sexual gesture or behaviour whether directly or indirectly through sexually coloured remarks, physical contacts or touches, showing pornography or pornographical story, a demand or request for sexual favours; any other unwelcome physical, verbal/non-verbal conduct being sexual in nature. The critical factor is the unwanted of the behaviour, thereby making the impact of such actions on the recipient more relevant rather than intent of the perpetrator. According to India’s constitution, sexual harassment infringes the fundamental right of a woman to gender equality under Article 14 of the Constitution of India and her right to life and live with dignity under Article 21 of the Constitution. Although for long there was no specific law against sexual harassment at workplace in India, but many provisions in other legislations are aimed at protecting against sexual harassment at workplace, such as Section 354, IPC deals with “assault or criminal force to a woman with the intent to outrage her modesty, and Section 509, IPC deals with “word, gesture or act intended to insult the modesty of a woman.

During 2013 new amendments were carried out in Indian Penal Code for acts relating to sexual harassments against women. Section 354A, 354B, 354C, 354D was newly inserted in Indian penal code, especially for the acts which shall be treated as sexual harassments.

According to the section 354A, the following activities by a man shall be treated as sexual harassment against women. Such as:

- unwanted physical contact and advances involving unwelcome and explicit sexual overtures;
- demand request for sexual favours; or
- showing pornography again as the will of a woman; or
- making sexually coloured remarks,
- cyber messaging reflecting sexual tunes.

Most SH is perpetrated by male students against female students. However, there are also cases of harassment by women against men, and of same sex harassment perpetrated by either sex or other than campus environment. Awareness of sexual harassment protecting act is almost unknown to the most of the students.

Background of the study:

SH is common at every stage of education institutions. SH on campus commonly occurs among peers and most students who has experience but not reported what has happened. The dynamics of SH often involve an aggressor who holds a position of power over the victim, which include men against women, senior students against junior students, and in a teacher-student relationship or sometimes even higher authority in terms of indirect favour. Moreover, those sexually harassed students have been affected in every way. Visva-Bharat (a Central University of India and Institute of National Importance) has more than 5000 female student from Primary level to PG level where safety in terms of physical and psychological safety is need indeed.

In recent times, the issue of gender equality and violence against women has been a prime focus of attention and concern in India. Sexual harassment generally takes place when there in inequality of powers among persons. The persons involved may be students v/s teachers, employee versus organizational head, research supervisor v/s research student etc. sexual harassment involves gender inequality in work related activities, educational duties and activities.

Higher educational institutions are the pioneer institutes of higher learning that are expected to provide safe environmental conditions for students, teachers and administrative staff to achieve their educational goal. Despite providing favorable and friendly environment for teaching learning process, sexual harassment is considered as one of the important issues in educational institutes.

Operational Definitions:

- **Sexual Harassment:** Any sexual activity or unwanted behaviour or act that happened without consent.
- **Prevalence:** Factors, forms in terms of measurement that reveals the scenario.
- **Awareness:** Knowledge of a situation or fact of certain issues.
- **Safe Campus:** Initiative aimed at mental, emotional and physical safety of students.
- **Consequence:** A result or affect typically one that is unwelcome or unpleasant.
- **Prevention:** The action of stopping something from happening or arising.
- **Higher Education:** Higher Education is tertiary education leading to award of an academic degree.

Research Question:

- a) Do students have knowledge and experiences of any form of sexual harassment within the campus?
- b) Do students have knowledge and experiences of any acts, law against sexual harassment and women protection?
- c) What are the effects of SH to students' academic performance at the University?
- d) What is the perception and attitude of university management towards students regarding sexual harassment?
- e) What could be the best sexual harassment management strategies and spreading up awareness level among students?

Objectives of the study:

- a) To find out the perception on sexual harassment among students.
- b) To study about the effects of sexual harassment on students' academic performance.

- c) To study the awareness scenario and suggest effective measures to reduce sexual harassment in simplified ways.

Methodology of the study:

The researchers here applied case study method to study the scenario in depth. Data was collected using Google form questionnaires and interview schedules to prepare a master database for calculation, presentation the calculation through graphical method. The study involve 10% from total post graduate Female students (Approx- 550) from Vidya Bhavana, Siksha Bhavana and Vinaya Bhavana of Visva Bharati. The study involve 53 of students for effective surveying .Simple Random sampling and snowball sampling technique were used.

Data Analysis, Interpretation and Discussion:

The researcher has carried out questionnaire survey among female students of the University to know the present scenario of the Sexual Harassment and its associated parameter through Google form and face to face interview. In the present study, data were analyzed by descriptive statistics and represented as in percentage. The study shows some pen picture under the followings:

Objective-1: To find out the perception on sexual harassment among students.

Perception of sexual harassment in University students:

On questionnaire framed above, we can find out the views of the student, experiences and opinion towards sexual harassment and how to enhance awareness level. The results and discussions are given in the forthcoming graphs following basic descriptive statistical procedure.

The first question was about what sexual harassment means and its different forms and more than 89% of students (Table-1) believed that they knew exactly what it means. The second question asked what could be considered as experiences of sexual harassment. The more than 53% responded that they have seen, faced or heard of SH with their friends in the campus. Students feel embarrassed or ashamed to admit that they were victims of the crime and may report it by saying that they know someone who had to suffer from it.

Table-1

Q. Do you know what are the forms of Sexual Harassment (SH)?	No of respondent	Percentage
YES	47	89%
NO	6	11%

Table-2

Q. Have you self experience, seen or heard any kind of SH among your friends?	No of respondent	Percentage
YES	29	55%
NO	24	45%

The above presented (table-2) data where 53% students have self experience, seen or heard of SH among your friends in the campus. This is highly alarming for the students as well as in the University too. The students who have self experienced or seen or heard the SH incident from friends told about forced for date by unknown person, drinking coffee or tea or sometime it ranged from catcalling to inappropriate physical touch. Some of female students also have the experience of molestation in the campus, offensive comments over phone call and offensive remarks in the campus. Sexual Harassment or assault with inappropriate touching is also very common by their relative and private tutor. A student also has shared forceful intercourse in their relationship, SH at public place and even professional unit too. Sexual proposal with bad intestinal touching are also experienced by female students while they are travelling public transport system.

Objective-2: *To study about the effects of sexual harassment on students' academic performance*

Impact Assessment of Sexual Harassment:

Sexual harassment and abuse is creating big trouble in this university have a deep negative impact upon victim students.

Sexual harassment have significant and detrimental effects on students. It creates an environment that is hostile, intimidating, and damaging to their well-being and academic progress. The impact of sexual harassment on students can manifest in various ways:

- a) **Psychological effects:** Sexual harassment can lead to emotional distress, anxiety, depression, and Post-Traumatic Stress Disorder (PTSD) among students. They may experience feelings of shame, guilt, and low self-esteem. These psychological effects can affect their ability to concentrate, learn, and participate in school activities.
- b) **Academic consequences:** Students who experience sexual harassment may struggle academically. The distress caused by such experiences can interfere with their focus, memory, and cognitive abilities. They may have difficulty

concentrating on their studies, resulting in lower grades and a decline in academic performance.

- c) **Physical health impacts:** Sexual harassment can have physical health consequences for students. They may experience sleep disturbances, appetite changes, headaches, and other stress-related physical symptoms. These health issues can further hinder their ability to attend classes regularly and fully engage in their educational pursuits.
- d) **Social and relational effects:** Students who have experienced sexual harassment may withdraw from social interactions, fearing judgment or stigma. They may isolate themselves from peers and teachers, making it challenging to build supportive relationships. This isolation can contribute to feelings of loneliness and further exacerbate the negative impact on their overall well-being.
- e) **Educational engagement:** Sexual harassment can affect a student's engagement in school activities. They may avoid certain classes, extracurricular activities, or school events to minimize exposure to potential harassers or triggers. This avoidance behavior can limit their educational opportunities and hinder their personal and academic growth.
- f) **Long-term consequences:** The effects of sexual harassment can extend beyond the immediate experience. Survivors may carry the emotional and psychological impact into their adult lives, affecting their future relationships, career choices, and overall well-being. It is crucial to address and support survivors promptly to minimize the long-term consequences.

In the campus of Visva-Bharati, female students have often experienced about an offensive remark about their appearance, heard remarked on their body shaming or sexual activity which creates high impact on mental health of these female students. These types of bad experiences among students have deep impact on mental well-being including affecting of student academic performance. The fear of being judged based on their appearance can limit their willingness to take risks and fully engage in their university experience. The below table presentation reveals the scenario of this kind of impact upon student.

Table-3

Q. Did someone make an offensive remark about appearance, bodily or sexual activity?	No of respondents	Percentage
YES	28	53%
NO	25	47%

Table-4

If such incident happened to you, Did you take any steps against that?	No of respondents	Percentage
YES	17	32%
NO	17	32%
Dilemma or Confused	8	16%
Not Consider	11	20%

The above representation shows that 35% female students have taken steps against these kind of offensive remarks and commends while 33% female student did not take any steps against such kind of incident to combat the situation. There is 24% students have replied to not consider or perhaps they ignored this kind of remarks. The survey has also revealed that to combat this kind of situation some students shared to their parents, some students shared to social media to protest such incident, some students unable to protest because of the power that the person holds. One student even also told that most of the times close people commented in negative way about physical appearance, but the fear factor, anxiety factor and future litigations with negative consequence made her ignore such offensive comments.

Table-5

Did such incident affect your academic performance?	No of respondents	Percentage
YES	25	47%
NO	28	53%

It is evident from the above respondent that more than 53% female students confessed that the incident of sexual harassment created deep negative impact on their mental well-being and on the other hand 47% female students told to not have such impact on mental well-being. They also have expressed the different negative impact having experience of sexual harassment like fear, anxiety, and lack of attention on study etc.

The researcher have surveyed about the impact of SH on studies or any kind of mental health. The response shows that, 21% students have felt fear and 28% students have felt anxiety after being sexually harassed in the campus. 30% students expressed that they felt insecurity after the incidents and 25% students have felt lack of attention to concentrate for their studies. This is highly alarming for the students' mental health. 17% students have felt both the fear and anxiety

and 13% students have feeling of fear, anxiety, lack of attention towards their study and insecure while been in the outside or during travelling in the public places or transport.

The following data representation shows that

Table-6

Q. If Yes, please tick the followings:	No of respondents	Percentage
Fear	11	21%
Anxiety	15	28%
Insecurity	16	30%
Lack of attention	13	25%
Fear and Anxiety	9	17%
Fear, Anxiety and Insecurity	1	---
Fear Anxiety Insecurity and Lack of attention	7	13%

Objective-3: To study the awareness scenario and suggest effective measures to reduce sexual harassment in simplified ways.

Awareness scenario among students

Raising awareness about sexual harassment among students is crucial to creating a safe and supportive environment. Inform students about their rights and the resources available to them. Provide information about support services, such as counselling, help lines, or campus organizations dedicated to addressing sexual harassment. Make sure they know where to access confidential assistance and guidance. Foster a culture that prioritizes respect, empathy, and equality. Promote open discussions about consent, healthy relationships, and bystander intervention. Encourage students to challenge harmful attitudes, stereotypes, and victim-blaming behaviours. Implement policies and procedures that address sexual harassment and ensure accountability.

The campus area of Visva-Bharati is very large and the students have to travel long distance for visiting library work, attend classes from hostel or own house or other day to day activities. Therefore campus safety and awareness against SH is mandatory in terms of their security and well being of mental health. The following presentation has shown the present scenario of SH awareness.

Table-7

Q. Do you know any women assistance helpline in your campus?	No of respondents	Percentage
YES	14	26%
NO	39	74%

To know the preliminary safety of the female students the research has asked about presence of any women assistance helpline in the campus of Visva-Bharati. The reply was quite surprising that 74% female students do not even know any kind of women assistance helpline and only 26% students have the idea about this women assistance helpline the campus of Visva-Bharati.

Another important aspect regarding the preliminary awareness of knowing of any women protection act, because such acts or laws helps the female students in legal way.

Table-8

Q. Do you know about any women protection act?	No of respondents	Percentage
YES	38	71%
NO	15	29%

The above bar graph shows that 29% students have no idea about any women protection act and 71% students knows about women protection act.

The Visakha Committee, also known as the Vishaka Guidelines, refers to a set of guidelines established by the Supreme Court of India in 1997. These guidelines aim to prevent and address incidents of sexual harassment in the workplace. Here are the key activities and guidelines outlined by the Visakha Committee. Following the Vishakha guideline by the Supreme Court, 1997, and In view of the Section 4 (1) of 'The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013',

Prevention: The guidelines emphasize the importance of preventing sexual harassment by creating a safe and conducive work environment. Employers are encouraged to take proactive measures such as establishing a clear policy against sexual harassment, disseminating information about it, and conducting awareness programs.

Complaint mechanism: The committee recommends establishing an internal complaints committee (ICC) in workplaces to address complaints of sexual

harassment. The ICC should be comprised of at least one external member, preferably from a women's rights organization, and should have the authority to conduct inquiries and take appropriate action.

Complaint procedure: The guidelines outline a detailed procedure for handling complaints of sexual harassment. They emphasize the need for confidentiality, promptness, and impartiality throughout the investigation process. The complainant and the accused person should have equal opportunities to present their case, and there should be no victimization of the complainant.

Remedial measures: The committee suggests a range of remedial measures that can be taken in response to substantiated cases of sexual harassment. These may include warnings, counseling, transfers, withholding promotions, or initiating disciplinary action, depending on the severity of the offense.

Awareness and training: The guidelines stress the importance of creating awareness among students specially women about their rights, the prohibition of sexual harassment, and the complaint mechanism. Regular training programs on prevention and sensitization should be conducted to combat the situation of Sexual Harassment in university campus.

It is important to note that while the Vishaka Guidelines served as an initial framework, subsequent legislation was passed in India to provide a more comprehensive legal framework for addressing sexual harassment in the workplace. The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013 supersedes the Vishaka Guidelines and provides a more detailed and robust framework for addressing sexual harassment at workplaces in India. Visva-Bharati also has Internal Complaints Committee (ICC) but awareness among students regarding ICC cell represented as follows:

Table-9

Do you have any knowledge of Visakha Committee activities against SH in institution?	No of respondents	Percentage
YES	10	10%
NO	43	90%

The above pie chart shows that 90% students do not have any knowledge of Visakha Committee activities or guideline against SH in institution while only 10% students have knowledge of Visakha Committee activities against SH in institution.

Campus based Awareness Spreading Ideas/ Valuable Feedback/ Suggestions from students of Visva-Bharati :

- All the students from school level to Post Graduate level must have to aware about SH, its different forms and extent and the acts to combat. Students we should be more aware about the Acts, Committee so that students can go at the right place at right time to get rid of SH.
- Installation of CCTV cameras in the vulnerable places in the campus area and its monitoring surveillance is needed to identify the culprit. Plenty of streetlights wherever needed and implementing of easily accessible women helpline services is require immediately.
- "Women should share their experiences with others so that others can be aware of such incidents and as well as the hotspots where such incidents take place. They should seek help from friends and family rather than being silent. They shouldn't feel that this is "attention seeking"(as many people would call it) but seeking attention for a cause.
- Prepare a syllabus that includes the safe campus ideas including sufficient effective classes for both the male and female students for awareness.
- Regular conducting of SH awareness campaigns, arrange Sexual Abuse and Assault Awareness Program weekly or monthly in school and colleges and teach women with self defence strategies. Open to hearing the incident with empathy and avoid being judgemental.
- Implementing of more security service and continuous monitoring to the lonely places is also suggested.
- The female students needs to be strong and should have some skills to protect herself. Make your girl fearless. Teach her how to speak against harassment fearlessly. A special committee should develop with 50% women and 50% men that will take charge against this type of harassment and more importantly the one who is harassing needs lesson for his/her narrow mentality.
- Immediate reporting to ICC to take immediate action against the culprit.
- Using social media to spread awareness about sexual harassment can be beneficial because it can help people become more knowledgeable about this topic, help others who are victims of sexual harassment feel comfortable in reporting their situation and lead to the prevention of sexual harassment.

- Raising awareness about sexual harassment among students is crucial to creating a safe and supportive environment. Educate students about what constitutes sexual harassment, including verbal, physical, and online forms. Provide clear examples of inappropriate behaviours and emphasize that any unwanted and non-consensual actions or comments of a sexual nature are unacceptable.
- Inform students about their rights and the resources available to them in the Visva-Bharati campus. Provide information about support services, such as counselling, help lines, or campus organizations dedicated to addressing sexual harassment. Make sure they know where to access confidential assistance and guidance.

Conclusion:

Remember, effectively addressing sexual harassment requires a sustained effort from the entire university community. Addressing poor management against sexual harassment requires a commitment to change and a comprehensive approach. It involves establishing clear policies, implementing effective reporting mechanisms, providing regular training and education, offering robust support services, ensuring prompt and impartial investigations, and holding perpetrators and enablers accountable for their actions. By implementing these recommendations, universities can create safer and more inclusive environments that prioritize the well-being of their students, faculty, and staff. Effective strategic measures that can be taken by institutions of higher learning should be considered and instituted to promote better attitudes and morals in society, starting from upbringing of the young at home.

By effectively management of sexual harassment, universities create a safer and more inclusive environment for all students, faculty, and staff. This fosters a sense of trust and belonging, allowing individuals to fully engage in their academic pursuits and campus activities without fear of harassment or discrimination. Addressing sexual harassment in universities leads to a campus environment where all individuals can thrive, learn, and contribute to the fullest extent. It fosters a culture of respect, equality, and inclusion, shaping the future leaders and professionals who will go on to make a positive impact in society.

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NEED OF HUMAN VALUES IN EDUCATIONAL INSTITUTIONS FOR SOCIAL DEVELOPMENT OF STUDENTS

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ABSTRACT

Education is capable of making life meaningful to give proper momentum to the development of society. In today's technological and materialistic era our fundamental and moral values are being lost and only material comforts remain part of the race for prosperity which we can be rich physically but are becoming weak in spiritual and mentally process. Therefore there is a need to know understand and adopt these human values so that along with the material progress we can flourish the human civilization and culture and inspire the whole world to contemplate the new direction. The good and comprehensive education system is expected to create the necessary human capacity and knowledge that will bring the country to greater heights. In this regard a holistic education programme is needed which can equip students with both the hard and soft skills required as well as human values. Value education is always essential to shape one's life and to give one an opportunity of performing on the global stage. The need for value education among the parents, children, and teachers is constantly increasing as we continue to witness increasing violent activities, behavioral disorders and lack of unity in the society etc. Value education enables us to understand our needs and visualize our goals correctly and also indicate the direction for their requirement. It also helps us to remove our confusions and contradictions and enables us to utilize the technological innovations. Human values are the foundation for any viable life within society they build space for a drive, a movement towards one another which leads to peace. Human values thus defined as universal they are shared by all human beings, whatever their

religion, their nationality, their culture, their personal history. By nature they induce consideration for others. Human values are the virtues that guide us to take into account the human element when one interacts with other human beings. There are many positive dispositions that create bonds of humanity between people and thus have value for all of us as human beings. They are our strong positive feelings for the human essence of the other. It's both what we expect others to do to us and what we aim to give to other human beings. These human values have the effect of bonding, comforting, reassuring and procuring serenity. Moral values like truthfulness, happiness, peace, justice are instilled in children's thoughts, feelings and actions and they function as ideals and standards that govern their actions in their life. The value system practiced in the family becomes automatic to the young family members if they are taught moral values systematically. Human Values play a very leading role in present educational institutions. Human values are now withering very fast for which we humans are most responsible. Value based education should be emphasized ranging from school to university level of education. Human value is generally known to be a moral standard of human behavior. Therefore, human values should be preserved and protected. The value education is much needed in our modern society because our lives became more miserable. The quantity of education has considerably increased but the standard had decreased. The human values integrated learning concept obtained through institution has gained wide acceptance around the world.

Key words: Social Development, Education, Human Values.

INTRODUCTION

Education system is expected to create the necessary human capital and knowledge workers who will bring the country to greater heights. In this regards, a holistic education programme is needed which can equip students with both the hard and soft skills required as well as human values. However, the main emphasis in education today lies in acquiring large amounts of information, passing examinations and securing qualifications for future employment. This paper highlights the implementation of a programme called the education in

human values. This programme seeks to improve the teaching-learning environment that will foster character building through the incorporation of basic universal values thus contributing towards academic excellence. The stress of an ever-increasing work load and a working environment dominated by social problems will continue to make a teacher's profession more difficult and less satisfying. With so many external influences demands and constraints it can be easy to lose hold of the values that make up a civilized society. This education in human values programme seeks to help teachers, parents and children to focus on the basic positive values that underlie all aspects of a moral society. This is done through what is called a triple role for education between teacher's parents and students meaning that all three groups play key roles in reversing current trends and in reaching towards the goal of truly successful value based education respectively. Human values are things that have an intrinsic worth in usefulness or importance to the possessor principles standards or qualities considered worthwhile or desirable. Human values constitute an important aspect of self-concept and serve as guiding principles for an individual. Human values are the virtues that guide us to take into account the human element when one interacts with other human beings. There are many positive dispositions that create bonds of humanity between people and thus have value for all of us as human beings. They are our strong positive feelings for the human essence of the other. It's both what we expect others to do to us and what we aim to give to other human beings. These human values have the effect of bonding comforting reassuring and procuring serenity. Human values are the foundation for any viable life within society; they build space for a drive a movement towards one another which leads to peace. Human values thus the need are universal they are shared by all human beings whatever their religion their nationality their culture and personal history. By nature, they induce consideration for others. We can relate the human values to the three levels of consciousness, the conscious mind the subconscious mind and the super conscious mind. One must realize that we are not just a body but we also have a mind which is very important in the learning process. The human values integrated learning concept starts with the interaction with the environment. Students have to study mathematics, sciences, languages and other subjects so as to prepare themselves for their careers in life. But at the same time human values are integrated into all subjects so as to bring about peace and calmness of the mind which will prepare the learner for the journey within and that is education. When the conscious mind is raised towards the

super-conscious mind, then knowledge and wisdom will be drawn out from the education.

HUMAN VALUES

The following is the basic principle of the human values integrated instruction.

- i. Human values are an integral part of all subjects and activities in the school and in the home. In fact, human values are an integral part of our life.
- ii. The five human values of truth right conduct peace love and non-violence are one and cannot be separated. If one value disappears then all the values will disappear.
- iii. Human values cannot be taught they have to be brought out from within the learner. It has been a mistake in the past where teachers have been teaching morality ethics values and good character as subjects. Learners can memorize them and can pass examinations but they fail to put them into practice in their daily life. There seems to be a general decline in morality throughout the world. Transformation of the person cannot take place by mere teaching but can be achieved through self-realization when the values come out from within the learner. In such cases there is a direct experience of the human values in the life of the learner.
- iv. In real life everything is inter-related. Thus a good learning experience is to have an integrated approach. In our daily life we do not just have one value throughout the day. For example right conduct cannot be there alone but it is found that all the five human values are inter-related and exist at the same time. Thus it would be a mistake to teach one value at a time. In the same way mathematics should not be taught as a separate subject as in real life, science exist along-side by side in all the subjects.
- v. Human values integrated instruction gives the learner the ability to solve problems from various perspectives by giving varied inter-related experiences.
- vi. Human values integrated instruction opens up a wider world view for both the teacher and learner making the learning process much more interesting. The education in human values is a multi-cultural multi faith and self-development programme designed for children and young people all over the world. There are two types of education. One type is worldly education and the second type is referred to as educare. Education will equip a person with knowledge that will enable him to earn a living. Education can help that

person to become great with name and fame. However educate will bring out the human values from within and will transform the person into a good person with character. Education is related to educating the head whereas Educare is related to education of the heart. Both education and Educare are necessary. However education in human values takes a holistic approach to educating the child and recognizes five values as an integral part of the human being. These values are recognized by all major religions adopt a multi faith approach allow and encourage each child to follow his faith and are simply conducive to application in diverse cultural conditions. These values are love peace truth right conduct and non-violence. Human values are for example brotherhood friendship empathy compassion love openness listening welcoming acceptance recognition appreciation honesty fairness loyalty sharing solidarity civil respect and consideration. The function of most of the basic values is to make it possible for every human to realize or maintain the very highest of most basic universal core values of life with love and happiness. Respect is one of the most important human values for establishing relations of peace and yet it remains elusive, its understanding varies according to age of child teenager, and adult to one's education and surrounding culture. It is better understood when combined with other values. The disposition that is deeper than civility, very close to consideration and approaching appreciation. Indeed to respect someone one must be able to appreciate some of his human qualities even if one does not appreciate his opinions or past behavior. The value system is an enduring organization of beliefs concerning preferable modes of conduct along a continuous importance. Thus the importance of different values co-varies with the importance of others in the value system.

INTRINSIC AND EXTRINSIC VALUE

An intrinsic value is a value that one has of itself independently of other things including its context. For example, according to a fundamental form of consequentialism, whether an action is morally right or wrong has exclusively to do with whether its consequences are intrinsically better than those of any other action one can perform under the circumstances. An intrinsic value is something that is good and itself the thing that has true intrinsic value is happiness or pleasure. There are no physical things that have intrinsic value. An extrinsic or relational value is a property that depends on a thing's relationship with other things. Extrinsic value is the value which depends on how much it generates

intrinsic value. It is something that is good because it leads to something else that is good. It is a means to an end that is money has extrinsic value because it can be used to buy something that we want to like a new house. The new house would have extrinsic value because they are comfortable and stylish and they make you feel happy. The reason that things have extrinsic value is because they themselves lead to happiness or pleasure or they lead to a series of other things that eventually lead to happiness. Pleasure is an Intrinsic Value which is the ultimate end to which all things of extrinsic value are the means. Relative truth can take many forms, but when it comes from within oneself as the dictate of inner ones. It becomes the right conduct. Peace refers to an awareness of emotions their acceptance and skillful handling resulting in calmness and balance. Peace can come from the practice of truth right conduct and love.

NEED OF HUMAN VALUES IN STUDENTS

The five values in program define five aspects of the human personality, the intellect physical emotional psychological and the spiritual. Each of these five aspects corresponds to one basic human value. For instance the intellect aspect is related to truth the vital or emotional aspect relates to peace the psychological refers to peace physical aspect related to the right conduct and finally spiritual aspect relates to non-violence or more properly non-violation. The value education is always essential to shape one's life and to give one an opportunity of performing on the global stage. The need for value education among the parent's children teachers is constantly increasing as we continue to witness increasing violent activities and behavioral disorders that lack of unity in the society. The value education enables us to understand our needs and visualize our goals correctly and also indicate the direction for their needs. It also helps to remove our confusions and contradictions and enables us to rightly utilize the technological innovations. There are different views that call urgent need to inculcate human values in Indian society. Numerous traditional values which have been inherited from past remain valid and true to be adapted by future citizens but many fresh values to match confronting problems in emerging Indian culture. Presently, negative human values are in upper side. It may be because of neglect of value education which created vagueness and indiscipline in the mind of people.

RELATIONSHIPS BETWEEN ETHICAL AND MORAL VALUES

Human values that are said to be ethical are those that command respectful behaviour toward others that is towards other human beings without harming

them. These can be applied to animal and plant life as well. Moral values are in fact the same but today moralizing rhetoric is not well received. For this reason some people refer to ethical values. However, most people seem more interested yet in human values. These are seen as more positive perhaps because we feel directly concerned, we ourselves have a strong desire to have others be human to us. These human ethical and moral values are universal values felt deep down inside each of our consciousness. They are also expressed formally in laws, constitutions and various international texts asserting human rights. The recognition of these universal values by many countries in the world is the first step toward their implementation calling for everyone to respect them. These texts aim in the first place at guaranteeing the integrity for both physical and psychological of every human being precisely because he is good human each person holds the rights. But the ultimate goal is to promote a positive and concrete practice attitudes, behaviours and acts helps in establishing those human universal values as the basis of human relationships in a spirit of reciprocity and mutual respect of those values. Human values inspire us to become better citizens put into practice our moral values, especially in bad situations when we tend to put them aside and become confrontational.

ROLE OF HUMAN VALUES IN FAMILY AND SOCIETY

The family and society is important in developing the moral values of student. There is a close contact between the parents and children which determine the personality of child. Family is the foundation on which values are built. Moral values like truthfulness happiness peace justice are given in children's thoughts, feelings and actions and they function as ideals and standards that govern their actions in their life. The value system is practiced in the family becomes automatic to the young family members if they are taught moral values systematically. The family shapes the child's attitude towards people and society and helps in mental growth in the child and supports his ambitions and values. Blissful and cheerful atmosphere in the family will develop the love affection tolerance and generosity. The child learns his behavior by modeling what he sees around him. Family plays a major role in helping a child to socialize and has great influence and bearing on the progress of the child. Joint family system, the presence of elders in the family plays the effective role in moral development of the children. It will also help young ones of the family to imbibe human values and eradicate their negative mental tendencies when they are among elders. Student identifies themselves with their parents, other family elders and adopts

them as their personal models for emulation and imitation. The behavioural problems are set to correct only by the involvement of family in the children's life as they spend most of their time in adolescence with the parents. Family is the first social organization that provides the immediate proximity from which the kid can learn his behaviour. Social standards and customs the need by a family provide the emotional and physical basis for a child. Values developed by a family are the foundation for how children learn, grow and function in the world. These beliefs transmit the way of children's life and changes into an individual in a society. These values and morals guide the individual every time in his actions. Children turn out to be a good person because of the value taught and given by his family members ideas passed down from one generation to another generation make up a family values. Customs and traditions are followed and taught by the family leads to a disciplined and organized life. Families values helps the child to stand strong on his views despite others efforts to break through with opposing beliefs. The child has a strong sense of what is right and wrong and are less likely to become victims of bad influences.

ROLE OF HUMAN VALUES IN EDUCATIONAL INSTITUTIONS

In institutions students are members of a small society that exerts a tremendous influence on their moral development. Teachers serve as role model to students in institution. They play a major role in inculcating their ethical behaviour. Though there are rules and regulations in the educational institutions that infuse the value of education to the students in an informal way. They play a major role in developing ethical behaviour in student. General steps are accountability in which the student should be encouraged to be accountable for their own actions and should learn to respect and treat others kindly. Education in human values is incorporated in the curriculum based on the five thrust as follows:

- a. Students gain a deeper understanding of truth by developing discrimination honesty self-reflection and integrity.
- b. Students experience right action through the sub-values which include self-confidence for balance responsibility good manners and other social skills.
- c. Students experience peace as they gain emotional equilibrium through self-acceptance optimism patience contentment and humility.
- d. Students develop compassion sharing tolerance friendship and sacrifice as they discover that love is not mere emotion but the force that permeates all creation.

- e. Students learn that true non-violence is not harming anything living and non-living in the word or deed. It encompasses mutual co-operation respect for diversity and understanding ecological balance and the unity of life.

The teacher is the first role model to the student outside their family. When the student see the model showing concern for others motivating them for their good deeds and co-operation and helpful with their academic issues the student learn them by observing and imitate it with fellow members. The student is taught basic morals and values in the institution. They should be taught by emphasizing the idea through many activities stories and tales which will encourage them to engage in more helping behaviors. The teacher should appreciate the student for developing pre-social behavior especially for any specific action they have done to help others. It is appraised that human values enhances person's life but in present scenario these values are deteriorated in several countries. This trend of weakening in human values does not only pose serious threat to the future course of development of the nation but even for its survival respect and authority itself. However change in human values in younger group is unavoidable with time but the decline in Indian youth group is at disturbing rate as compared to other country around the globe. It encourages on the parent's teachers and society to imbibe the desired human values in young age group. The values are bridge between individual and social ones. Individual holds value but others influence the formation of those values. In philosophical frame works values are those standards or code for conduct for conditioned by one's cultural doctrines and guided by conscience according to which human being is supposed to conduct himself and shape his life patterns by integrating his beliefs ideas and attitudes to realize cherished ideas and aims of life. Families groups and societies tend to share common values. Family has been regarded as corner stone of society. It forms a basic unit of social organization. Human values are necessity in today's society and business world. Human values are the features that guide people to take into account the human element when one interacts with other. They have many positive characters that create bonds of humanity between people and thus have value for all human beings. They are strong positive feelings for the human essence of the other. These human values have the effect of bonding comforting reassuring and procuring serenity. Human values are the basis for any practical life within society. They build space for a drive a movement towards one another which leads to peace. In simple term human values are described as universal

and are shared by all human beings whatever their religion their nationality their culture and their personal history. Value education is always essential to shape one's life and to give one an opportunity of performing on the global stage. The need for value education among the parent's children teachers is constantly increasing as we continue to witness increasing violent activities behavioural disorders and lack of unity in the society. Value education enables us to understand our needs and visualize our goals correctly and also indicate the direction for their demand.

CONCLUSION

The human values integrated learning concept obtained through intuition has gained wide acceptance around the world. The students and teachers have benefited greatly from this unique method of teaching and learning experience. The nation needs heroes who can bring their country to greater heights. What we witness today is that current approaches to education only address at most one or two aspects of personality in the teachings. These techniques are not adequate in bringing out the potential latent in each child. In most education system individuals are treated merely as action agents unable to bring out the divine potential within a child. By adopting the human values approach with the right teaching techniques it has been proven that it is possible to create a balanced individual and society. The good education system with the education in human values can make it a reality. Human values play a very leading role in present educational institutions. Human values take precedence over social values. Human values are now withering very fast for which we humans are most responsible. The value based education should be emphasized ranging from school to university level of education. Human value is generally known to be a moral standard of human behaviour. Therefore human values should be preserved and protected. Today many researches and publications should be done on several aspects of the society which help to perpetuate the human values of the human community in the modern era. Human values may be treated as keys to the solution of the global problems. Already some universities prescribed human values and moral values syllabus for improve the humanity of the students. It's a great achievement to present and next society and educational institutions.

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RABINDRANATH TAGORE'S RURAL RECONSTRUCTION & EDUCATIONAL THOUGHT

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ABSTRACT

It was a period of social upheaval and reforms in India when the mystic Rabindranath Tagore a prominent poet and profound thinker were born in Calcutta on 6 May 1860. He was born into a prominent Calcutta family known for its socio-religious and cultural innovations during the 19th Bengal Renaissance. His ideas must be gleaned through his various writings and educational experiments at Santiniketan. In general, he envisioned an education that was deeply rooted in one's immediate surroundings but connected to the cultures of the wider world. He felt that a curriculum should revolve organically around nature. This paper will try to focus on Rabindranath's educational ideas and rural reconstruction.

Key Word: Visionary, Education, Reconstruction.

Introduction:

It was a period of social upheaval and reforms in India when the mystic Rabindranath Tagore a prominent poet and profound thinker were born in Calcutta on 6 May 1860. He was born into a prominent Calcutta family known for its socio-religious and cultural innovations during the 19th Bengal Renaissance. The profound social and cultural involvement of his family later played a strong role in the formulation of Rabindranath's educational priorities. Although he was not educated in any university, he was clearly a man of learning with original ideas about education.

Key ideas:

In general, Rabindranath envisioned an education that was deeply rooted in one's immediate surroundings but connected to the cultures of the wider world. He felt that a curriculum should revolve organically around nature. He also emphasized upon the importance of an empathetic sense of interconnectedness with the surrounding world.

It should be noted that Rabindranath in his own person was a living icon of the type of mutuality and creative exchange that he advocated. His vision of culture was not a static one, but one that advocated new cultural fusions, and he fought for a world where multiple voices were encouraged to interact with one another and to reconcile differences within an overriding commitment to peace and mutual interconnectedness. His generous personality and his striving to break down barriers of all sorts gives us a model for the way multiculturalism can exist within a single human personality, and the type of individual which the educational process should be aspiring towards. Tagore's educational efforts were ground-breaking in many areas. He was one of the first in India to argue for a humane educational system that was in touch with the environment and aimed at overall development of the personality.

TAGORE'S EDUCATIONAL PHILOSOPHY:

In Tagore's philosophy of education, the aesthetic development of the senses was as important as the intellectual--if not more so--and music, literature, art, dance and drama were given great prominence in the daily life.

A prominent figure through his poetic brilliance that belongs to the traditional group of Indian philosophers of education, inspired by the ancient Indian philosophy of education. He bitterly criticized the defects of British philosophy of education and western educational approach in India, for its aim and means were against Indian national interest, and thus presented educational philosophies.

Tagore considered lack of education as the main obstacle in the way of India's progress and at the root of all its problems. According to him; academic learning should enable us to understand the situations in which we are placed and to adopt proper attitudes towards them. The aim of education should be to develop and nourish our beliefs, emotions, and imaginations, which enable us to assess, evaluate, and take up appropriate attitudes towards our experience.

TAGORE'S PRINCIPLES OF EDUCATION:

According to Rabindranath Tagore the education provides a sense of one's identity as a total man and to bring education in harmony with life, it is self-realization. He believed that this realization was the goal of education. In order to reach this basic identity of human being, one needs to undertake processes towards this stage of a total man, a process that can only be assisted through education. Besides, he believed that self-education is based on self-realization, which its process is as important as education itself. According to Tagore's concept of self-education, the educator must follow these principles:

1. Freedom: Tagore believed in complete freedom of any kind – intellectual freedom, satisfaction, decision, heart, knowledge, actions, and worship then only one can turn to self-guidance.

2. Perfection. Perfection implies that the student must try to develop every aspect of his personality, all the abilities and powers he has been endowed by nature. The sole aim of education is development of the child's personality which is possible only when every aspect of the personality is given equal importance.

3. Universality. Universality implies the important aspect of an enduring faith in the universal soul, which exists within him. It is thus important to identify one's own soul with the universal soul. This search is achieved by knowledge, worship and action. Once this realization of the universal soul is achieved, it becomes easier to progress further.

Nature-based Education:

Tagore insists that no mind can grow properly without close communication with nature. Those situations present to the learner a situation, which stimulates his imagination and creativity, and combats the boredom of mechanical learning. He also referred to the significance of educating feeling as distinct from educating the senses and the intellect. Indian national educational system should try to discover the characteristics of the truth of its own civilization. The truth is not commercialism, imperialism or nationalism, but rather universalism. Its aim was to develop individual personality by the means of harmonious interaction and union of the spirit with the environment.

Mother-tongue as the Medium of Education:

The use of English in education prevented assimilation of what was taught and made education confined only to urban areas and the upper classes rather than

rural areas. Tagore stressed on the unnaturalness of the system of education in India, its lacks of links with the nation and its management, which was in the hands of a foreign government. He argued that to educate India's entire population and restoring the flow of culture from the educated classes to the rural population would not come about unless the mother-tongue was adopted as the medium of teaching.

Education as a Means of Peace

Tagore criticized the British educational process as it failed to develop attitudes and the spirit of inquiry. He wanted science to be taught along with India's own philosophical and spiritual knowledge at Indian universities. Because science without constraint of self-knowledge leads to an endless desire for material goods and well-being, and the meaningless pursuit of the instruments of war and power, which are often the origin of conflict among nations and the source of suppression of the weaker by the stronger. That is why both spiritual and scientific knowledge are considered by Tagore as equally important. About the place of religion in education, Tagore said: *"Nature and human spirit wedded together would constitute our temple and selfless good deeds our worship."*

Tagore's views on education:

Rabindranath Tagore finds relevance even today and speaks volumes on the nature of the 'education' that we as 'students' are subjected to the problems plaguing the current educational system are the same as the ones which Rabindranath Tagore observed in his times. Some of important views are discussed below-

- ***Unity of west and east:*** Rabindranath Tagore was primarily an educationist rather than a political thinker. His education marked a novel blending of the ideas of the east and the west. The spiritualism of Indian philosophy and progressive outlook of the western people were blended together to give rise to an educational philosophy which marked its distinction in comparison to other educationists of India.
- ***Natural growth in natural circumstance:*** Tagore emphasized on 'naturalism' for framing educational model. He envisaged that nature is the best teacher to the pupil. Nature will provide the student with necessary situation to earn knowledge. No pressure should be exerted upon the student to learn anything. It is the nature which will be the guiding force to inculcate the spirit of learning in the mind of a student to pursue the education he likes. It will shape his behavior and character.

- ***Discard book-centered education:*** For the first time in the arena of education, Tagore established a new mile stone. With boldness and firmness he rejected a book-centered knowledge for students. To him it is not just to confine the mind of boys and girls to text books only. It will kill the natural instincts of a student and make him bookish. It will kill his creative skill. So, students should be freed from the book-centered education and should be given a broader avenue for learning.
- ***Independence to the learner:*** Tagore's approach to education was unique in its approach to it. It gave much emphasis to the 'freedom of thought' and imagination. To implement it in the field of education he had opened Shantiniketan, Sri Niketan and Brahmachari Ashram. He explained freedom in three-categorized ways i.e freedom of heart, freedom of intellect and freedom of will.
- ***Adoption of real and practical teaching:*** According to Tagore, teaching should be practical and real but not artificial and theoretical. As a naturalist outlook, Tagore laid emphasis on the practicality of education. That will definitely increase the creative skill within a learner.
- ***Palace of fine arts (dance, drama, music, poetry etc.):*** Tagore attached great importance to the fine arts in his educational curriculum. To him game, dance, music, drama, painting etc. should form a part of educational process. Students should take active part in these finer aspects of human life for these are very essential to enrich soul.

EDUCATION FOR RURAL RECONSTRUCTION:

- Tagore was aware about the rural poverty of our country. So, he wanted to eradicate it through education. The practical training imparted in different crafts to the students will make them skilled artisans in their field. Tagore founded a center for rural reconstruction to which the modern ecological movement owes so much. Rabindranath Tagore's Institute for Rural Reconstruction situated at Sriniketan was pioneering in its time and the culmination of his long period of endeavor to redeem the neglected Indian village and bridge the gap between the city and the village. Without exaggeration Tagore was the father of the rural uplift movement in this country. He had become an ardent advocate of a thorough rehabilitation of rural life at least a generation before the Indian National Congress turned its attention in this direction. In his programme of constructive work Tagore laid greatest stress on the work of rural uplift. The Indian National Congress was

also concerned about the poverty of late- **Infusing the Santhali element in schooling:** *“Gurudev Tagore’s approach to education, the ambience of the gurukul system, lack of rigidity in the curriculum, and the emphasis on holistic education made me realize the possibility of there being a lot of room for improvement in the prevailing system of education Santali children were subjected to.”* Infusing the Santali Element in Schooling by Rina Mukherjee.

- **Sriniketan:** A new type of school serving the special needs such as healthcare and economic welfare of Santali tribal communities and other neighboring villages. He have religiously worked for rural reconstruction in the surroundings villages of his Santiniketan school in rural Southern Bengal and the work of rural economic reconstruction was a pioneer endeavor to redeem the neglected village. Bucked up with such noble mission in 1922, he established rural reconstruction institute — Sriniketan within one year of setting up of Visva-Bharti.
- **Viswa-Bharati:** A central University and an institution of national importance *“Visva-Bharati represents India where she has her wealth of mind which is for all. Visva-Bharati acknowledges India’s obligation to offer to others the hospitality of her best culture and India’s right to accept from others their best”.*(Rabindranath Tagore in 1921)
- **Dartington Trust:** An institution established to promote the Arts, Social Justice and Sustainability, founded by Leonard and Dorothy Elmhirst; inspired by Rabindranath Tagore who stayed at Dartington Hall during his European tour in 1930. Nineteenth-century rural India, but there was a difference over the remedy.

If the wealth of nature enriched his poetic life, the gain from experience in human affairs was no less real to him as a man. He now came in to contact with men on a scale as never before in his life. The realities of rural life imparted a new tenderness to his outlook. Hence his sensitive mind reacted spontaneously to the sufferings which he saw around him. In Tagore’s view, only one way of protecting the weak, namely, to give them strength. The most effective way of giving strength is, according to him, to impart proper education.

TAGORE'S PROJECTS FOR THE DEVELOPMENT OF RURAL EDUCATION:

TAGORE'S VISION: RURAL-ECONOMIC RECONSTRUCTION:

The need of his economic development was based on creating a market that will bring all the villagers together and he did this through several melas (fairs). Like two of his dearest students Moitri Devi and Suchitra Mitra, who later became renowned author & singer respectively, have written about the contribution of melas like Poush Mela, Nandon mela and Sriniketan mela in bringing villages together and connecting them to the rest of the world.

Tagore's sympathy towards the peasants, but his desire to lend dignity to their work and to lighten their burden by introducing joy and music into it. Tagore sought to bridge the gap between city and village through the Sriniketan experiment of combining science and tradition.

The goal of self-reliance was the basic premise in Tagore's scheme of rural-economic reconstruction and it was apparently distinguished from the nationalist and economic thinking of those days where he rejected the Nationalist movement on swadeshi and Swaraj. Thus in the work which he started first at Silaidaha and Patisar, and later at Sriniketan there was a silent protest against the indifference of his countrymen. In the midst of indifference he silently started the work on a small scale and patiently waited for tomorrow. Such was the vision of a man who saw education as a means to bring about change in society and more importantly revolutionize the individual.

TAGORE'S VISION FOR AN EDUCATED INDIA:

Tagore's progressive educational philosophy is largely forgotten today. The experimental models Tagore pioneered in his schools, Santiniketan and Sri Niketan, remain mere experiments. His ideals have not found their way into India's schools; future generations have returned to rote-memorization as the predominant learning style. Yet Tagore's vision for education is one that modern India cannot afford to forget. *"To accept the truth of our own age it will be necessary to establish a new education on the basis, not of nationalism, but of a wider relationship of humanity"*. Rabindranath Tagore, *Visva-Bharati*, 1919, pp. 9-10. (Translated by UDG).

These ideas of a new education were founded upon an urge and an instinct to create a new type of humanity whose scientific-technological progress and economic development would grow through dialogue and respect for values.

Many of these issues remain deeply relevant today; Tagore insisted that education is the most important element in the development of a country. But it is not hard to see why he saw the transformative role of education as the central story in the development process.

It was on education rather than on sacrifice that the future of India would depend. The emphasis here was on self-motivation rather than on discipline, and on fostering intellectual curiosity rather than competitive excellence. Tagore realised the need for education in science as well as in literature and the humanities

Central idea of Tagore's education vision was the nurturing of students' souls. The emphasis was on "self-motivation rather than on discipline, and on fostering intellectual curiosity rather than competitive excellence." India's democracy is in great danger if it fails to take Tagore's legacy to heart. Only the kind of education that Tagore envisioned can equip our citizens to meet the challenges of our modern, globalized world.

CONCLUSION:

Although Rabindranath Tagore was not educated in any university, he was clearly a man of learning. He had his own original ideas about education, which led him to establish an educational institution named Vishva Bharati in Shantiniketan with the intention of re-opening the channel of communication between the East and the West. He travelled extensively in different countries of the world, and was a successful mediator between the Eastern and Western cultures. Tagore's philosophy of education draws its inspiration from ancient Indian philosophy of education.

As one of the earliest educators to think in terms of the global village, Rabindranath Tagore's educational model has a unique sensitivity and aptness for education within multi-racial, multi-lingual and multi-cultural situations, amidst conditions of acknowledged economic discrepancy and political imbalance. Rabindranath to absorb and learn subconsciously at his own pace, giving him a dynamic open model of education, which he later tried to recreate in his school at Santiniketan. Not surprisingly, he found his outside formal schooling to be inferior and boring and, after a brief exposure to several schools, he refused to attend school.

His experiences at Jorasanko provided him with a lifelong conviction concerning the importance of freedom in education. He also realized in a profound manner

the importance of the arts for developing empathy and sensitivity, and the necessity for an intimate relationship with one's cultural and natural environment. He saw education as a vehicle for appreciating the richest aspects of other cultures, while maintaining one's own cultural specificity.

Tagore devoted much of his life to advancing education in India and advocating it everywhere. Nothing absorbed as much of his time as the school in Santiniketan that he established. He was constantly raising money for this unusually progressive co-educational school. In his distinctive view of education, Tagore particularly emphasized the need for gathering knowledge from everywhere in the world, and assessing it only by reasoned scrutiny. Rabindranath Tagore, by his efforts and achievements, is one of a global network of pioneering educators, who have striven to create non-authoritarian learning systems appropriate to their respective surroundings. Tagore did not neglect the lesser aim of life and education, where the focus of colonial system of education was ultimately on employment. His intention was to correct this conception, without ignoring science, technology, and efforts on rural empowerment. For without these, it is impossible to revive the poor condition of people living in rural areas.

Tagore felt that young generation should be aware of their national cultural heritage, grasp its significance for them, and persuaded them to learn cultures from other countries. Tagore emphasized on the use of a national language as the vehicle of education at all stages of education. He wanted Indian universities to integrate themselves with society and make an effort to educate people living in the countryside. Tagore considered the lack of education to be the main obstacle in the way of India's progress and at the root of all its problems. Conclusively, he did not want education to remain confined to the cities and to particular classes of society. Perhaps the central issues that moved Tagore most are the importance of open-minded reasoning and the celebration of human freedom.

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SOCIAL INTELLIGENCE AND ACADEMIC ACHIEVEMENT OF STUDENTS IN SECONDARY EDUCATION DEVELOPMENT

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ABSTRACT

The aim of this research is to consider and study the social intelligence and academic achievement of students in secondary education development. Education is a powerful instrument for change in the society. When such a responsibility is imposed on the educational institutions they have to play a positive role for bringing a progressive change in the society. The student enjoys a pivotal position in the educational system that gets influenced and prepares him for the future life. In schools and colleges the best records are made by students who have other qualities in addition to intelligence like persistence and willingness to go along with established routines. From child classification to higher level students in all situations where people live and work together intelligence and academic achievement are constantly under scrutiny and being evaluated. Psychologists developed interest in understanding promoting and utilizing the individual differences for the development and prosperity of the society. The guideline for the teachers educationists and practitioners researchers as well as curriculum planners in order to imbibe coherence and integrity in personality and developing social intelligence among the students so that the students will be able to acquire basic understanding regarding themselves i.e. where they stand in various dimensions of social intelligence so that they can tackle with the day to day situations more efficiently and tactfully. The population of the study was 700 respondents while 40% of the population was used to obtain a sample size of 280 senior secondary school students. The simple random sampling technique was adopted for the study. A structured questionnaire titled Social Intelligence and Academic

Achievement with a four point rating scale was designed and a reliability coefficient of 0.83 was obtained using Pearson's Product Moment Correlation. Mean was used to answer the research questions while the null hypotheses were tested at 0.05 level of significance using Pearson's Product Moment Correlation analysis. The aim of this study was to investigate social intelligence and academic achievement of senior secondary school students. It was found that significant relationship exist between self-awareness and academic achievement of students self-motivation and academic achievement of students empathy and academic achievement of students. This concluded that self-awareness self-motivation and empathy enhance the academic achievement of students. It was recommended among others that teachers or instructors need to take into account their students' diverse self-awareness self-motivation and empathy in designing instructional methods that take care of these diversities. It was further recommended that teachers should help their students to understand their various intelligence preferences and make use of such to develop life-long learning.

Key Words: Social Intelligence, Students, Academic Achievement, Secondary Education.

INTRODUCTION

Academic achievement encompasses the acquisition of knowledge and the development of skills within the context of school subjects which are assessed through a variety of evaluation methods. The phenomenon under consideration is subject to various influences including but not limited to instructional effectiveness motivation family support and the broader educational system. The importance of the academic accomplishment in the pursuit of educational objectives is the assessment of achievement and the provision of avenues for individual and professional development. The achievement refers to the level or status of an individual's learning and their capacity to effectively apply the knowledge they have acquired. The process encompasses not solely the acquisition of knowledge and skills but also the cultivation of attitudes and values. However, (Trow, 1960) academic achievement refers to the level of scholastic accomplishment which is typically assessed through standardized tests

and reflected in grades and units. It encompasses an individual's acquired skills and level of competence in various school related tasks. According to Kohli (1975) academic achievement refers to the degree of proficiency attained in academic endeavors or the knowledge formally acquired in school subjects. This is typically measured by the percentage of marks obtained by students in examinations. The academic performance of students who are frequently plays a significant role in shaping their future opportunities and potential for success. It is imperative to bear in mind that additional factors such as emotional intelligence social aptitude and personal development are also pivotal determinants of success and that academic accomplishment does not singularly serve as a predictor of success or intelligence. Therefore it is imperative to implement a comprehensive educational strategy that takes into account the holistic development of students in order to guarantee their overall success and well-being (Qaisur, 2023). The academic achievement of students in secondary school can be influenced by a range of factors encompassing their individual backgrounds socio-economic conditions and educational opportunities. Social Intelligence plays very important role in student's educational development. It gives the capacity to know one-self and to know others is a part of the human condition as the capacity to know objects or sounds and it deserves to be investigated no less than other charged forms. Social scientist believes social intelligence is an aggregated measure of self and social awareness evolved social beliefs and attitudes and a capacity and appetite to manage complex social change. Psychologist believes that it is social intelligence rather than quantitative intelligence that defines who we are as humans (Gnanadevan, 2007). The history of the rise progress and development of advanced countries show that they have given due consideration and importance to higher education and all their progress owes a lot to the advancement and priority given to higher education. Most persons have individual profiles of characteristics and abilities that result from pre-dispositions learning and development. Generally intelligence means mental abilities enabling one to think rationally learn readily act purposefully and deal effectively with one's environment. In psychological testing it is a term that has been given many different technical meanings concerned with mental abilities such as verbal reasoning quantitative thinking abstract analysis manipulation of geometric shapes recognition of similarities and differences between pictured objects. In the view of Wechsler (1985) intelligence is the ability to undertake activities that are characterized by difficulty complexity abstractness, economy social value and the emergence of originals and to

maintain such activities under conditions that demand a concentration of energy and resistance to emotional forces. In the view of Goleman (2006) there are three types of intelligence abstract mechanical and social. He explained abstract intelligence as the ability to apply knowledge in complex problem solving by seeing the problem as a whole as opposed to checking only the individual constituent parts while mechanical intelligence is the skill to understand the functioning of mechanisms and processes associated with engineering and the science. It further highlighted that social intelligence is the kind of intelligence that is found among successful managers and marketers. They know how to find their own in a group of people and they are always ready with proper responses to every query. In other words they know how to be the people's person. Social Intelligence is also known as interpersonal intelligence because it is also the study of an individual's ability to notice the distinctions between him and other people (Saxena and Panigrahi, 2009). It asserted that social intelligence is not an innate quality. It is not something people are either born with or are not. In fact there have been many people who were born socially awkward but then went on to become prolific speakers and actors. This proves that we do not have to be blessed to become a socially intelligent person. All you have to do is practice the right things and keep applying them at the right time. The concept of social intelligence is content-wise and very closely related to emotional intelligence (Baron, 2006). To characterize social intelligence from the view point of this concept it is essential to concentrate on both levels. However stressing the cognitive approach in defining social intelligence is related to how individuals understand and interpret their own behaviours as well as the others and also how in connection to this interpretation they can adjust their behaviours effectively. Social intelligence consists of perceptiveness of the internal states and moods of other people general ability to deal with other people knowledge of the social norms of the social life ability to orient oneself within social situations use of social techniques which enable manipulation social charm and social adaptation (Silvera, *et al.*, 2001). Social intelligence according to Thorndike is the ability to act wisely in a social relationship (Thorndike, 1920). However (Marlowe, 1986) suggested that individuals who are socially intelligent appear to experience a rich meaningful life as opposed to truncated affective experiences. Furthermore he found that social intelligence is associated with enhanced social problem solving abilities. He suggested that social intelligence to social competence. It defined it as the ability to understand the feelings thoughts and behaviours of persons including one interpersonal relationship and to act appropriately upon that

understanding. It opined that it is difficult to lead a successful life in a society without social intelligence. Social intelligence helps an individual to develop healthy co-existence with other people. Socially intelligent people behave tactfully and prosper in life. Social intelligence is useful in solving the problems of social life and helps in handling various social tasks. Thus social intelligence is an important developmental aspect of education. Several studies have shown that social intelligence is multidimensional and distinguishable from general intelligence domains (Jones and Day, 1997; Marlowe, 1986). These concepts of social intelligence are incorporating internal and external perceptions of social skills and other psychosocial variables self-awareness self- motivation and empathy by (Taylor, 1990). However (Willmann, *et al.*, 1997) viewed supporting harmony and restoring equilibrium between individuals as acts of being socially intelligent. People with this intelligence are usually included into the differences between what others say and what they really mean. As a result socially intelligent students may sometimes be accused of being good readers. This can be due to a combination of excellent listening skills and the ability to meaningfully for others. According to (Weis and Sub, 2007) showed support for the existence of an under lying general social intelligence which positively relate to students' academic performance. Success in academic achievement of the students is positively related to social intelligence (Ugwu, 2011) respectively.

DEFINITION OF SOCIAL INTELLIGENCE

Social Intelligence (SI) is the ability to get along well with others and to get them to co-operate with others. A continued pattern of toxic behavior indicates a low level of social intelligence the inability to connect with people and influence them effectively. Social intelligence is a person's ability to interact well with others and often called people skills. It is a learned ability involving situational awareness understanding of social dynamics and a decent amount of self-awareness. There are four contributing aspects of social intelligence defined by researchers.

Communication Skills

These involve the ability of a person to listen well understand the words and emotional content of what they hear speak well with others express their thoughts and emotions clearly and use skills when speaking with others.

Social Rules

These involve knowing the different usually unspoken rules of various types of interactions and situations as well as how to play an appropriate role in a variety of interactions. We wouldn't normally act the same way in a board meeting as we would were watching a football game with friends.

Motivation of Others

This involves reading the sub text of a conversation and understanding why a person is saying something or behaving in such a manner. Imagine a person with tears streaming down his face yet they tell us that everything is fine. While this is an easy situation to read high social intelligence that can help to decipher even the most subtle situations.

Impression of Management

This skill involves understanding the reaction of others to us and behaving in a way to make the impression as we want.

HYPOTHESES

The following null hypotheses were formulated and tested at 0.05 alpha level.

H01: There is a significant relationship between self-awareness and academic achievement of senior secondary school students.

H02: There is a significant relationship between self-motivation and academic achievement of senior secondary school students.

H03: There is a significant relationship between empathy and academic achievement of senior secondary school students.

METHOD OF THE STUDY

This study adopted the correlational research design. The population of this study was 700 respondents which consisted of students from secondary school. 40% of the population (280) was used as the sample size while the stratified sampling technique was adopted in selecting the sample for the study. A structured questionnaire titled Social Intelligence and Academic Achievement with a four point rating scale was designed. The instrument was validated by two experts in the field of Measurement and Evaluation while a reliability coefficient value of 0.83 was obtained using the Pearson's Product Moment Correlation. Mean was used to answer the stated research questions while Pearson's Product Moment Correlation analysis was used in testing the formulated hypotheses at 0.05 alpha levels.

SOCIAL INTELLIGENCE IN STUDENTS ACHIEVEMENT

The process of education is considered so important in our society. It has become an integral part of our lives in the twenty first century with a special focus on life skills. As we are living in a society in which special skills in particular social abilities are needed for our life achievement and to maintain the community. Students have evolved special competencies to allow them to survive and to reproduce. As society becomes more and more complex its intellectual competence becomes more sophisticated. Their competence is the social intelligence and can be defined as intelligence that lies behind one's group interactions and behaviours. Social Intelligence is of more importance in the present life style due to growing tensions stresses and various complexities (Gakhar and Bains, 2009). It can be learned developed and used as an effective life skill for achievement managing personal life interpersonal relationships and achieving success in all the areas of life. This learning process is most effective when it begins early and continues through high school. The socio-emotional skills are important for success in school work and life. With SEL students learn to manage their own emotions and behaviours that have empathy for others and solve problems effectively to make responsible decisions and maintain healthy relationships. Students learn to recognize what's happening inside them and to be aware of their emotions which help them to deal with strong emotions and impulsive behaviours (Othman, *et al.*, 2008). It helps them think and analyze the situation before acting. Students learn to identify other's emotions and perspectives which help them to empathies and show compassion no matter who they are or what their back ground is. Students learn to solve their problems in peaceful ways and communicate assertively about what they need or want (Ugwu, 2011). This helps them to get along with other students. When students learn to make responsible decisions about their life and their future things can turn out better.

SOCIAL INTELLIGENCE AND ACADEMIC ACHIEVEMENT

Educationists disagree on the role social intelligence plays in personality. Some strictly define it as just one form of intelligence which was outline by Howard Gardner's theory of multiple intelligences which has been simplified to Karl Albrecht's six dimensions of intelligence known as A.S.P.E.A.K, where each letter stands for a particular kind of intelligence including abstract, or logical reasoning mathematics and symbolic information processing social or interaction with others practical or problem solving for real-life situations emotional or self-

awareness and ability to control one's emotional and behavioral reactions aesthetic or an understanding of relationships between objects design skills and comprehension of form Kinesthetic intelligence or awareness and skill in moving the body or controlling objects through space. However other theorists see social interaction as a manifestation of an individual's personality because it employs many cognitive processes integral to personality formation such as perception memory and problem solving skills (Ruisel, 2004). Those to the cognitive view of personality the belief that personality is composed of perception memory and problem-solving in cognitive systems tend to explain differences in personality as different sets of knowledge and skill seen most clearly when people interact with one another. In addition to examining the main effects of social intelligence and academic achievement on socio-metric and perceived popularity the interaction between social intelligence and academic achievement was tested (Kosmitzki and John, 1993). It is possible that students who are both socially intelligent and highly achieving are the most well-liked or the most popular students in their school. However it is also possible that social intelligence has a positive effect on perceived popularity to the effect of academic achievement may be neutral or even negative. In this case the most popular students may be highly and socially intelligent but not necessarily doing well in school (Panigrahi, 2005). To clarify this matter we also examined the interaction between social intelligence and academic achievement in the prediction of popularity.

ROLE OF SOCIAL INTELLIGENCE

It can be expected that social intelligence will always have a positive effect on popularity no matter what the nature of the peer group is. Social intelligence implies adjusting one's behavior to the norms of the group. No matter what these norms are the socially intelligent adolescent is always expected to be able to read them accurately and adjust to them. This process is always expected to be beneficial to their status in the group. In contrast the effect of academic achievement on peer status is expected to depend on the norms of the group (Kihlstrom and Cantor, 2000). Academic achievement is expected to lead to higher status only if it is prioritized in the class room. In peer groups where academic excellence is the norm such as in class rooms with a high academic orientation it is expected to lead to popularity. But in class rooms where other skills are prioritized the academic achievement may not lead to popularity or even be predictive of unpopularity. Different types of class rooms may thus have different associations between academic achievement and popularity.

RESULTS

The positive correlation coefficient of 0.733 suggests that there is a moderate positive relationship between academic achievement and the managing emotions dimension of social intelligence among children in senior secondary school. This means that as social intelligence related to managing emotions increases the academic achievement of children also tends to increase. In other words students who demonstrate better abilities in managing their emotions such as being able to handle both pleasant and unpleasant emotions being active rather than passive in their emotional responses and feeling more in control of their emotions are more likely to achieve higher academic success. The positive correlation coefficient of 0.704 suggests that there is a moderate positive relationship between academic achievement and the motivating our self-dimension of social intelligence among children in senior secondary school. This means that as emotional intelligence related to self-motivation increases the academic achievement of children also tends to increase. In other words students who demonstrate better abilities in motivating themselves to achieve their academic goals are more likely to have higher academic success. It is revealed that the coefficient of correlation between academic achievement and the knowing other emotion dimension of social intelligence of senior secondary school students is found to be 0.739. This correlation is significant at the 0.05 level of significance indicating a statistically meaningful relationship between the variables. The positive correlation coefficient of 0.739 suggests that there is a moderate positive relationship between academic achievement and the knowing other emotion dimension of social intelligence among children in senior secondary school. This means that as emotional intelligence related to understanding and empathizing with the emotions of others increases the academic achievement of children also tends to increase. In other words students who demonstrate better abilities in perceiving and comprehending the emotions of their peers and others around them are more likely to have higher academic success.

DISCUSSION

The concept of academic achievement encompasses various dimensions and pertains to the degree of success or accomplishment an individual has attained within an educational context. Academic achievement has been the subject of diverse perspectives and definitions put forth by psychologists and educationalists. According to (Good, 1959) academic achievement pertains to the acquisition of knowledge or the cultivation of skills in academic disciplines,

typically assessed through test scores or evaluations conducted by educators. It denotes the degree of accomplishment and competence that students have attained in their scholarly endeavours. Ladson Billing, (1999) underscores the significance of academic performance as the measure of achievement in relation to educational objectives, whether they are immediate or long-term, for students, educators, or educational establishments. That academic achievement is the result of the instructional efforts provided to students by educators within an educational environment. This accomplishment is an outcome of the educational process and signifies the academic performance of students, educators, and the educational institution. The concept refers to the academic achievement of students upon completion of an educational programme as emphasized. The notion of academic achievement is intricately linked to the concept of learning, yet it encompasses a broader range of factors. Learning is a process that entails lasting modifications in behaviour as a consequence of past experiences (Qaisur, 2023). However, academic achievement pertains specifically to favourable alterations in cognitive structures and deliberate outcomes of instructional programmes. Teaching is a profession requiring specialization in terms of knowledge and skills. The person involved in this process should possess all round development in terms of cognitive, affective and psychomotor domains. There exists a wide gap between theory and the knowledge and skills of teaching required in the actual classroom curriculum transaction. The teacher should have a skill of constructivism as it is the present hour of talk he has to bridge the classroom knowledge to real life situations by constructing the knowledge of the student (Qaisur, 2021). One of the major findings of this study was that there is a significant relationship between self-awareness and academic achievement of students. This implies that self-awareness enhances the academic performance of students (Kaur and Kalaramna, 2004). This finding however is in line with the result of which proved that greater awareness helps students to be more focused with their studies. He further opined that multi self-awareness people tend to achieve more and score better than other learners with one or two self-awareness styles. As such it is inferred that self-awareness makes a significantly relation with student's overall academic achievement. Such finding highlights the importance of recognizing student's varying self-awareness. Teachers should be aware of the usefulness of this concept for effective learning to take place. Also it was found that self-motivation significantly enhances student's ability to improve on their academic achievement (Qaisur, 2023). This implies that the ability to motivate oneself in face of adversity is the hall mark of a perseverant

individual thus people who can put a positive spin on their negative emotions and end up as performers are prized in organizations. Finally it was found that there is a significant relationship between empathy and academic achievement of students. This finding is supported by (Bennett, 1993) who asserted that empathy is the quality of putting oneself in other people's life and knowing where the life goes. He further advanced that it is the understanding of the problems of others by thinking of them as our own. This is because of over-whelming importance in ensuring effective academic performance. Social intelligence is a significant factor of prediction and interpretation of human behaviour in various social contexts of social practice. The study suggests that there is a significant relationship between self-awareness and academic performance of students. This implies that self-awareness enhances the academic achievement of students. It was also revealed that self-motivation significantly enhances student's ability to improve on their academic achievement. This implies that the ability to motivate oneself in face of adversity is the perseverant individual thus people who can put a positive spin on their negative emotions and end up as performers are prized in organization and that there is a significant relationship between empathy and academic achievement of students (Qaisur, 2021). Social intelligence helps an individual to develop healthy co-existence with other people. Socially intelligent people behave tactfully and prosper in life (Riggio, *et al.*, 1991). Social intelligence is useful in solving the problems of social life and help in facing various social tasks. Thus social intelligence is an important developmental aspect of education. It is recommended that National Policy of Education should include teacher training programmes in order to enhance students' social intelligence not only for class room discipline but also to understand the problems related to students society and their family. Such programmes will assist students in developing better strategies for class room discipline and students development. From the above the study recommend that students should be properly trained through various orientation and refresher courses to develop uniformity of thoughts and experience among themselves so that the dimensions like confidence tactfulness and recognition to social environment will be enhanced and used for social and academic performance of the students. It is also suggested that at all levels of education a proper social atmosphere should be provided to the students so that they may develop better social intelligence in future in order to deal with the society more effectively as well as to have better academic achievements (Kaukiainen, *et al.*, 1999). Further it is suggested that authorities should organize various interaction programmes cultural activities

social activities at inter and intra-district levels to develop social intelligence among the students. It is difficult to lead a successful life in a society without social intelligence.

CONCLUSION

Education is fundamental for achieving full human potential developing an equitable for society and promoting national development. Providing universal access to quality education is the key to India's continued ascent and leadership on the global stage in terms of economic growth social justice and equality scientific advancement national integration and cultural preservation. Universal high quality education is the best way that forward for developing and maximizing our country's rich talents and resources for the good of the individual the society the country and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high quality educational opportunities to them will determine the future of our country.

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STUDENTS VIEWS ON ONLINE EDUCATION DURING COVID-19 PERIOD

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ABSTRACT

The present study aims to find out views of the students about various aspects such as challenges, benefits etc. of online education and learning and their mental condition during COVID – 19 pandemic. An online survey has made by the researcher among 64 postgraduate students of different subjects from three Universities of West Bengal. A questionnaire has been prepared by the researcher using Google form. The researcher followed the simple random sampling technique for the collection of data. A total number of 64 students were selected. Descriptive statistics was used for the analysis of the collected data. The findings revealed that the COVID-19 pandemic had the greatest impact on the students' mental health. Smartphone was the popular device for attending online class among students. Google meet was the most used app for online class among most of the respondents of this study. Majority of the students had positive opinion about their experience regarding online class during lockdown.

Keywords: Online education, covid-19 pandemic, lockdown, students view

Introduction:

The year 2020 witnessed the pandemic situation and we saw lockdown in many countries of this globe including India, where people were forced to stay at home. Every aspect of human life was affected by it including education. The COVID – 19 pandemic affected educational systems all over the world. According to UN, the closure of schools and learning spaces impacted 94% of the world's students' population. There was also an impact of it on the continuity of learning for the young learners of India. Around 32 crores Indian students left

their current schools or universities (www.legalserviceindia.com). As a result, we shifted from chalk-talk teaching learning to technology orient education. Education system moved to online mode. During this period online education played as a ray of hope to teachers and pupils for continuing education. Classes on Zoom, Google Meet, Skype, Whatsapp etc. were became the norm for teacher, students and parents. But online teaching and learning method created a division between rich v/s poor and urban v/s rural. Poor network connectivity, unpreparedness about new transition among, poor concentration and attention, lack of technical skills, lack of infrastructure, bad home environment etc. were the other challenges of online education during lockdown.

Operational definitions:**COVID-19 pandemic –**

The other name of Covid-19 pandemic is coronavirus pandemic. In December 2019, coronavirus was first occurred in Wuhan, the city in China and spread rapidly other areas of Asia and later worldwide. WHO declared it as a pandemic on 11.03.2020. According to World Health Organization (2020), COVID-19 is an infectious disease caused by a new strain of coronavirus that attacks the respiratory system. As of 9th June, 2023, the pandemic had caused 767,750,089 cases and 6,941,082 confirmed deaths (<https://en.m.wikipedia.org>).

Lockdown –

Lockdown is a restriction policy for people, community or a country to stay where they are, usually due to specific risks that could possibly harm the people if they move and interact freely (www.wikipedia.com). The people of the world witnessed it from March 2020 for coronavirus pandemic. The Government of India first ordered a nationwide lockdown for 21 days on 24th March, 2020. India noticed four phases of lockdown in 2020. There was also lockdown phase in 2021.

Online education –

Online education is electronically supported learning that relies on the internet for teacher /student interaction and distribution of class materials (www.indiaeducation.net).

Online learning --

According to Barak & Usher (2020), Online learning refers to the education environment that happens through the Internet using computers, mobile phones,

and other technological devices for instruction and management of academic programs.

Literature review:

Research conducted by Bibi, N. and et al. (2020) revealed that there was no significant difference between the challenges faced by the students enrolled in public and private colleges. Infrastructure was found as the most prevailing challenge along with home environment. The students of both sector colleges were unable to pay for additional internet facilities and accessories for online classes due to economic constraint. They also faced the problem of unavailability of smooth networking of different cellular companies and submission of assignment due to less knowledge about the technology. But the students faced fewer problems related to knowledge and skills of using the internet. Singh, G & Quraishi, S (2021) found that most of the (74.8%) students were facing difficulty in studies during the lockdown. A significant portion of the sample (88.2%) had the fear of loss of studies during the whole lockdown scenario. 68.7% of students were able to understand the online lecture. Accessibility problems of the network and homely environment were the reason for online learning difficulties as stated by the students.

Almahasees, J. & et al (2021) made a study entitled “Faculty’s and Students’ Perceptions of Online Learning During COVID-19”. They noticed that Zoom, online interactive classes offered by Microsoft Teams and WhatsApp were the common online platforms in Jordan in communication with students outside the class. The study also found that online education was useful during pandemic as stated by both faculty and students. But its effectiveness was less than face-to-face learning and teaching. Faculty and students indicated that problem of adaptation to online education, especially for deaf and hard of hearing students, lack of interaction and motivation, technical and Internet issues, data privacy, and security as challenges of online learning. They mentioned some benefits of it such as self-learning, low costs, convenience, and flexibility. Chowdhury, A (2021) reported that some respondents felt happy for utilization of time in attending online classes during lockdown period. Whereas some of them faced difficulty in joining online classes and to share feelings with anybody and also felt loneliness. They also faced network problem and lack of technical knowledge.

Barrot, J. S. and et al. (2021) reported that the important online learning challenge of college students was learning environment at their home and their

least challenge was technological literacy and competency. The findings further revealed that there was a greatest impact of COVID-19 pandemic on the quality of the learning experience and students' mental health. The most frequently used strategies employed by students were resource management and utilization, help-seeking, technical aptitude enhancement, time management, and learning environment control. Sharma, B. (2021) noticed that most of the students agreed about the easiness of online classes with the difficulty of interaction. Whereas some students were not satisfied with online classes. 57.7% of the students faced the problem of concentration during online classes as compared to a physical classroom.

Salakhova. V. B & et al (2022) conducted a study on "The Problems of the COVID-19 Pandemic in Higher Education" and noticed that all higher education students (160 people) faced technical difficulties during distance learning, such as poor internet connection, lack of access to online platforms, lack of necessary equipment, and individual space for online learning. They also found low technical readiness for distance education among some students and low quality of online resources, as well as cyber threats during online courses. All students had device such as computers, laptops, tablets, and phones for distance learning. But most of the students (121 people) generally did prefer to use a tablet or a phone for their internet connection.

Objectives:

1. To examine the mental condition of the students during lockdown period
2. To study the experiences of the students about various aspects of online learning and teaching
3. To identify the problems faced by the students during online class
4. To study the views of the students on the benefits of online learning

Delimitations:

1. This study was delimited to the three universities of three districts, Kolkata, South 24 parganas and North 24 Parganas.
2. The present study was delimited to the postgraduate students only.

Methodology:**Population**

The population of the study covered all the students of three universities under the district of Kolkata, South 24 parganas and North 24 Parganas.

Sample

This study involved 64 (12 male and 52 female) postgraduate students of different subjects from three universities of West Bengal. Simple random sampling technique was used to select the respondents.

Design of the study

The descriptive survey method was adopted for the conduct of the study.

Research Tool used for the study

For this study, self-constructed questionnaire was used by the researcher using Google form. First part of which consists of the questions related with the background of the students like age of the student, gender, subject of postgraduation, studying year, stream and name of the University. In the second part questions were given regarding mental condition of the students during lockdown and their views about various aspects of online learning and teaching.

Analysis and Interpretation of Data:

The researcher used percentage calculation as the main technique for the interpretation and analysis of the data. Narrative description was also done.

Findings:

The participants of this study were studying different subjects such as Education, Applied Psychology, Psychology, English and Political Science whose ages ranged from 21 to 26. Most of the respondents (87.6%) were in the age group of 21 to 23 years old and remaining 12.6% were in the age group of 24-26 years old. 71.9% of the sample were studying in 2nd semester and 26.6% were from 2nd semester. Majority of the sample (96.9%) were from Arts stream.

A significant portion of the sample (48.4%) agreed that their mental condition was not good enough during lockdown period and mental condition of 7.8% of student's were very bad as they were missed the face-to-face interaction. They were also not used to with the isolation. But 37.5% of the students have good mental condition during lockdown.

All respondents of this study were attended online classes during lockdown period. Majority of the students (85.9%) attended the online classes regularly whereas 14.1% of the students attended the online classes occasionally.

Smartphone was the popular device for attending online class as stated by 89.1% students of this study. They used it as device for their online learning. Only 9.4% respondents used laptop for online classes.

Most of the students (82.8%) said that their professor/teacher used live class as method for online teaching. Some students said that their professor/teacher gave them the link of recorded class instead of taking the live class. Whereas some students agreed that their professor/teacher provided them only study materials.

Google meet was the most used app for online class as stated by 76.96% of the respondents of this study. Zoom app was also used by some students and some students also used Zoom and Google meet both to attend online classes.

There is a need of basic technical skills for the success of online learning. Majority (81.3%) of the students felt that there was a need of technical skills for online class while others had opposite view point.

The interaction between teacher and students is always influence the learning process. It is also important for development of students' academic self-concept. According to 53.1% of the respondent online classes were not interactive than physical class. They could not interact with their professor/teacher properly. They felt the need of proper communication in between teacher and student. Whereas 20.3% of them was not sure about this. Only 10.9% of the students stated that online class was interactive.

The findings of the study revealed that problems of online learning faced by college students varied in terms of type and extent. There are different challenges faced by respondents during online class such as poor attention, poor network, lack of concentration, lack of interaction with teacher and friends, lack of technical skills, collection of study material etc. Respondents of this study stated more than one problem. 43.8% of the respondents agreed that poor network was the main problem during online class. Whereas 28.1% of students indicated that their online learning challenges lie in lack of interaction with teacher and friends, lack of concentration, lack of technical skills, along with poor attention and poor network. Very few students mentioned that they faced problems of collection of study materials during lockdown.

Most of the respondents (51.6%) agreed that they have faced stress due to online class during lockdown. Normally students were used to with the interactive session of the physical class. There was a very little scope of interaction with teacher and friend. But others had opposite view point.

The quality of online learning mode is seemed to be good for majority of the respondents (71.9%). Respondents were happy about their online learning experiences. But 28.1% of the sample had opposite view point. Their online experience was not good.

The students of this study also agreed on the benefits of online learning during lockdown. They mentioned various benefits of it such as learning new skills (34.4%), flexibility due to time and communication (28.1%), self-learning (15.6%), low costs (14.1%), self-paced learning (6.2%) and accessibility (1.6%).

The overall learning experience through online mode seemed to be good as majority of the respondents (81.2%) expressed positive opinion about their experience regarding online class. But 18.8% of students said that their experience was not good enough.

Discussion

Online mode of learning and teaching made an effect on the continuation of education during pandemic. Because lockdown affected the traditional teaching and learning across the globe. Online education was the only option. The findings revealed that most of the students' mental condition was not good enough during lockdown period and some of them had very bad mental condition which is similar to the findings of Barrot, J. S. and et al. (2021) and Chowdhury, A (2021). Majority of the respondents had the opinion that online classes were not interactive which is consistent with the study of Sharma, B (2021) and Chowdhury, A (2021). There are different challenges faced by students of this study during online class such as poor attention, poor network, lack of concentration, lack of interaction with teacher and friends, lack of technical skills etc. which is similar to the findings of Almahasees, J. & et al (2021), Chowdhury, A (2021), Sharma, B. (2021) and Salakhova. V. B & et al (2022). The students of this study also agreed on the benefits of online learning such as learning new skills, flexibility due to time and communication, self-learning, low costs, self-paced learning etc. during lockdown which is consistent with the study of Barrot, J. S. and et al. (2021).

Conclusion

The COVID-19 pandemic had very bad impact on the education sector across the world along with India. During pandemic the students were being taught via online mode. Online education was useful during the pandemic. The benefits of online learning as stated by the students are learning new skills, flexibility due to time and communication, self-learning, low costs, self-paced learning etc. At the same time, students were facing challenges to study on online mode like poor network/internet connection, lack of technical skills, lack of concentration and attention, lack of interaction with teachers and friends etc. Online education

cannot replace the offline education. The use of both offline and online mode of education will improve overall learning process.

Limitation

1. This study only focused on students' perspective.
2. The small number of participants is another limitation.
3. The participants were limited to postgraduate students from three universities.

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EDUCATION AND EMPOWERMENT OF SANTAL PEOPLE IN THE DISTRICT OF BIRBHUM

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ABSTRACT

The education plays a significant role in the exploitation and dire circumstances faced by the Santal people. Education serves as the cornerstone for their success, providing them with the necessary drive to break free from exploitation and poverty. Unfortunately, due to illiteracy and the resulting ignorance, the Santal community has been unable to capitalize on new economic opportunities. Education acts as a catalyst, bridging the gap between traditional ignorance and technological advancements, which is crucial for the development of the Santal people. Consequently, there is a pressing need for an educational environment within their homes to inspire higher achievements and foster a positive mindset, enabling them to reach greater levels of aspiration.

Education plays a crucial role in the progress and growth of individuals and society as a whole. It is widely recognized as a fundamental aspect of civilization, enabling people to attain freedom and empowerment. In the case of the Santal community, their advancement and overall development heavily rely on the level of education they receive. Education not only brings enlightenment but also grants individuals power, privilege, protection, and prestige. In this paper the author try to indicate the interrelationship between education and empowerment of santal people in the district of Birbhum.

Keywords: Education, Empowerment, Santal People, Birbhum District

Introduction

Education plays a crucial role in uplifting the economic and social status of the Scheduled Tribes. To truly understand and evaluate the cognitive abilities of the Santal community, it is essential to consider their ecological and cultural contexts. It is important to recognize that the Santals are not culturally inferior or intellectually less capable than children from other communities. Therefore, any educational program that fails to acknowledge and address the ecological, cultural, and psychological aspects of the Santals is unlikely to have a significant impact.

A key aspect of promoting effective education among the Santals is to establish a strong connection between school education and the broader aspects of their lives, with a specific focus on the needs and aspirations of the Santal communities. This approach ensures that education becomes a meaningful and relevant experience for the Santal students, enabling them to apply their knowledge and skills in real-life situations. By bridging the gap between education and the specific requirements of the Santal community, we can take a significant step towards empowering them and fostering their overall development.

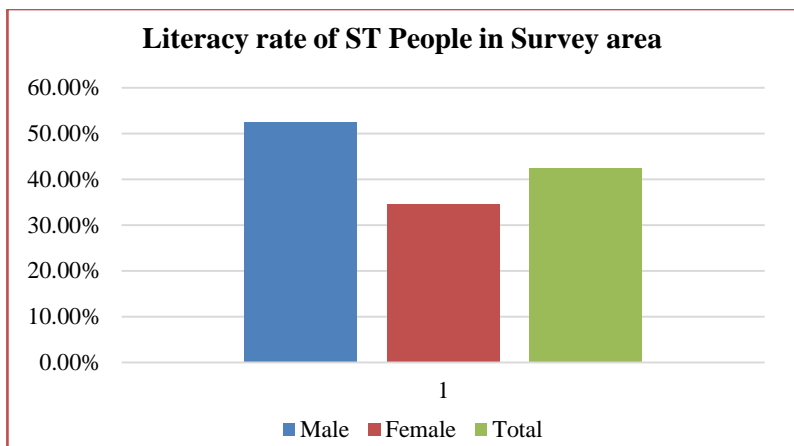
Analysis of Data

Literacy support is a system that actuality provides the knowledge to the people to perform their day-to-day activities and helps to establish their position in the society. It is fact that at the time of independence the overall literacy rate of Indian was less than 20% and tribal literacy rate was also very meagre that is less than 2%. After independence a number of schemes have been adopted to improve the rate of literacy among the children of different communities. However, the rate of literacy of Santal people still is in question and which is less than 45%. Although, special drive for mass literacy programme has been adopted by both central and state government. Therefore, to estimate the education, culture and empowerment status literacy rate of Santal people is a vital issue.

Table

Literacy rate of ST People in Survey area

Male	52.50%
Female	34.50%
Total	42.40%

Figure**Interpretation:**

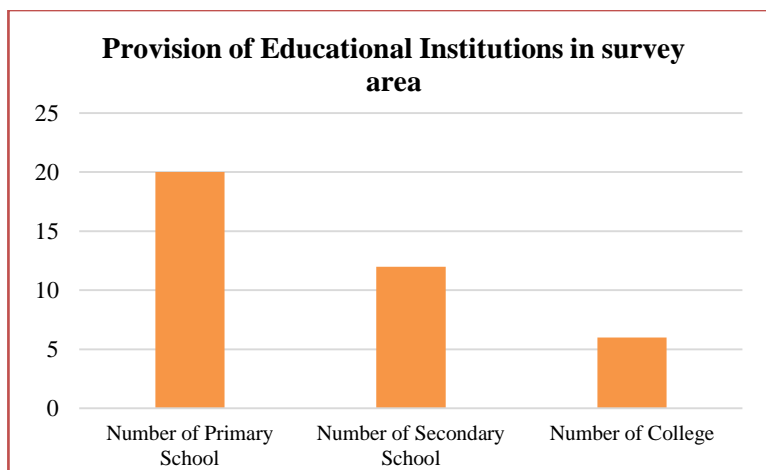
Above table reveals that the literacy rate of santal people, selected as sample is 42.40% of which male literacy rate is 52.50% and female literacy rate is 32.50%. Although, the literacy rate of santal people has improved significantly but it is far below the general literacy rate among the people of our country, which is more than 78% at present. The figure also indicates the trends of literacy rate due to variation of gender of tribal people.

Analysis of Data on provision of education of santal children

A critical issue was indicated by the different education commissions constituted after the independence that due to insufficient number of educational institutions of different categories the universalization of literacy has not been achieved its ultimate goal. After independent secondary education commission recommended for establishing primary schools within an easy distance from the house of the children. So that the provision of education could be improved and the children of the age group 6 to 14 can enrol themselves at primary school for minimum level of education. Based on this recommendation and also recommendations made by Kothari Commission primary schools are established in each of the village within one Kilometre from the home of the children. Accordingly secondary schools and colleges are also established to enrol the children who have completed primary education and secondary education respectively. In case of santal children (tribal) provision of education has improved significantly. The table below showing the number of education institutions of different categories in the study area. So that the tribal families have the scope to enrol their children at educational institutions within a very easy distance from their home.

Table**Provision of Education of ST People in Survey area**

Nature of educational institution	Number
Number of Primary School	20
Number of Secondary School	12
Number of College	6

Figure**Interpretation:**

The above table and figures indicate that in the surrounding areas of 20 santal villages the number of primary, secondary and higher education institutions. It is fact that each of the tribal village is having either a primary school or an Anganbadi education institution. As a result, 20 villages are having 20 primary schools. But in case of secondary schools the table indicates that in surrounding areas of 20 villages there have been 12 secondary schools in which the children of tribal families can enrol themselves as the students of secondary school. In case of college or higher education institution it is fact that the selected santal villages are distributed in scattered all over the district. Thus, in surrounding areas there have been six (6) colleges in which the santal children can enrol themselves for higher education.

Analysis of Data of educational status of Santal families in the district of Birbhum

The educational status of a santal family is determined on the basis of the standard of education of the member of a family. It is determined from the sum

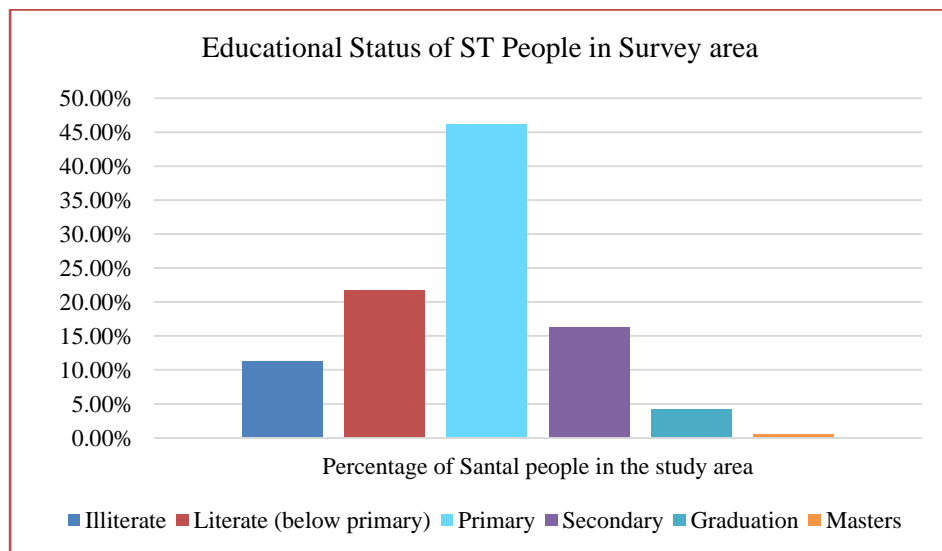
total of rating score on the level of education of a family, divided by the total number of members of a family. For example, total number of members of a family is five and total education rating score is 16, thus the level of education of the family is equal to $16/5=3.2$. However, in this study the educational status has been determined on the number of tribal people in primary, secondary, graduation and post-graduation levels. Therefore, percentage in different categories of education level has been determined out of 100%.

Table

Educational Status of ST People in Survey area

Level of Education	Percentage of Santal people in the study area
Illiterate	11.25%
Literate (below primary)	21.68%
Primary	46.05%
Secondary	16.28%
Graduation	4.20%
Masters	0.54%

Figure



Interpretation:

Above table reveals the percentage of educational status of the santal people in the study area. It is fact that results indicate that most of the selected santal people belong to pre-primary and primary education level, but it is interesting to note that 11.25% santal people belong to illiterate category. Therefore, it may be clearly mention that santal people are aware of education and its importance.

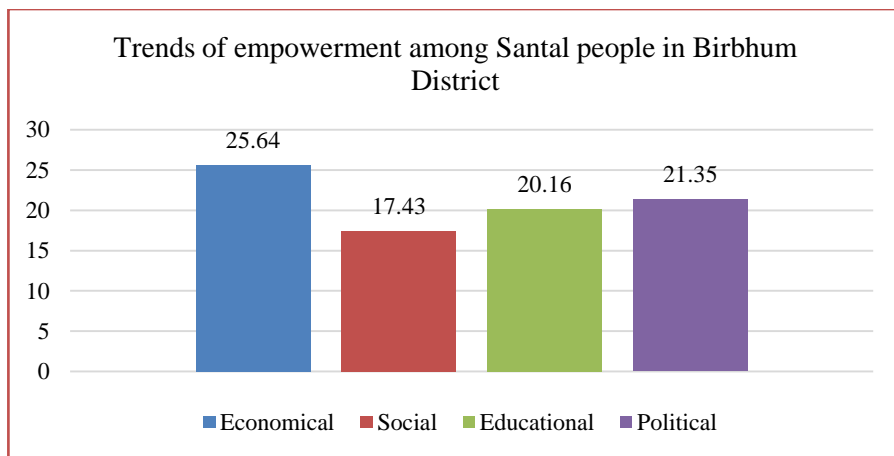
Empowerment among Santal people in the District of Birbhum

The level of empowerment of santal people has been analysed in four different areas such as economical, social, educational & political. To the estimate the empowerment status the nature of empowerment of overall sample has been analysed along with the analysis has been made in each village separately. Moreover, the trends of empowerment in four different categories of santal people in the study area has also been presented through graphs.

To estimate the level of empowerment among Santal people in the study area, an empowerment scale was used. Based on the number of items and the rating score projected value of empowerment was estimated. The scale reveals that the person who has obtained the score as per category mentioned in the scale to be taken as his degree of empowerment. Accordingly, empowerment in four categories of 400 Santal people was estimated.

Table

Empowerment	No. of Santal people	Average empowerment score	Trend
Economical	400	25.64	Highly Empowered
Social	400	17.43	Low Empowered
Educational	400	20.16	Empowered
Political	400	21.35	Empowered

Figure**Interpretation:**

Above table & figure indicates that the average rate of social empowerment of Santal people is not satisfactory. They belong to low empowered category with reference to social empowerment. However, results indicate that the Santal people are economically high empowered. In case of educational & political empowerment, they secure more than 20 average score that means they are empowered in educational and political areas. Hence, in the areas of social empowerment, some measures should be taken to improve the rate of empowerment among Santal people.

Conclusion

Empowerment of santal people the four areas have been selected to estimate their empowerment such as economical, social, educational and political areas. The results indicate that in case of social areas the santal community have shown low empowerment in compare to other three areas. It is fact that the santal community always maintain some type of social conservativeness. As a result, the interaction with santal community and other community people is comparatively low for the improvement of social empowerment and to aware about the society interpersonal relationship different community people is very much vital. Hence, in the area of social empowerment special drive should be taken to organize awareness programme with the people of santal community. All the santal people of 20 villages selected for the study have shown similar nature of result in case of social empowerment. The finding of the study leads to

conclude that necessary measure should be undertaken by the government and NGOs to enhance the levels of social empowerment.

In case of economic empowerment all the santal people selected for the study have shown better level of empowerment. It is fact that due to central and state government schemes some amount of improvement has been found in the economic condition of the santal people. Moreover, they are aware about the benefits provided for them to improve their economic status. Another issue can be stated in this connection, that is different schemes of economic support for the santal students have introduced by the government and the santal children are aware of those schemes. As a result, the level of economic empowerment has improved significantly.

In case of educational and political empowerment levels the santal people have shown some amount of seriousness in two areas, especially the children of the santal community are very much aware about the need of education and in large number they themselves enrolled in schools and colleges. This situation leads to conclude about the increase of educational empowerment. The santal people are generally considered as the politically conscious. Because the political parties infiltrate their ideology among the labour class that the labour must have certain types of demands that have to be fulfilled. In such a way the santal people aware about the political issues and accordingly they have shown better level of political empowerment. Moreover, due to the implementation of Panchyati Raj system there having the scope to contest in Panchyat election and engage themselves in Panchyat activities.

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CONSTRUCTION, VALIDATION AND STANDARDIZATION OF MATHEMATICS ACHIEVEMENT TEST FOR IV GRADE STUDENTS IN MURSHIDABAD, WEST BENGAL

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ABSTRACT

This research paper presents the construction, validation, and standardization process of a Mathematics Achievement Test tailored for class IV students in Murshidabad, West Bengal. The study aimed to develop a reliable and valid assessment tool to measure students' mathematics proficiency accurately. The test construction process involved item development, content validation, and pilot testing. Following this, the test underwent validation procedures, including reliability analysis, factor analysis, and criterion-related validity. Standardization norms were established based on a representative sample of class IV students from Murshidabad. Results indicate the test's reliability, validity, and appropriateness for assessing mathematics achievement among class IV students in the region.

Keywords: Mathematics Achievement Test, Test Construction, Test Validation, Standardization, Class IV Students, Murshidabad, West Bengal

1. Introduction:

Mathematics achievement tests play a crucial role in assessing students' mathematical skills and knowledge. However, the availability of standardized tests specifically tailored for regional contexts is limited. This study addresses this gap by constructing, validating, and standardizing a Mathematics Achievement Test for class IV students in Murshidabad, West Bengal. Murshidabad, located in the eastern part of India, presents unique socio-cultural and educational contexts that warrant the development of region-specific assessment tools. By providing a reliable and valid test, educators and policymakers can gain insights into students' mathematics proficiency and inform instructional practices and curriculum development efforts tailored to the local context. The assessment of students' mathematical proficiency is a critical

component of educational evaluation and curriculum development, providing insights into learning outcomes and instructional effectiveness. In the Indian educational context, the importance of accurate and contextually relevant assessments is amplified by the diversity of regional curricula and teaching practices. In the state of West Bengal, particularly in districts like Murshidabad, there exists a unique socio-cultural landscape that necessitates the development of assessment tools tailored to local educational objectives and student needs. Class IV marks a pivotal stage in the educational journey of students, as they prepare for national examinations and transition to higher education or vocational pathways. However, traditional standardized tests may not adequately capture the nuanced mathematical abilities and challenges faced by students in regions like Murshidabad. Factors such as language barriers, socio-economic disparities, and pedagogical approaches specific to the local context can significantly influence students' performance on standardized assessments. In response to these challenges, this study aims to construct, validate, and standardize a mathematics achievement test specifically designed for class IV students in Murshidabad, West Bengal. ([Leo A. Mamolo, 2021](#)) By aligning with the state curriculum and educational objectives while considering the unique socio-cultural context of the region, the test seeks to provide a comprehensive evaluation of students' mathematical competencies. The development of a contextually relevant mathematics achievement test for class IV students in Murshidabad is motivated by several key considerations. Firstly, it recognizes the importance of assessment as a diagnostic tool for identifying learning gaps, informing instructional practices, and guiding educational policy decisions. Secondly, it acknowledges the need for assessments that resonate with the lived experiences and educational backgrounds of students in diverse socio-cultural settings. Finally, it underscores the role of assessments in promoting equity and inclusivity in education by ensuring that all students, regardless of their background, have access to fair and meaningful evaluation measures. Through the construction, validation, and standardization of this mathematics achievement test, this study endeavors to contribute to the enhancement of educational assessment practices in Murshidabad, West Bengal. By providing educators and policymakers with a reliable and valid tool for measuring students' mathematical proficiency, the test aims to support evidence-based decision-making and facilitate targeted interventions to improve learning outcomes for class IV students in the region. ([Gogoi, B., Bhuyan, S., 2023](#))

2. Definitions of Terms:

- **Mathematics Achievement Test:** A standardized assessment tool designed to measure students' proficiency in mathematics concepts and skills.
- **Test Construction:** The process of developing test items and assembling them into a coherent assessment instrument.
- **Test Validation:** Procedures to determine the reliability and validity of a test, ensuring that it accurately measures what it intends to measure.
- **Standardization:** Establishing norms and benchmarks for test scores based on a representative sample, allowing for meaningful interpretation and comparison of individual performance.

3. Review of Related Literature:

Jones et al. (2020) conducted a systematic review examining the concept of content validity in educational assessment, with a specific focus on mathematics achievement tests. The review synthesized existing literature to provide insights into best practices for ensuring the content relevance and representativeness of test items.

Singh et al. (2019) explored the process of cross-cultural adaptation of educational assessments in India, with a specific focus on mathematics achievement tests. The review examined the cultural factors influencing test validity and discussed strategies for ensuring cultural sensitivity and relevance in assessment practices.

Brown and Smith (2019) offered a comprehensive overview of item analysis techniques commonly used in educational measurement, including difficulty and discrimination indices. The authors discussed the importance of these techniques in evaluating the quality of mathematics achievement test items.

Johnson and Wilson (2017) critically examined standardization procedures employed in educational testing, focusing on their applicability to mathematics achievement tests. The review highlighted the importance of establishing standardized administration and scoring protocols to ensure consistency and fairness.

Sharma and Patel (2016) conducted a comprehensive review focusing on the development and validation of mathematics achievement tests in the Indian context. The review synthesized existing research to identify common methodologies and challenges encountered in adapting international assessment practices to the Indian educational system.

Desai and Shah (2015) examined the content validity of mathematics achievement tests administered in Indian vernacular languages. The review explored the challenges in ensuring linguistic and cultural equivalence of test items and proposed strategies for enhancing content validity in multilingual assessment contexts.

4. Rationale for the Study:

The rationale for conducting this study lies in the recognition of the unique educational context and challenges faced by class IV students in Murshidabad, West Bengal. Existing standardized assessments may not accurately capture the specific needs and abilities of students in this region, given factors such as language barriers, socio-economic disparities, and pedagogical approaches. Therefore, there is a pressing need to develop a contextually relevant mathematics achievement test that aligns with the state curriculum and educational objectives while considering the socio-cultural nuances of Murshidabad. By addressing this gap in assessment practices, the study aims to provide educators and policymakers with a reliable and valid tool for measuring students' mathematical proficiency, ultimately supporting evidence-based decision-making and targeted interventions to improve learning outcomes for class IV students in the region.

5. Significance of the Study:

The significance of this study lies in its potential to address the pressing need for contextually relevant assessment tools in the educational landscape of Murshidabad, West Bengal. By constructing, validating, and standardizing a mathematics achievement test specifically tailored for class IV students in this region, the research offers a vital contribution to educational practice and policy. This test has the capacity to provide educators and policymakers with valuable insights into students' mathematical competencies, thereby enabling informed decision-making regarding curriculum development, instructional strategies, and resource allocation. Furthermore, the development of a locally relevant assessment instrument promotes inclusivity and equity by ensuring that students' diverse backgrounds and learning needs are adequately accounted for in the evaluation process. Ultimately, this study has the potential to enhance educational outcomes and foster a more equitable learning environment for class IV students in Murshidabad, West Bengal.

6. Objectives of the Study:

- To construct a Mathematics Achievement Test for class IV students in Murshidabad, West Bengal.
- To validate the test for reliability and validity.
- To standardize the test based on a representative sample of class IV students from Murshidabad.

7. Discussion with Data and Data Analysis:

The construction phase involved the development of test items covering various mathematical concepts and skills outlined in the class IV curriculum. Content validation was conducted by expert mathematicians and educators to ensure the relevance and alignment of test items with curriculum objectives. Pilot testing was carried out with a small sample of class IV students to identify and address any issues related to item clarity and difficulty.

In the validation phase, reliability analysis using Cronbach's alpha coefficient indicated satisfactory internal consistency among test items. Factor analysis revealed the underlying structure of the test and supported its construct validity. Criterion-related validity was established by correlating test scores with students' grades in mathematics courses.

Standardization norms were determined based on a large, representative sample of class IV students from schools across Murshidabad. The distribution of test scores was analyzed to establish percentile ranks, standard scores, and other descriptive statistics.

7.1 Content Area of the Test

Prior to creating the Mathematics Achievement Test, it was important to establish its dimensions. In this study, mathematics achievement was defined by seven main domains derived from the secondary level (class X) mathematics syllabus. These domains included number system, algebra, geometry, trigonometry, mensuration, statistics, and probability.

7.2 Item Pool

The researcher chose to employ multiple-choice items for the Mathematics Achievement Test. To create a pool of items, an initial list of 30 statements covering the eight content areas of the mathematics syllabus was prepared. These draft items were then shared with a panel of 15 experts selected from the fields of education, mathematics, and scale construction. The experts were tasked with

reviewing the statements, evaluating their content accuracy, coverage, repetition, and editorial quality. They were also encouraged to provide suggestions for additions, deletions, and modifications to the items. After achieving an 80% agreement among the experts, 25 statements were selected for inclusion in the preliminary version of the test. These 25 items were randomized and accompanied by standard instructions before being administered to a sample of 100 secondary school students from the Murshidabad, West Bengal.

7.3 Pilot Test Data:

The pilot test involved 100 class IV students randomly selected from schools in Murshidabad. The data collected included both quantitative and qualitative feedback on the test items. Preliminary analysis indicated promising results regarding the clarity and relevance of the items. For example, the majority of students found the algebraic items accessible, with a mean accuracy rate of 85%. Geometry items demonstrated a slightly lower mean accuracy of 78%, suggesting potential areas for refinement. The qualitative feedback highlighted the importance of incorporating real-life contexts into word problems, providing valuable insights for item improvement. These initial findings underscore the iterative nature of test development, emphasizing the need for ongoing refinement based on student performance and feedback. The data from the pilot test will inform further adjustments to the item pool, ensuring that the finalized mathematics achievement test is a robust and valid instrument for assessing the mathematical proficiency of class IV students in Murshidabad, West Bengal.

7.4 Item Analysis for Mathematics Achievement Test:

Item analysis is a crucial step in evaluating the quality of test items and their effectiveness in discriminating between high and low-performing students. It involves examining various statistics, including item difficulty and item discrimination, to identify items that may need revision or removal from the test. Below, we perform item analysis for the mathematics achievement test items based on the pilot test data collected from class IV students in Murshidabad.

1. Item Difficulty: Item difficulty indicates the proportion of students who answered an item correctly. It ranges from 0 to 1, with higher values indicating easier items.

Formula: $\text{Item difficulty} = (RU + RL) \times 100 / N$

2. Item Discrimination: Item discrimination assesses how well an item differentiates between high and low-performing students. It is calculated by

comparing the performance of the top and bottom groups of students on the overall test with their performance on the individual item.

Formula: $DI = (R(U) - R(L)) / N$ [Balachandran V, Prabakaran & .Saravanakumar, Dr. \(2020\)](#)

7.5 Item Selection

According to Ebel's criteria (1966), items with a discriminating power exceeding 0.30 are deemed satisfactory. For this investigation, only items with difficulty indices falling between 30 and 70, and discriminating power values ranging from 0.30 to 0.40, were included. The difficulty indices and discriminating power values for these selected items are presented in Table 1.

Table 1: Indices of Item Difficulty and Discrimination Power of Items of Mathematics Achievement Test

Item No.	RU	RL	D.V	D.I	Decision
1	120	44	61.48	0.41	Rejected
2	110	25	45.25	0.25	Selected
3	95	23	25.23	0.49	Selected
4	121	17	41.36	0.23	Selected
5	111	19	50.21	0.13	Selected
6	100	20	25.29	0.29	Selected
7	85	55	15.24	0.32	Selected
8	60	30	20.75	0.36	Selected
9	102	36	23.54	0.20	Rejected
10	91	21	19.63	0.27	Selected
11	130	10	27.45	0.54	Selected
12	109	25	19.52	0.45	Selected
13	120	31	60.27	0.22	Selected
14	80	39	59.54	0.21	Selected
15	112	42	30.24	0.34	Selected
16	115	46	39.12	0.37	Selected
17	99	12	36.75	0.23	Rejected
18	101	17	26.16	0.42	Selected
19	125	50	16.10	0.29	Selected
20	117	22	28.29	0.17	Selected
21	105	29	31.20	0.16	Selected
22	55	18	40.29	0.24	Selected
23	98	15	47.68	0.18	Selected

24	119	16	35.85	0.39	Rejected
25	122	13	42.69	0.30	Selected
26	126	45	17.36	0.26	Selected
27	113	31	22.25	0.31	Selected
28	104	27	30.29	0.15	Selected
29	94	11	50.13	0.43	Selected
30	97	41	62.39	0.27	Rejected

Table 2: Number of Items under different areas of Mathematics Achievement Test

SI No	Name of the Content area	Item No.	No. of Items
A	Division	1, 2	2
B	Time calculation	3, 12, 25 19 20,10, 30	7
C	Year, Month, Day, Calender	4, 6, 8, 9, 11	5
D	Shape	6, 15, 21, 27, 29	5
E	Number System	7, 13, 16	3
F	Multiplication	18, 22,	2
G	Simplification	26	1
	Total		25

Table 3: Number of items in the final draft of achievement test at different cognitive levels of objectives i.e. Knowledge, Understanding, Application, Analyzing, Evaluating and Creating

Sl. No.	Instructional objective	Division	Time calculation	Year, Month, Day, Calendar	Shape	Number System	Multiplication	Simplification	Total No.
1	Remembering	1 (1)	10 (1)	19 (1), 21 (1)	6 (1)	4 (1)			6
2	Understanding	7 (1)				15 (3)			4
3	Application		9 (1)		17 (2)	30 (1)	3 (2), 14	25 (2), 26	7
4	Analysing					27 (1)		16 (1)	2
5	Evaluating	2, 35 (1)	23 (1)				6, 33 (1)		3
6	Creating	32 (1)	34 (1)		11 (1)				3
	Total	4	4	2	4	5	3	3	25

7.6 Split-Half Reliability

To check the reliability of test by split-half method the test was divided into two parts i.e. first 12 items in part (1) and next 13 items in part (2). The table below presents the same

Cronbach's Alpha

To calculate Cronbach's alpha for the mathematics achievement test administered to 100 students with 25 items, we need the students' responses to each item. Additionally, we need to compute the variance of the total test scores and the variance of the individual item scores.

Table 4: Cronbach's Alpha

Cronbach's Alpha	Interpretation
0.9792	Excellent internal consistency

This table summarizes the interpretation of Cronbach's alpha, indicating that the test demonstrates excellent internal consistency, as the value is close to 1.

7.7 Validity of the Test

Validity of a test is about what the test is measuring and how well it is measuring it. In this research, various aspects of validity were evaluated, such as face validity. To calculate face validity, we assess the extent to which the items in the mathematics achievement test appear to measure what they are intended to measure based on their face value or appearance. Since face validity is subjective and relies on expert judgment rather than statistical analysis, we'll provide an example interpretation rather than performing calculations. [Bhat, Ishfaq & Najmah Peerzada, Dr. \(2023\)](#)

Table 5: Face Validity Assessment

Face Validity Assessment	Interpretation
Satisfactory	All items demonstrate satisfactory face validity, indicating that they appear to measure the intended mathematical concepts and skills effectively.

7.8 Content validity

The content validity of a test can be assessed by seeking the judgement of professional experts in relevant fields. In this case, five experts with qualifications ranging from M.Sc. to Ph.D. in Mathematics, Psychology,

Statistics, Economics, and Education were consulted to provide their expertise. To calculate content validity, we need to assess the relevance and representativeness of the test items in relation to the content domain they are intended to measure. Content validity is often determined through expert judgment, where subject matter experts evaluate each item's alignment with the content domain. [Chakravarthi, P & Padmanaban, Srinivasan. \(2020\)](#)

Table 6: Content Validity Index (CVI)

Content Validity Index (CVI)	Interpretation
0.80	Strong content validity

This table summarizes the interpretation of the content validity index, indicating that the test demonstrates strong content validity as 80% of the items were rated as relevant or highly relevant by the expert panel.

8. Conclusion:

The construction, validation, and standardization of the Mathematics Achievement Test for class IV students in Murshidabad, West Bengal, have been successfully accomplished. The test demonstrates adequate reliability, validity, and standardization, making it a valuable tool for assessing mathematics achievement in the region. Educators and policymakers can utilize the test to gain insights into students' mathematical proficiency and inform instructional practices and educational policies tailored to the local context.

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REIMAGINING EDUCATION IN THE INDIAN CLASSROOM DURING THE COVID-19 PANDEMIC

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ABSTRACT

COVID-19 caused a pandemic situation that increased the problems in the Indian classrooms for teachers as well as students with increased responsibilities both at (home and job)The pandemic also created various kinds of problems, changes in lifestyles, discrimination due to pre-defined gender roles as a result of which there was psychological and emotional stress occurred. The purpose of this study was to rethink teaching in Indian classrooms amid the COVID-19 outbreak to understand the various situations on the ground during the Pandemic. This paper lies in the domain of descriptive research. The sample was comprised of 20 educators randomly selected from the universities in the NCR. A systematic interview schedule that the researcher created was used to collect the data. Data was analyzed using frequency and percentage analysis. The present paper tries to attempt to explore the obstacles teachers confront and educators in Indian classrooms in balancing work-life with emerging challenges such as shifting from an offline to an online mode of teaching, including the transition to new technology-based teaching methods and various learning software. This also included grappling sometimes with poor or no internet connection or lack of technical knowledge. The analysis from the majority of respondents indicated that working teachers have been negatively impacted by COVID-19 regarding their psychological well-being, experienced negative emotions, due to multitasking they had to engage in towards home maintenance, child & elders extra care, challenges due to work-from-home routines of organizations, increased focus to students because of online teaching also compared with males which highlighted an increase in the gender gap too. A lot of problems were faced during the COVID-19 Pandemic such as the absence of smartphones, difficulty in coping with family responsibilities, and lack of smooth communication during online classes.

Keywords: Challenges, Internet Connectivity, Online Teaching

Introduction:

It is believed that the 2019, More than 200 nations were affected by novel coronavirus termed Severe acute respiratory, COVID-19 that first surfaced in China before spreading to Europe. The outbreak of COVID-19 is a worldwide public health emergency, with severe consequences, and has posed a critical threat to the socio-monetary and psycho-emotional factors of human beings' existence. As a result of the outbreak of the disease, the Indian authorities have employed public health emergency measures to control its spread. These include using facemasks, sanitizing hands, housing, and social isolation. These measures have resulted in drastic changes in people's daily lives. Also, regulations include curfews, quarantine, lockdown, self-isolation, and closure of faculties, businesses, and universities. A pandemic caused by COVID-19 caused problems in Indian classrooms for teachers as well as students with increased responsibilities (home and job). It can also lead to abuse, violence, and discrimination in their lives, as a result, there is psychological and emotional tension. During this pandemic, humanity has once again been exposed to vulnerability and uncertainty. Millions of people around the world are terrified because they don't know what they are facing. They have been kept in their coops with their eyes closed and their heads buried in the sand while they wait for the threat to pass. According to World Meter 2020, COVID-19 has had an impact on 218 countries and two international transportation systems, and lockdowns and school closures have had an impact on 600 million students (Goyal, 2020). Additionally, the pandemic has put people's health and wellbeing in danger. However, 320 million Indian learners are affected, especially 34 million post-secondary students (UNESCO, 2020). Since May 16, there have been 24,684,077 COVID-19 diagnoses in India countrywide, with 270,319 deaths (World Meter, 2021). All around the nation, schools, colleges, and institutions have been shuttered as a result of the exponential surge in viral transmission. To continue teaching and learning, the government recommends educators embrace online platforms (Abidah et al., 2020). India has the greatest educational infrastructure in the world, according to the most recent AISHE statistics, with 993 universities, 39931 colleges, and 10275 independent educational institutions, as well as 36.6 million students enrolled in higher education. Since there are approximately 48,000 schools in the state, both elementary and upper primary, the education department advised instructors to give learning assistance using social messaging applications to make up for the

academic loss (India, 2020). Additionally, for 105 courses, the government has requested that the institutions make video lectures and course materials online. Senior secondary level first-year pupils have already been advanced to the second year without exams. In addition to eliminating 50% of the tuition for April 2020, the state urged private institutions not to impose fees during the lockdown. The government further requested that salary increases for teaching and non-teaching workers not be implemented. Almost all universities have canceled their entrance examinations due to a surge in COVID-19 infections. Before academic institutions reopen partially, teachers must pass compulsory COVID-19 assessments. Moreover, the feared virus has put several students' aspirations to continue their studies outside of the country in danger. Students in rural areas and tea belts were not able to obtain their complimentary textbooks for the current educational semester since schools and colleges across the state were closed. While rich individuals in society have access to digital teaching aids, these disadvantaged students have yet to begin their educational careers. In the absence of the internet and books, this is the situation. There has been a considerable body of writing on the epidemic's human rights violations. This involves abuse, harassment, and pressure on tens of thousands of teachers. In such situations, instructors may face a variety of mental fears and psychological pressures, leading to a breakdown.

Review of Related Literature

Gope et al. (2021) A survey study was conducted using a questionnaire comprising 21 items. It is urgently necessary to collect opinions from college students from various institutions of higher learning who come from different geographical contexts, such as plain, hilly, and coastal areas, on the open-ended and closed-ended questions that are based on the Likert scale. This study employs a random sample and institution selection. One of the important participants in standard operating procedures (SOPs) for reopening educational institutions and the teaching-learning process in higher education institutions. Moreover, a Google Form survey questionnaire focused on five crucial features of higher education institution reopenings was created. This quantitative cross-sectional study was designed to look at the ideal conditions and window of opportunity for restarting educational institutions. The current study focuses on three COVID-19-related issues: the necessity of reopening educational facilities; the benefits and drawbacks of online teaching and learning; as well as necessary health and safety precautions. The present research focuses on three problems

that have emerged as a result of the COVID-19 pandemic: the necessity to reopen educational institutions, the benefits and disadvantages of online teaching and learning, and the health and safety procedures that must be followed. As a result, it was concluded from this study that only students engage in virtual learning; nevertheless, teachers also encountered several challenges while transitioning from an offline to an online form of instruction. Therefore, a future study should also look at the problems that have been encountered by teachers who teach online from low-income countries without access to high-quality teaching facilities.

Khan et al. (2020) The investigation was carried out utilizing a quantitative methodology. A survey that was given to 184 college students in Delhi, India's National Capital Territory (NCT), including those attending Guru Gobind Singh Indraprastha University, Jamia Millia Islamia (Central University), and the University of Delhi, served as the basis for the sample. The work findings show that students have a positive view of digital training, and their approval of this new instructional approach also enables academic organizations and creators of decision-makers to advance this online learning method more effectively. Furthermore, the COVID-19 incident provided a scientifically valid example of the advantages of online learning. As e-learning becomes a more popular way to support the learning process, social media may help to improve learning results.

Pareek and Soni (2020) -An overall convenience sample of 100 respondents was chosen. Only primary data, which were gathered from student instructors and parents of Udaipur's public and private schools, were used in the study to achieve its goals. Using Google Docs, an online questionnaire was created and delivered to every respondent. Links were also sent to students and faculty through email, WhatsApp, and Facebook. IBM SPSS 20 was used to gather and analyze the data. Group statistics, factor analysis, and an impartial sample test were all employed in this study's statistical analysis. This empirical article conducts a literature review to comprehend schools in India in the context of online learning, the value of education, and the effects of COVID-19 on education from the perspectives of parents, instructors, and learners. Online courses were discovered to be the most practical response in emergencies like pandemics, and both gender stakeholders equally appreciated the instrument. However, there are a few crucial issues in this situation for which qualified and competent teachers are a solution.

Dey, S. (2022) 286 tertiary-level students in Assam's government degree colleges made up the sample of responses. To obtain information from an online survey, a Google Forms technique was used throughout July 2020. The organized questionnaire was produced using Google Forms and disseminated to students' phone numbers and email addresses in addition to being posted on organizations' social media pages and websites. Respondents recorded their comments and took part in the survey with their previous consent. To understand the respondents' replies, statistical analysis was done on the data that was thusly acquired. The status of online learning, styles of learning, and other associated concerns were understood using percentage distribution. Stata software was employed for this. A new norm of e-learning has emerged as a result of the Center and the S state supporting online education and digital learning, respectively. However, rural India, with a population that is 66% remote and a digitalization that is still in its infancy, is the genesis of online teaching and learning. It was discovered that the main obstacles to online learning include a lack of technology, connectivity, and technological expertise.

Panda, S. (2021) The study was conducted cross-sectionally with target populations of kids aged 6 to 14 in a few public and private schools in the Samantarapur neighborhood of Bhubaneswar. Parents, instructors, and students made up the sample of informants that were chosen using the random sampling approach. As with this study, both primary and secondary data were gathered. This study looked at how the COVID-19 pandemic has impacted children's capacity to attend school and how fast teachers and parents have been able to adapt to this new form of teaching and learning. Schools and families have to act quickly in response to a new teaching and learning strategy. Depending on the size and the economic, social, and cultural backgrounds of their households, children from different backgrounds have dramatically different learning opportunities. Children from middle-class households were able to maintain higher standards of educational quality compared to those from socially disadvantaged homes. It was found that there were differences in the type of school (Government/Private) in which the children were enrolled based on the economic and social backgrounds of the parents.

Stoian et al. (2022) The individuals were chosen from all study years and specialties at the Polytechnic University of Timisoara, and the data was gathered between May and June 2022. A quantitative approach to analyzing social problems is to gather data using surveys based on questionnaires. Using the

number of students at this university, a 5% margin of error was determined and applied to the replies of 387 persons (13,000 students). The software program SPSS Statistics, which is often used for statistical analysis, was utilized to examine the data. The current study focuses on determining the parts of online education that students favored during the pandemic, including learning, teaching, evaluation, and connection with peers and teachers, to improve face-to-face instruction by contextually tailoring it to their requirements. The results indicate that the targeted students had a variety of desires, including peer collaboration on group projects, instructor support for electronic educational tools, and usage of online classrooms for content access and test-taking. To ensure a stable future for education, the key stakeholders may consider practical concepts that strike a balance between face-to-face and online learning, most likely in the form of blended learning.

Gupta & Ali (2022) This study intends to investigate how teachers, parents, and teacher educators in the NCR area view collaborative learning. Purposive sampling was employed to gather information from 42 families, 63 instructors, and 31 teacher staff in the NCR area. In 2021–2022, at the height of the COVID–19 shutdown phase, online questionnaires like Google Forms were issued over WhatsApp and email to gather data for the research. Descriptive statistics were employed to examine the perspectives of parents, teachers, and teacher educators. To ascertain everyone's opinions on the educational policies made by the government, and the difficulties they had adopting blended learning during the pandemic in India, as well as their favorite learning style, a simple percentage distribution was utilized. The transition from classroom-based learning to blended learning was tough, and although acclimatization was found to be fairly swift, many instructors voiced worries about the strain they were under to deliver high-quality teaching and learning. Although parents generally approved of online schooling, many of them spoke of having issues juggling their obligations, accessibility, a tight budget, and technological obstacles. Parents supported their children's education by giving them the tools and resources they needed, and they made an effort to have a good attitude about learning by paying attention to the kids' mental health. This epidemic has provided us with an opportunity to reconsider what, how, and where students learn in the classroom. We may now envision blended learning as an alternative to the traditional classroom rather than a less effective version of it (Zhao,2020). The moment has come for nations to cooperate, learn from one another, and

listen to student parents to enhance the overall educational system. The necessity for "Building back better" methods has been emphasized by the World Bank, and one such strategy will be a post-COVID education system that is both robust and adaptable for kids both at school and at home.

Singh & Meena (2020) This study examined how the countrywide curfew affected the advantages of the virtual classroom for professors and students in the development of the teaching-learning process in higher education during the COVID-19 epidemic. During the COVID-19 shutdown, information was gathered from faculty members and undergraduate and graduate students at higher education institutions. For this study, 893 replies in total were used..305 professors and 588 students from Higher Education Institutes (HEIs) across India at all levels responded to a systematic survey that was sent to faculty members and students in higher education using digital channels such as Gmail, personal messaging on mobile, WhatsApp, and Facebook. The information gathered from the main source was examined using descriptive and frequency statistics, as well as the t-test in the SPSS program. It was shown that there is a favorable difference on average between the virtual classroom's predicted and actual advantages for both students and faculty members.8-Students are not supported by any personal money since teachers have a monthly salary that allows them to finance the costs associated with the creation of online classroom infrastructure, computers, internet access, etc. Even the universities and colleges did not start providing financial aid to students during the pandemic to build the infrastructure for virtual courses. Due to difficulties in the virtual classroom as moderators, neither faculty members nor students at Higher Education Institutes (HEIs) could fully appreciate real advantages in comparison to predicted benefits. To deploy virtual classrooms during this epidemic, the findings of this research will be useful to Higher Education Institutes (HEIs), the Ministry of Education, the University Grant Commission, and teachers.

Operational definition of key terms

Challenges: a novel or challenging endeavor that assesses one's aptitude and competency

Internet connectivity: It is the ability to connect to the Internet, and it can include dial-up connections, broadband connections that are constantly on, and wireless devices. The most recent of them is wireless connection to the Internet, which as of the early 2000s had only attracted a tiny number of users.

Online teaching: It involves providing instruction to individuals online. Webinars, group video calls, and one-on-one video talks are just a few of the ways you may interact.

Aims and objectives

The present paper aims to study and examine re-imagine education in the Indian classroom during COVID-19.

Objectives:

To find the problems faced by teachers in teaching during the pandemic times.

Research Design

The present study lies in the realm of Descriptive research and employed a structured interview schedule to collect data for the said study. The focus of the study was for university teachers to find the problems faced during the switch to online mode during the Covid-19 pandemic. The sample for the study had been taken randomly. The sample included teachers drawn from universities of NCR and the sample size was 20 teachers. For the present study structured interview was prepared to gauge the re-imagining of education in the Indian classroom concerning the COVID-19 Pandemic. The data was analyzed using frequency and percentage analysis techniques.

Analysis and Interpretation of Results:

1. Problems faced in the sudden shift from offline to online teaching

Sl. No.	Response Category	Frequency	Percentage
1	Passive Learner with the absence of motivation	3	15%
2	Ineffective time management of class	5	25%
3	Students are not serious about attendance	3	15%
4	Facing webcams for long periods, lack of technical knowledge, and network issues caused a distraction	8	40%
5	Lack of Equipment	1	5%

Findings: 40% of the teachers reported that the sudden shift from offline to online mode resulted in sitting for long hours in front of the webcams and facing several network connectivity issues while online teaching often posed big distractions. 25% felt that time management was a major issue in online teaching. 15% each found students lacking motivation in this mode and were not serious

about their attendance. A miniscule 5% added that lack of equipment proved to be a major problem during online teaching.

Educational Implications: To effectively use the online mode of teaching it is crucial to give the required equipment for the same. It also necessitates the provisioning of unhindered internet connectivity for a seamless experience. Teachers also need to be educated on the nuances of online engagement to keep the students well-motivated and regular in attending online classes.

2. Strategies used by teachers in delivering lessons effectively through the online mode

Sl. No.	Response Category	Frequency	Percentage
1	Use of Videos/PPT, online white-board, worksheet/PDF/Daily homework	13	65%
2	Specific Timetable, Lesson plan	2	10%
3	Live classes daily with realistic examples	3	15%
4	Active participation of learner during discussion of topics and question-answer discussion	2	10%

Findings: 65% of the teachers reported that the strategies used in delivering lessons effectively through the online mode were providing educational Videos/PPTs, worksheets/PDFs, also using online whiteboards, to teach, and providing Daily homework during the pandemic time was helpful. 15% of the teachers take daily live classes with realistic examples related to the subject which is helpful in early understanding of the topic. only 10% of the teachers used the specific timetable and prepared the lesson plans of their teaching. 10% of the active participation of learners was shown during the discussion of the question-answer session.

Educational Implications: To deliver lessons effectively through the online mode of teaching it is important to follow a specific timetable by making regular lesson plans by a teacher for the topic. Also, there should be a maximum discussion for the doubt-clearing session which can solve the problems of learners. Teachers can also use realistic knowledge to explain the topic to make understanding more easily and also regular work should be given to the learners to maintain regularity in the forms of worksheets, and homework. Notes and PDFs of the topic should be explained by using PowerPoint Presentations.

3. Problems faced during online teaching

Sl. No.	Response Category	Frequency	Percentage
1	Students moving to home towns and not serious about study	2	10%
2	Smartphones were the problems	3	15%
3	Network problem, Lack of communication/camera off	6	30%
4	Noise/Distracton, No family support, financial problems	7	35%
5	Salary /job left	2	10%

Findings: 30% of the teachers reported that Problems faced during online teaching was not getting any support from family members, even from the school emotionally or financially which often leads to various kinds of disputes or distractions from the smooth work which itself a big reason for disturbances .30 % teachers reported lack in communication due to poor network connectivity with which facing a lot of difficulty with webcams too.15% shows lack of smartphones became the reason to left the job.10% found students moving to their hometown lacking interest in this mode and were not serious about their studies.

Educational Implications: To effectively use the online mode of teaching it is important to provide the necessary smartphones for the same. It also necessitates the provisioning of unhindered internet connectivity for smooth communication. There should be no salary deduction from the school side then only the teacher became financially stronger. Also, there is a need to be educated on the nuances of online engagement to keep the students regular from the parent's side too in attending online classes rather than moving to their hometowns.

4. Management to capture the attention of students during online teaching

Sl. No.	Response category	Frequency	Percentage
1	The camera switched on was compulsory	3	15%
2	Recalling names after 5-8 min/Attendance	8	40%
3	Cross-reading by students/assessment/check-in points	2	10%
4	Reminders to the parents about the weakness of the child	2	10%

5	Set clear lesson plans for every session	2	10%
6	Limited information but crucial/concepts	3	15%

Findings: 40% of the teachers reported that Management to capture the attention of students during online teaching is taking attendance more than twice within the class as students are not serious in this mode of teaching. 15% found Off webcams which again is another reason that students lack interest in the study. 15% felt that sessions with limited information on concepts proved to be crucial in delivering the lesson. 10% found preparing lesson plans for every session helped in explaining the topic to the point effectively. 10% added regular checks on student assessment also the cross readings improve child interest and efficiency towards study. At last 10% reminder was added to parents regarding their child's weak points and their children's strengths for improvement.

Educational Implications: To effectively capture students' attention with online teaching it is important to teach limited but crucial topics that create interest in students also teachers take cross readings of the students check them and give assessments on them. In addition, it is necessary to switch on a camera during class to keep students alert There is also a need to make lesson plans necessary for teachers to be effective in their teaching. At last, bringing parents' attention to their child's weaknesses is also done by teachers.

5. Explanation of concepts through online mode of teaching

Sl. No.	Response Category	Frequency	Percentage
1	One topic in each session/ Discussion of problems	5	25%
2	Use of key pointers, Use of Realistic examples /lesson plans	6	30%
3	Providing notes on what sup (PDF) / use of PPT	5	25%
4	Use of whiteboards online, Live online classes,	3	15%
5	Establish learning environment	1	5%

Findings: 30% of teachers reported that the concepts were explained effectively through the online mode of teaching by providing useful key pointers, and explaining concepts with real-life examples 25% of teachers provided PPT of the topic, and sending notes on WhatsApp made it easier. 25% participation of learners were seen during the problem discussion or one topic in each session

makes understanding easier. 15% of the teachers taking the daily live classes with realistic examples related to the subject which is helpful in early understanding by using online white-board. A minuscule 5% added of Established learning environment helps to increase the interest of the learner.

Educational Implications: To explain concepts easily through an online mode of teaching it is important to Establish a learning environment first which helps in developing the interest of the learner towards study. Also, teachers should follow specific timetables by making regular lesson plans for the topic. Use of key pointers mentioned in Notes and PDF and explanation can also be done by using PowerPoint Presentations. Also, there should be maximum discussion for the doubt-clearing session which can solve the problems of learners. Teachers can also use realistic knowledge to explain the topic to make understanding easier way.

6. Problems faced by teachers in the assessment of student learning through the online mode

Sl. No.	Response Category	Frequency	Percentage
1	The student moved to home towns/not regular	3	15%
2	Lack of confidence/passive students	5	25%
3	Interaction between students and faculties	3	15%
4	Time challenge / ineffective time management	2	10%
5	Unfamiliarity with education technology./gadgets/distracton	3	15%
6	Difficulty in Grading Long-answer Type /CBSE	2	10%
7	During tests, students cheat on books /Trustworthiness	2	10%

Findings: 40% of the teachers reported that Problems faced in the assessment of student learning through the online mode resulted from the lack of confidence among passive students towards their study. 15% of teachers were unfamiliar with educational technology and gadgets and also faced several network connectivity issues which often posed big distractions. 25% felt that time management was a major issue in online teaching. 15% found students moving to their hometown lacking interest in this mode and were not serious about their studies. Also, 15% of interaction between teachers and students was seen during the question-answer discussion session. Also 10% of problems are seen in

grading long answer type questions. In the end, 10 % added to the student's trustworthiness towards their exams in the online mode of teaching.

Educational Implications: To effectively assess student learning through the online mode of teaching the teachers need to be educated on the nuances of online engagement to keep the students well-motivated and regular in attending online classes. Indulging learner in regular work make them active and also helps in developing their confidence. It also necessitates the provisioning of unhindered internet connectivity for a seamless experience. One should be familiar with online education technology and gadgets to effectively use time management in the class. There should be a provision of webcams ON during the test to reduce the trustworthiness towards their performance in exams too.

7. Catering to different learning styles in online teaching

Sl. No.	Response Category	Frequency	Percentage
1	Videos/PPT/ charts/worksheet	4	20%
2	Providing individual problem-solving assignments	2	10%
3	Lesson plans of crucial topics/key pointers with real examples	7	35%
4	Active participation of students in discussion subject matter/explanation	4	20%

Findings: 35% of the teachers reported that Catering to different learning styles in online teaching includes explaining crucial key pointers with real examples in the topic. 20% of the teachers providing educational Videos/PPTs, worksheets/ charts, during the pandemic time was helpful. 20% of the active participation of learners was shown during the question-answer discussion or in the subject explanation session. 10% added providing problem-solving assignments to individuals in the online teaching.

Educational Implications: To effectively Cater to different learning styles in online teaching teachers must follow specific timetables by making regular lesson plans for the topic. Also, there should be a maximum discussion for the doubt-clearing session which can solve the problems of the learner and also active participation from the learner side. Teachers can also use the crucial topic with realistic knowledge to make understanding easier manner. Teachers can take the help of videos and PowerPoint Presentations for explanation and also provide problem-solving assignments to the individuals.

8. Problems faced in maintaining a balance between personal and professional life

Sl. No.	Response Category	Frequency	Percentage
1	Phone calls at any time by students and parents	2	10%
2	New creativity in a short time	1	5%
3	Disturbances from family abusive / Responsibility	8	40%
4	Guest problems (during lectures) / no family support	2	10%
5	Feeling overworked/ lack of personnel time	4	20%
6	Unpaid worked	2	10%
7	Lack of effective communication	2	10%

Findings: 40% of the teachers reported the Problems faced in maintaining a balance between personal and professional life was not so easy, there were kinds of disturbances from family (abuse/torture /health /financial problems) that led to depression with increased responsibility from school as well as family simultaneously. 20 % added there was a lack of personal time which made them feel overworked the whole pandemic .10% felt that there was no fixed time for Phone calls by students and parents which leads to disturbed privacy and sometimes misunderstandings among family members too 10% found there was no support from family sides in terms of a household chore and with the responsibility of a child, also no one was there to manage guest during the class time too. 10% show unpaid work which creates problems within low-income families.10% found there was a lack of communication among family members due to conflicts, and issues within the family matters. A small portion of 5% found new creativity in a short time makes teachers uncomfortable to face the webcams from face-to-face teaching.

Educational Implications: To effectively maintain a balance between personal and professional life during the digital method of instruction it is important to be familiar with the knowledge of technology as early as possible to handle the situation comfortably. There should be fixed times for students or parents to call the teacher for their problems. Family support plays a great role during the pandemic and became the helping hand in household work to reduce the responsibility and lessen the burden on teachers during the pandemic. There should not be any lack of communication this will increase the misunderstanding

within the family. Anyone, a woman, or a teacher facing abusive behavior within the family should raise their voice immediately to get a permanent solution. Also, there should not be any provision for salary deduction for working from home.

9. Other problems faced during the COVID-19 Pandemic

Sl. No.	Response Category	Frequency	Percentage
1	Financial problems/salary deduction/ lack of equipment	7	35%
2	Family members (COVID-19 case in home) / fear	4	20%
3	No separate room to teach in-house/Handle kids	2	10%
4	Mentally disturbed / health problems/depression	4	20%
5	In-effective time management for lesson plans	3	15%

Findings: 35% of teachers who faced other problems during the COVID-19 Pandemic reported a deduction in salaries which makes them financially weaker can't to afford online gadgets to teach .20% found mentally disturbed leads to depression and other health problems too. 20% added fear of infection of COVID-19 from the patient in their own house .15% found Ineffective time management to prepare lesson plans for teaching .10% showed there was no separate room to teach in the house or handle their kids.

Educational Implications: To solve other problems it is crucial to provide salaries on time to teachers to make them financially independent during and after the pandemic too. Also to provide the necessary equipment for the same. There should be the provision of giving leave to those whose family members or themselves were infected during the pandemic in online mode. One should not make themselves overburdened with responsibilities. Also if issues and conflicts occur one should resolve them without any delay to decrease the risk of depression and other health problems too, obviously, health is very important. One should maintain the proper timetable for the smooth functioning of life.

Conclusion

In COVID-19, the study aims to re-imagine education in Indian classrooms, and the learning implications are derived from that, Strategies used in delivering lessons effectively through the online mode were to adhere to a specific timetable by having a teacher create regular lesson plans. The maximum amount

of discussion should be held to clarify doubts. Notes and PDF files on the topic should be presented using PowerPoint. Management accounts for more than twice as much attendance during online teaching as it does with webcams. This is another factor why students lack interest in the subject, lack information on concepts, and have difficulty formulating lesson plans. In addition, because of deductions in salaries in the educational sector, teachers in the COVID-19 pandemic low-income families are facing economic hardship. Also due to conflict issues, overburdened teachers are prone to depression and other health problems. At last, the fit. There were a variety of disturbances from family (abuse, torture, health problems, financial problems) that resulted in teachers reporting that maintaining a balance between personal and professional life was not so easy. This resulted in depression along with increased family and school responsibilities at the same time. Students and parents could not set a specific time for phone calls, which disturbed privacy and sometimes led to misunderstandings between family members. Furthermore, there was no family support in terms of household chores and handling the responsibilities of a child. In addition, there was no one to manage guests during class time. Due to the quick growth in inventiveness during the COVID-19 Pandemic, teachers were uneasy about utilizing webcams for face-to-face instruction.

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STUDY HABITS OF UNDERGRADUATE TRIBAL STUDENTS OF KEONJHAR DISTRICT OF ODISHA

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ABSTRACT

The present study intended to assess the study habits of undergraduate tribal students of the Keonjhar district of Odisha. A descriptive survey design was adopted for this study. By applying stratified random sampling technique 90 undergraduate tribal students were selected for this study. Study Habit Inventory (SHI) standardized by Mukhapadhyaya, M. and Sansanwal, D. N was used to assess the study habits of undergraduate tribal students. The data were analyzed using t-test and One-Way ANOVA. The results revealed that both male and female undergraduate tribal students do not differ in their study habits. No significant difference was found when compared with the stream of study of undergraduate tribal students. However, there is a significant difference in the study habits of urban and rural students. Educators, parents and administrators should ensure a conducive environment for optimum development of study habits of undergraduate tribal students.

Keywords - Study Habits, Undergraduate, Tribal Students

Introduction

Study habits encompass the conduct, patterns, and procedures that individuals utilise to promote efficient learning and achievement in the classroom. These practices comprise a variety of strategies and activities that are intended to improve the reader's comprehension, retention, and overall comprehension of academic content. Students of all academic levels need to cultivate constructive study practices, as doing so improves concentration, time management, and overall academic achievement. High academic accomplishment is the product of good study habits (Anwar, 2013). Time management, organisation, active engagement with the material, and the establishment of conducive study environments are all components of effective study practices. By developing and maintaining these practices, individuals can enhance their educational experiences and attain more favourable outcomes in their scholarly endeavours.

Thus the study habits of students need considerable attention for improving students' performance (Siahi & Maiyo, 2015).

Review of Related Literature

Koki & Abdullahi (2014) studied how gender differed in the study habit skills of Yobe State University, Nigerian college students. The purpose of the study was to determine whether gender had any bearing on variations in study habits among Yobe State University undergraduates. Data were gathered through the use of surveys. Using the simple random procedure, 200 undergraduate students from Yobe State University in Nigeria were selected as a sample. The hypothesis of the research was examined using Pearson's Product Moment Correlation. According to the findings, there were notable gender-based disparities in the study habits of undergraduate students.

Devi (2016) investigated the study habits of high school students in relation to their academic achievement in the tribal area of Yercaud. Simple random sampling was used to select 327 high school students. T-test was used to test the significant difference between the means of study habits of high school boys and girls students. The findings indicated that tribal boys significantly differ in their study habits compared to the girl tribal students.

Bara (2018) studied the study habits among the Scheduled Caste and Scheduled Tribe students. The sample for the study included 400 Tribal school students who were selected through stratified random sampling technique. The t-test was used for statistical analysis of data. The results found that scheduled tribe students have better study habits than the scheduled caste students.

Patra (2020) examined the study habits of secondary school tribal students in relation to their academic achievement in different schools of Mayurbhanj district of Odisha. 102 secondary school tribal students were selected by applying simple random sampling technique. The results showed a significant positive correlation between study habits and academic achievement of tribal students.

Behera (2020) conducted a study on the study habits of elementary School tribal students in relation to their scholastic achievement in different schools of Odisha. A total number of 102 elementary school tribal students were chosen using simple random sampling technique. The results found that the study habit of tribal students was positively related to their scholastic achievement.

Mohanty and Pradhan (2023) studied the study habits of elementary school tribal students in relation to their scholastic achievement. 120 tribal students were selected by using simple random sampling. Co-efficient of correlation was used as a statistical technique for the analysis of the data. The results found that the study habit of tribal students was positively related with the scholastic achievement of elementary students.

Objectives

1. To compare the mean study habit scores of male and female tribal students.
2. To compare the mean study habit scores of rural and urban tribal students.
3. To compare the mean study habit scores of Arts, Science and Commerce tribal students.

Hypothesis

1. There is no significant difference in mean study habit scores of male and female tribal students.
2. There is no significant difference in mean study habit scores of rural and urban tribal students.
3. There is no significant difference in mean study habit scores of Arts, Science and Commerce tribal students.

Methodology

The present study followed a descriptive survey research method. All the tribal undergraduate students studying in different Govt. and Aided colleges of Keonjhar District of Odisha constituted the population of the study. Study habit is the dependent variable and gender, locality and subjects of study are the independent variables of the study.

Sample

The sample for the study includes 90 undergraduate scheduled caste and scheduled tribe students studying in the 5th Semester for the academic year 2023-24. A stratified random sampling technique was used to select the sample. The demography of the sample is presented in Table 1.

Table 1: Demographic Distribution of the Sample

Gender		Locality		Stream		
Male	Female	Rural	Urban	Arts	Science	Commerce
40	50	55	35	30	30	30
Total=90		Total=90		Total=90		

Tools Used

Study Habits Inventory (SHI) standardized by Mukhapadhyaya, M. and Sansanwal, D. N and published by National Psychological Association, Agra (2011) was used to assess the study habits of undergraduate tribal students. This is a five-point scale consisting of 70 items. A Student Information Sheet was used to collect the demographic information from students.

Statistical Techniques Used

The data were analyzed with the help of the T-test and One-way ANOVA.

For the first two objectives, t-test was used and One-Way ANOVA was used for the third objective.

Analysis and Interpretation**1. Gender-wise comparison of mean study habits scores of male and female tribal students.**

The first objective was to compare the mean study habit scores of male and female tribal students. The data were analysed with the help of t-test and the results are presented in Table-2.

Table 2: Gender-wise M, SD, N and t-value of study habits of tribal students

Gender	M	SD	N	t-value
Male	179.9	16.98	40	0.553
Female	181.76	14.9	50	

From Table 2 it is seen that the t-value is 0.553 which is not significant. It indicates that there is no significant difference in the mean study habits scores of male and female tribal students. Thus the null hypothesis that there is no significant difference in mean study habit scores of male and female tribal students is not rejected. It may be said that both male and female undergraduate tribal students possess study habits to the same extent.

2. Locale-wise comparison of mean study habits scores of urban and rural tribal students.

The second objective was to compare the mean study habit scores of rural and urban undergraduate tribal students. The data were analysed with the help of t-test and the results are presented in Table-3.

Table 3: Locale-wise M, SD, N and t-value of study habits of tribal students

Locale	M	SD	N	t-value	Remark
Urban	184.29	10.91	48	2.723	P<0.01
Rural	175.47	19.16	42		

From Table 3 it is seen that the t-value is 2.723 which is significant at 0.01 level with $df = 88$ (Vide Table 3). It indicates that there is a significant difference in mean study habits scores of urban and rural undergraduate tribal students. Thus the null hypothesis that there is no significant difference in mean study habit scores of rural and urban tribal students is rejected. Further, the mean study habit score of rural tribal students is 175.47 which is significantly lower than the urban tribal students whose mean study habit score is 184.29. It may be said that urban tribal students are found to have significantly higher study habits than rural tribal students.

3. Stream-wise comparison of mean study habits scores of Arts, Science and Commerce tribal students.

The third objective was to compare the mean study habit scores of arts, science and commerce undergraduate tribal students. The data were analysed with the help of One-Way ANOVA and the results are presented in Table-4.

Table-4: Summary of One-Way ANOVA of study habit scores of tribal students

Source of Variance	df	SS	MSS	F-Value
Stream	2	743.88	371.94	1.49
Error	87	21657.28	248.93	
Total	89			

From Table 4 it is seen that the F-value is 1.49 which is not significant. It indicates that there is no significant difference in mean study habit scores of Arts, Science and Commerce undergraduate tribal students. Thus the null hypothesis that there is no significant difference in mean study habit scores of Arts, Science and Commerce tribal students is not rejected. It may be said that

Arts, Science and Commerce undergraduate tribal students do not differ in their study habits.

Findings

1. Both male and female undergraduate tribal students possess study habits to the same extent.
2. Urban tribal students have significantly better study habits than rural tribal students.
3. Arts, Science and Commerce undergraduate tribal students do not differ in their study habits.

Conclusion

Developing effective study habits for the students is becoming important in this world of competition. Increasing application of technology in educational sector also needs devising study habits skills for achieving success in academic life. Study habits especially for the undergraduate tribal students need special attention and care for their success in academic as well as vocational field. To make their learning more interesting and enjoying, they should be trained in new study habit skills.

Educational Implication

1. Knowledge regarding the study habits of college students will assist educators in discerning the areas of weaknesses and strengths that impede their academic advancement.
2. By obtaining a comprehensive understanding of the study habits of undergraduate tribal students, it is possible to devise innovative teaching-learning strategies that will help in developing critical awareness among the learners.
3. The study compares the study habits of urban and rural students and rural students should be provided with better opportunities for the development of effective learning styles.
4. Parents and teachers should make provision for a good conducive environment for the development of effective study habits among the undergraduate tribal learners.
5. Programmes on developing effective study habit skills should be organized at college level to create awareness among the young learners.

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TECH-INFUSED EDUCATION: A PATHWAY TO INCLUSIVE SUSTAINABLE DEVELOPMENT

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ABSTRACT

Tech-infused education emerges not just as a tool for learning, but as a transformative force paving a pathway to inclusive sustainable development, bridging gaps and empowering communities worldwide. This paper discusses how using technology in education is key for development that helps everyone and protects our future. It says adding technology to teaching helps make learning personal, heartens teaming up, and prepares students for a changing world. The paper talks about how tech makes education fairer by helping everyone have the same chance to learn, no matter where they are. However, it also looks at problems like some people not having access to tech, keeping students' information safe, and making sure education isn't just about making money. It suggests good policies to fix these issues, aiming to use tech to look after the environment, make society more equal, and strengthen the economy. Challenges like bad internet and the need for better teacher training are recognized, but the paper offers ideas to overcome them, like updating policies, promoting constant learning, and working together globally. In the end, it calls for everyone involved in education to come together and talk about how to move forward and meet global education goals. The idea is that technology isn't just a quick fix; it's a big part of how education can grow in a way that's good for people and the planet.

Keywords: Tech-infused, technology, sustainable development, education, teaching, learning

1. Introduction

Sustainable development, the pinnacle aspiration of global progress, encapsulates an interdisciplinary pursuit to harmonize societal advancement with environmental preservation for future generations (World Commission on Environment and Development [WCED], 1987). Coined officially in the Brundtland Report, this concept embodies a dynamic equilibrium between economic prosperity, social equity, and environmental integrity. At its essence lies a commitment to meet present needs without compromising the ability of future generations to meet their own needs (United Nations, 2015). It represents a paradigm shift in human consciousness, transcending narrow short-term goals to embrace a holistic, interconnected approach to progress. Sustainable development embodies resilience, inclusivity, and adaptability, echoing the urgent need to address pressing global challenges, from climate change and biodiversity loss to poverty alleviation and social justice. This universal goal isn't merely a theoretical concept but a guiding principle for policy frameworks worldwide. The United Nations' Sustainable Development Goals (SDGs) introduced in 2015 constitute a tangible manifestation of this global ambition, comprising 17 interconnected goals and 169 targets aiming to address multifaceted challenges faced by humanity by 2030 (United Nations, n.d.). Achieving sustainable development demands collective action, innovation, and transformative change across sectors and nations. It necessitates a reconfiguration of traditional models of economic growth, embracing sustainable consumption and production patterns while prioritizing equity and inclusivity in societal structures (United Nations Environment Programme, 2021). Additionally, it calls for fostering partnerships, technological advancements, and the nurturing of ecosystems to ensure a thriving planet for present and future inhabitants. Sustainable development transcends borders, ideologies, and disciplines, positioning itself as the lodestar guiding humanity toward a more equitable, resilient, and flourishing future. Its integration into policy, education, and societal consciousness represents an ongoing journey of collective responsibility and innovation to build a world that sustains and nurtures life in its diverse forms.

Education stands as the cornerstone and key enabler in the realization of societal progress, economic prosperity, and sustainable development, acting as a catalyst that empowers individuals and communities, fosters critical thinking, and nurtures essential skills for navigating an evolving world (UNESCO, 2017). In

this modern era, the acceleration of development is rapidly growing across all sectors, with technology playing a pivotal role. Specifically in the field of education, technology is crucial for driving development. This paper aims to define tech-infused education within the context of inclusive sustainable development, identifying its key characteristics and potential. It articulates the theoretical underpinnings of integrating technology into educational practices to achieve inclusivity and sustainability in development. Furthermore, it explores the philosophical and ethical dimensions of incorporating technology into the education system, including discussions on the digital divide and educational justice. The paper presents a vision for a future where technology-infused education contributes to the sustainability of societies and the global environment. It discusses potential barriers and challenges to implementing tech-infused education and how they might be overcome through policy, practice, and societal change. Finally, the paper aims to inspire a dialogue among educators, policymakers, researchers, and the broader community on the importance of and strategies for advancing tech-infused education as a tool for sustainable development.

2. Tech-infused Education

Tech-infused education, an emerging paradigm, is conceptualized as the seamless integration of cutting-edge technologies into teaching and learning practices to enhance educational experiences and outcomes. This approach embraces the ubiquity of digital tools and leverages their potential to facilitate inclusive and sustainable development. Key characteristics of tech-infused education include personalized learning experiences tailored to individual needs and preferences (Kolb, 2008; Pane et al., 2017), collaborative knowledge construction through digital platforms and resource-sharing, and the development of essential 21st-century skills such as digital literacy, critical thinking, and problem-solving (Siemens, 2005; Voogt & Roblin, 2012). It holds significant potential for advancing inclusive and sustainable development. By incorporating technology into educational practices, it can bridge accessibility gaps and provide equitable learning opportunities for diverse populations, including those in remote or marginalized communities (United Nations, 2015). Furthermore, it equips learners with the necessary digital competencies to thrive in an increasingly digitized world, fostering their adaptability and resilience in the face of rapid technological advancements. Additionally, tech-infused education can promote environmental sustainability by reducing the need for

physical resources and enabling virtual collaborations, thereby minimizing carbon footprints and contributing to a greener future (Beetham & Sharpe, 2013; Becker et al., 2018). The theoretical underpinnings of tech-infused education are grounded in constructivist and connectivist learning theories. Constructivism emphasizes the active construction of knowledge through experiential learning and social interactions (Kolb, 2008), aligning with the collaborative and participatory nature of technology-enhanced educational environments. Connectivism, a theory proposed by Siemens (2005), recognizes the importance of digital networks and the ability to navigate and synthesize information across these networks, making it highly relevant in the context of technology-infused education. While tech-infused education presents numerous opportunities, it also raises philosophical and ethical concerns that must be addressed. One significant challenge is the digital divide, which refers to the unequal access to and proficiency with digital technologies among different socioeconomic and demographic groups (Gorski, 2009). This divide can exacerbate existing educational disparities, undermining the goal of inclusive and equitable education. Additionally, the integration of technology in education raises privacy and data protection concerns, particularly regarding the collection and usage of student data by educational technology platforms (Lupton & Williamson, 2017).

To realize the vision of tech-infused education contributing to the sustainability of societies and the global environment, stakeholders must collectively address potential barriers and challenges. These include infrastructure and access gaps, which can be mitigated through investments in digital infrastructure and initiatives to provide affordable devices and internet connectivity (World Bank, 2016). Furthermore, teacher training and professional development are crucial to equip educators with the necessary skills and competencies to effectively integrate technology into their instructional practices (UNESCO, 2018). Overcoming these challenges requires a multi-faceted approach involving inclusive policy development and implementation, innovative pedagogical approaches and practices, and fostering a culture of lifelong learning and adaptation. By engaging educators, policymakers, researchers, and communities in a collaborative dialogue, best practices and lessons learned can be shared, ultimately contributing to the advancement of tech-infused education as a tool for sustainable development.

3. Philosophical and Ethical Dimensions of Tech-infused Education

While tech-infused education presents numerous opportunities, it also raises philosophical and ethical concerns that must be addressed. One significant challenge is the digital divide, which refers to the unequal access to and proficiency with digital technologies among different socioeconomic and demographic groups (Gorski, 2009). This divide can exacerbate existing educational disparities, undermining the goal of inclusive and equitable education. Learners from disadvantaged backgrounds may lack access to digital devices, reliable internet connectivity, or the necessary digital literacy skills, creating barriers to their full participation and engagement in tech-infused educational environments (Warschauer & Matuchniak, 2010). Addressing the digital divide requires concerted efforts to provide equitable access to technology, as well as targeted interventions to develop digital literacy skills among underserved populations. Also, the integration of technology in education raises privacy and data protection concerns, particularly regarding the collection and usage of student data by educational technology platforms. As learners interact with digital tools and online environments, they generate a wealth of data, including personal information, learning behaviours, and performance metrics. The misuse or unauthorized sharing of this data can compromise individual privacy and pose risks to learners' well-being and future opportunities (Zeide, 2017; Lupton & Williamson, 2017). Addressing these concerns requires robust data governance frameworks, transparency in data collection and usage practices, and the implementation of robust security measures to safeguard student data. Moreover, the increasing reliance on technology in education has fuelled debates around the commodification of education, wherein educational experiences are perceived as products to be consumed rather than transformative processes of personal growth and societal advancement. The commercialization of educational technologies and the influence of private stakeholders in shaping educational policies and practices raise concerns about the prioritization of profit over pedagogical principles and learners' best interests (Selwyn, 2015; Ball, 2012). Addressing this issue requires critical examination of the role of private entities in education, fostering public-private partnerships that align with ethical principles and educational values, and promoting transparency and accountability in decision-making processes.

Navigating these philosophical and ethical dimensions requires a multi-stakeholder approach involving educators, policymakers, technology developers,

and the broader community. Inclusive policy frameworks that prioritize digital equity, data privacy, and ethical governance are essential (UNESCO, 2019). Additionally, promoting digital literacy and critical thinking skills among learners can empower them to navigate the complexities of technology-infused environments responsibly and ethically (Pangrazio & Selwyn, 2019). By addressing these philosophical and ethical concerns proactively, tech-infused education can be harnessed as a force for positive change, promoting inclusive and sustainable development while upholding fundamental human rights and values.

4. Vision for Sustainable Future through Tech-Infused Education

Tech-infused education holds the promise of contributing to a sustainable future across environmental, social, and economic dimensions. Firstly, the integration of technology into educational practices can promote environmental sustainability and ecological stewardship. By leveraging digital tools and virtual learning environments, tech-infused education reduces the need for physical resources such as paper, textbooks, and commuting, thereby minimizing the carbon footprint associated with traditional educational models (Nair, 2019). Additionally, technology enables learners to engage in simulations and virtual field trips, fostering a deeper understanding of environmental issues and cultivating a sense of responsibility towards protecting our planet (Jhan & Yates, 2020). Secondly, tech-infused education plays a pivotal role in advancing social equity and inclusivity. By democratizing access to educational resources and opportunities, technology can bridge the gaps created by geographical barriers, socioeconomic disparities, and physical disabilities (UNESCO, 2018). Online learning platforms, open educational resources, and assistive technologies empower learners from diverse backgrounds to pursue quality education, fostering social mobility and promoting a more equitable society (Becker et al., 2018). Furthermore, technology facilitates the representation of diverse perspectives and voices in educational content, challenging traditional narratives and promoting cultural understanding and respect (Warschauer & Matuchniak, 2010). Moreover, tech-infused education contributes to economic resilience and global competitiveness. By equipping learners with essential digital skills and fostering adaptability, tech-infused education prepares individuals to thrive in an increasingly digitized and rapidly evolving workforce (World Bank, 2016). Proficiency in using technology for collaboration, problem-solving, and innovation enhances employability and entrepreneurial opportunities, driving

economic growth and prosperity (Beetham & Sharpe, 2013). Additionally, technology enables global connectivity and cross-cultural exchanges, facilitating the exchange of knowledge and ideas, and promoting international cooperation and competitiveness (OECD, 2019).

Realizing this vision of a sustainable future through tech-infused education requires a concerted effort from various stakeholders. Policymakers must prioritize investments in digital infrastructure, teacher training, and inclusive policy frameworks that address digital divides and promote equitable access (UNESCO, 2019). Educational institutions must embrace innovative pedagogies and integrate technology into curricula and instructional practices (Becker et al., 2018). Technology developers must collaborate with educators to design user-friendly, accessible, and pedagogically sound educational technologies. Furthermore, fostering a culture of lifelong learning and adaptability among learners is crucial to ensure they can navigate the rapid technological advancements and societal transformations that characterize our ever-changing world (Voogt & Roblin, 2012).

5. Barriers and Challenges to Implementation

The successful implementation of tech-infused education is often hindered by a multitude of barriers and challenges. Primarily, infrastructure and access gaps pose a critical obstacle. Students and educators in many regions, particularly rural and underserved communities, face a lack of reliable internet connectivity and insufficient technological resources (UNESCO, 2020). This digital divide not only restricts access to educational technologies but also exacerbates inequities, leaving those without access at a further disadvantage. Teacher training and professional development emerge as another salient challenge. Merely providing the tools is insufficient; educators must be adept at integrating technology into their teaching (Ertmer & Ottenbreit-Leftwich, 2010). Often, teachers lack the requisite skills and confidence to effectively use technology in classrooms, necessitating comprehensive training that goes beyond basic operational knowledge to include pedagogical techniques for digital education (Kopcha, 2012). Addressing these shortcomings requires targeted policy and regulatory frameworks. Education systems need policies that foster equitable access to technology, alongside sustained investment in infrastructure (Reimers & Schleicher, 2020). Policy frameworks must be flexible yet robust enough to adapt to rapidly evolving technological landscapes and diverse learning contexts. Yet, creating such policies is complex, as it entails addressing multifaceted issues

such as funding models, privacy concerns, and ensuring alignment with international educational standards (Dede, 2005). Furthermore, the effectiveness of these policies hinges on successful execution and consistent regulatory oversight. Strategic guidance must be provided at national and local levels to facilitate the scaling and adaption of technology in educational settings while maintaining quality and addressing ethical considerations. Professional development programs, accordingly, should be included in these policies to ensure teachers are equipped not only to use technology but to innovate with it, advancing pedagogical practice (Barbour, Morrison, & Ross, 2019).

Ultimately, mitigating these barriers requires cooperative and coordinated efforts among governments, educational institutions, private-sector partners, and communities. A concerted focus on fostering digital literacy, investing in infrastructure, creating supportive policy environments, and enabling educators through ongoing professional development will be essential for the realization of the full potential of tech-infused education in driving inclusive sustainable development. As we envision educational futures shaped by technology, it's crucial to remember that these tools are not just for a privileged few but are instead a means to empower all learners, irrespective of their socio-economic backgrounds. The success of tech-infused education will be judged by its inclusivity and by its effectiveness in bridging educational divides to create a more sustainable and equitable world (Singh & Thurman, 2019).

6. Strategies for Overcoming Challenges

Overcoming the challenges inherent in the implementation of tech-infused education necessitates multifaceted strategies that address the roots of these impediments. Inclusive policy development and implementation stand paramount in ensuring that technology's educational promise reaches every learner. Governments and institutions must work to enact policies that specially cater not only to the majority but also to marginalized groups, thus bridging the equity gap (UNESCO, 2017). These policies should mandate the allocation of resources for both technological infrastructure and the necessary support systems in underprivileged areas, thereby democratizing access to quality education (Reimers & Schleicher, 2020). Equally important are innovative pedagogical approaches and practices that cater to diverse learning needs. The adoption of blended learning models, project-based learning, and personalized learning plans has shown potential in engaging students and supporting diverse learning styles (Means et al., 2013). Teachers must be equipped with the knowledge and

resources to implement such methodologies effectively, which requires substantial investment in professional development. This investment not only aids the teacher's skill enhancement but also galvanizes a shift towards student-centered learning models that foster critical thinking and problem-solving skills (Darling-Hammond et al., 2020).

Fostering a culture of lifelong learning and adaptation is crucial in navigating an ever-shifting educational landscape. Continuous learning should be promoted not just among students but also among educators and policymakers — a commitment to regularly updating one's knowledge and skills to stay abreast of technological advancements and pedagogical innovations (Houle, 1980). This culture of learning and adaptation plays a key role in preparing all stakeholders to respond effectively to future challenges and changes in education driven by technology (Dede, 2005). Partnerships between educational institutions, communities, and the private sector can further bolster the strategies for overcoming challenges. Congruent to this is harnessing data and research to inform policy and practice adjustments (Mandernach, 2015). Real-time feedback mechanisms, informed by educational data analytics, can provide insights into the effectiveness of technological initiatives and direct continuous improvements to the educational system (Daniel, 2015). Ultimately, the strategies to surmount the hurdles facing tech-infused education must integrate collective action. This necessitates a shared vision and collaboration at all levels — from educators on the ground to international policy forums — to lay the foundation for an equitable and sustainable educational future (Schleicher, 2019). Only with a cogent commitment to inclusivity, innovation, and adaptation will the trajectory towards tech-infused education be sustained and its full potential realized in the pursuit of lifelong, universal education.

7. Inspiring Dialogue and Collaboration

The advancement of tech-infused education towards inclusive sustainable development requires more than just isolated interventions; it calls for an orchestrated effort where dialogue and collaboration serve as the cornerstone. Engaging educators, policymakers, researchers, and communities is fundamental to understanding the multifaceted landscape of educational technology. Researchers such as Fullan (2013) have highlighted the significance of collective capacity as a driving force for educational change, necessitating educators to work in collaboration with policymakers and communities to create conditions favorable for effective technology integration in classrooms. Within this

collaborative framework, the sharing of best practices and lessons learned becomes invaluable. By documenting and disseminating successful strategies and acknowledging the stumbling blocks encountered, stakeholders can capitalize on a shared knowledge base to replicate and scale up what works and to circumvent common pitfalls (OECD, 2015). For example, insights into how certain pedagogical tactics have enhanced student engagement with technology can serve as a blueprint for others striving to achieve similar outcomes (Zhao & Frank, 2003).

Collective action is paramount in steering these efforts towards the fulfilment of sustainable development goals (SDGs), particularly Goal 4 which aims to ensure inclusive and equitable quality education. As underscored by the United Nations (2015), achieving this goal requires all hands on deck, necessitating partnerships that cut across the public and private sectors. By engendering an ecosystem where different entities converge on a shared vision for education, the materialization of SDGs becomes a more reachable target (Sachs, 2012). Encouraging such multifarious collaboration also acknowledges the dynamic and interconnected nature of educational challenges. As Darling-Hammond (2010) argues, systemic reforms in education are predicated on the collective efforts of those within and outside the educational sector who are committed to learner-centric, equity-focused outcomes. Essential to this process is the creation of platforms and forums where stakeholders can convene, deliberate, and align goals and strategies.

In the spirit of inspiring dialogue and collaboration, it is necessary to recognize the power of technology itself as a tool for connectivity. Digital platforms can collapse geographical and social barriers, creating spaces for international discourse and cooperation (Greenhow & Robelia, 2009). By leveraging these technologies, the global educational community can foster an enriched dialogue that fuels innovation and inclusivity. The cumulative effect of these dialogues, best practices, and collaborative efforts manifests not only in upgraded educational systems but also in greater social cohesion and a more robust, sustainable developmental trajectory. In this global paradigm, the confluence of education, technology, and collaboration stands as an emblem of progress and hope for a future of lifelong learning that is embraced by all segments of society (UNESCO, 2014).

8. Conclusion

The integration of technology in education holds the potential to revolutionize learning paradigms and pave the way for inclusive sustainable development. The article irradiates how tech-infused education can promote environmental sustainability, social equity, and economic prosperity. While opportunities to foster more personalized and collaborative learning experiences are plentiful, significant challenges persevere, including the digital divide, infrastructural limitations, and privacy concerns. Overcoming these sprints necessitates multifaceted strategies, including the development of inclusive policies, investment in digital literacy, and fostering a culture of lifelong learning and continuous pedagogical innovation. Encouraging cross-sector collaboration and international partnerships is crucial in this effort. To ensure the successful implementation of tech-infused education, stakeholders must commit to shared goals of advancing education that is equitable, accessible, and capable of preparing learners for a brighter, sustainable future. The article calls for a collaborative push to harness the transformative power of technology, facilitating global dialogues and leveraging collective capacity to meet the ambitious aims of the Sustainable Development Goals.

Declarations

Ethics Approval and Consent to Participate:

Not Needed

Consent for Publication:

Though this is a single author article so no need of any consent from others

Availability of Data and Material:

The data and materials supporting to this paper are accessible upon reasonable request.

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STUDY OF WELL BEING OF SECONDARY SCHOOL TEACHERS IN RELATION TO THEIR STRESS

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ABSTRACT

The transmission of information and experience from one generation to the next, as well as the reconstruction of society, all depend heavily on the teacher. A teacher serves as the guardian of culture, as well as a critic of societal vices, an interpreter of current events, a pioneer of reform, and a mentor to the efforts of the populace. Given the presence of India's diverse educational system today, teaching has become a more demanding and stressful profession. Only a happy, contented, and psychologically sound teacher can consider the welfare of the children. This setting informed the design of the study, which looked at different characteristics of secondary school teacher's well-being in relation to their stress. About 200 teachers were chosen as a sample from various government and private schools in Amritsar. A variety of statistical methods had been used to analyse the data, including t-ratio, correlation(r) and ANOVA (two-way) which was used to compute the data. The study's findings showed that wellbeing of female government teachers was more than that of male teachers belonged to private schools. Moreover, it has been found that well-being does not affect by stress and significantly influenced by type of school- government and private schools.

Keywords: *well-being, stress and secondary school teachers.*

I. INTRODUCTION

The world we live in today is hardly a bed of roses. Each of us has to overcome unique difficulties, and sometimes the strain can be overwhelming. Stress occurs when we feel overburdened, pressed for time, or unclear about how to meet the demands imposed on us. "Teaching may be a demanding profession. The regular conversations students and intense pressures and challenges are frequently caused by co-workers and the never-ending and fragmented demands of

teaching, which can result in stress (Pithers, 1995). According to McGrath (1970), stress is a dynamic state that an organism experiences in response to an adaptation demand and as a perceived imbalance between an adaptation demand and an organism's capacity to respond in circumstances where an inability to meet the demand may have detrimental effects. Teacher stress can be referred to the unpleasant, negative emotions that teachers endure, such as worry, tension, annoyance, or despair as a result of some aspect of their profession as a teacher (Kyriacou, 2001). Galloway et al. (1984) believe that a stress perspective that considers how instructors engage with their employment or "fit" is the most beneficial. In a nutshell, it represents a situation in which teachers saw a danger to their self-esteem or well-being (DeRobbio & Iwanicki, 1996). According to Maslow (1968), the quest of health was universal human to self-actualization, and well-being is generally characterized to as wholeness of body, mind, and spirit in terms of health, prosperity, and self-actualization. It is a dynamic state defined by a reasonable degree of harmony between individuals, abilities, wants, and expectations, as well as environmental demands and possibilities (Levi, 1987). Thus, well-being is a synthesis of psychological, spiritual, social, and bodily elements. Work-related stress has a wide-ranging, negative impact on teachers' job satisfaction, wellness, mental health, and daily functioning. Teachers who experience less stress, according to Dubey (2011), are more emotionally intelligent than those who suffer greater stress. Male teachers also perceive stress differently than female professors. In his study on "Teaching Teachers to De-stress," Wilson (1979) concluded that 95% of Californian teachers were curious to participate in stress-coping education programs to control their stress and that 90% of California's teachers experienced at least some amount of stress. Stress in the teaching profession is widely recognised, and it has been discovered that their well-being is much lower than that of other high-stress professions (Travers & Cooper, 1991). Against this backdrop, a study of secondary school teachers' occupational stress in connection to their mental health and job satisfaction was conducted.

II. REVIEW OF RELATED LITERATURE

The investigator has made earnest attempts to track down relevant literature for the current investigation, including both critical and ancillary works. The following studies had been reviewed for the present investigation:

Linda (2001) investigated the impact of workplace stress on the well-being of pregnant employees. If the employee is pregnant, the enormous stress has an

impact on the mother's and unborn child's health. Graham and Pettinato (2002) investigate subjective well-being in Latin American countries and Russia and discover that relative economic variations have a significant impact on how people assess their well-being. Moorjani and Geryani (2004) conducted a study on students from various faculties such as science, business, and arts. The findings revealed that students from different faculties differ significantly in their life satisfaction and general well-being, although there is no significant gender difference in life satisfaction and general well-being. Sabu and Jangaiah (2005) investigated occupational stress among teachers and discovered that occupational stress had a weekend effect. The association between teachers of high and higher secondary schools' professional stress, mental health, and coping mechanisms is examined by Kumar et. al. (2007). The findings showed that instructors are under stress as a result of role overload, obligations, and physical stressors prevalent in the classroom. The outcome also showed a poor link between workplace stress and mental wellness.

In their study, Sahoo and Mohapatra (2009) investigate the role of professional contexts in psychological well-being based on gender. Two hundred persons (100 men and 100 women) from five different vocations were chosen at random. In the context of group comparison, it was discovered that doctors and teachers have the highest levels of happiness, while administrators have the lowest levels. Engineers and executives were assigned to intermediate roles. The findings were explained in light of the needs and expectations of distinct job roles. In their 2010 study, Srimathi and Kiran Kumar looked into the psychological health of working women in diverse professions. A total of 325 women were picked at random from a variety of organizations, including businesses, hospitals, banks, schools, and call centers/BPOs. The psychological well-being ratings for women working in industries, followed by those for women working in health institutions, were the lowest across all subfactors. Women working in banks reported a moderate level of psychological health. The highest overall psychological well-being scores and the highest scores across all psychological well-being subfactors were achieved by female instructors. Each subscale of the PWB is strongly and favorably related to the others. According to Burrus et al. (2012), reactions to the situational Test of Emotion Management were substantially connected to eudemonic well-being as measured by responses on psychological well-being scores ($t=.54$). Furthermore, the ability to manage emotions was linked to hedonic well-being, with both the frequency of good

affect experienced corresponding. According to Henn et al. (2013), stress among teachers was caused by psychological factors, particularly negative affect and role difficulties. Interestingly, they discovered a substantial inverse link between psychological well-being and stress, implying that exaggerating psychological well-being and lessening non-favorable outcomes should be the main goals of interventions.

Kern et al. (2014) discovered that when staff members perform well across many domains of well-being, they are more dedicated to the school and content with their health, lives, and jobs. "Positive emotion, meaning, and accomplishment were most strongly related to life satisfaction and health, whereas engagement and relationship were most strongly related to job satisfaction and organizational commitment," according to the findings. Yin et al. (2016) studied into how the emotionally charged nature of teachers' profession impacts their wellbeing. the emotional character of teachers' work and how this affects their well-being. Yin and colleagues came to the conclusion that confidence in coworkers was found to be beneficial. What exactly is Teacher Wellbeing? Teachers who utilized reappraisal more frequently than those who suppressed were more likely to be in good psychological health. Cook et al. (2017) cites a wealth of data indicating that teaching is a difficult profession and that teacher stress and burnout can affect teacher effectiveness. They evaluated the Achiever Resilience Curriculum, which attempts to increase teacher well-being, and discovered that program participants. Research on job stress among secondary school teachers in West Bengal's Birbhum District was conducted by Adhikari in (2019). Simple random sampling was combined with descriptive research techniques to collect data for the study. Teachers in IX-X level schools were given a questionnaire about their job stress. The results showed that female academics had greater levels of stress compared to their male counterparts because of incapacity to handle heavier workloads. It also revealed that teachers working for private enterprises and in rural areas experienced higher levels of stress than those working for the government and in large cities.

➤ **DELIMITATIONS OF THE STUDY**

1. The study was delimited to sample of secondary school teachers of Amritsar.
2. The study was delimited to sample of male and female.
3. The study was delimited to sample of 100 Govt. and 100 private secondary school teachers.

➤ **OBJECTIVES OF THE STUDY**

The objectives of study are following:

1. To study well-being of secondary school teachers with respect to type of school.
2. To study the well-being of secondary school teachers with respect to gender.
3. To study the stress level of secondary school teachers with respect to type of school.
4. To research the gender differences in the stress levels of secondary school teachers.
5. To research the connection between secondary school teachers' well-being and stress.
6. To research how stress and gender combine to affect secondary school teachers' wellbeing.
7. To investigate the impact of stress and the nature of the school on secondary school teachers' wellbeing.

HYPOTHESES OF THE STUDY

Following are the hypothesis of study:

1. There exists no significant difference in well-being of Govt. and private secondary school teachers.
2. There exists no significant difference between well-being of male and female secondary school teachers.
3. There exists no significant difference in stress level of govt. and private secondary school teachers.
4. There exists no significant difference between stress level of male and female secondary school teachers.
5. There exists no significant relationship between well-being and stress level of secondary school teachers.
6. There exists no interaction effect of stress and gender on well-being of secondary school teachers.
7. There exists no interaction effect of stress and type of school on well-being of secondary school teachers.

III. METHOD AND PROCEDURE OF THE STUDY

The research falls within the category of descriptive research. Twenty schools from the Amritsar area were chosen at random to participate in the study. 200 instructors were chosen from the Amritsar district's government and private secondary schools. Among this, 100 teachers (50 males and 50 females) were selected from government secondary schools as well as 100 teachers (50 males and 50 females) were chosen from private secondary schools for the data collection. The study's instruments - Rebecca J. Collie, Jennifer D. Shapka, Nancy E. Perry, and Andrew J. Martin's (2014) scale of Teacher well-being: Exploring its components and a practice- oriented and Dr. K.S. Misra's teacher stress scale was employed. The t-ratio, correlation(r), and ANOVA (two-way) statistical methods were employed.

IV. ANALYSIS AND INTERPRETATION OF DATA

Hypothesis:1 - There exists no significant difference in well-being of government and private secondary school teachers.

Table 4.1

Variable.	Type of School	Mean	Std. Deviation	Std. Error Mean	T-test
Well-being	Government	286.12	64.320	6.432	4.128
	Private	248.90	63.184	6.318	

According to the table above, the computed t-value is 4.128, which is greater than the table value at the 0.05 level. As a result, there is a substantial gap in the well-being of private and government teachers. Because the mean of private secondary school teachers' well-being was 286.12 and the mean of government secondary school teachers' well-being was 248.90, the null hypothesis that there is no significant difference between private and government secondary school teachers' well-being was rejected.

Hypothesis:2 - There exists significant difference between well-being of male and female secondary school teachers.

Table 4.2

Variable	Gender	Mean	Std. Deviation	Std. Error Mean	T-test
Well-Being	Male	261.71	74.721	7.472	1.239
	Female	273.31	56.372	5.637	

Table 4.2 shows that the estimated t-value is 1.239, which is more than the table value at the 0.05 level. As a result, there is a considerable variation in the well-being of male and female teachers. Because the mean well-being of male secondary school teachers was 261.71 and the mean well-being of female secondary school teachers was 273.31, the null hypothesis, which claimed there was no discernible variation among secondary school teachers' (male and female) wellbeing was rejected.

Hypothesis:3 - There exists no significant difference in stress level of government and private secondary school teachers.

Table 4.3

Variable	Type of School	Mean	Std. Deviation	Std. Error Mean	T-test
Stress	Private	82.00	30.352	3.035	7.311
	Govt.	117.63	38.127	3.813	

Table 4.3 shows that the estimated t-value is 7.311, which is more than the table value at the 0.05 level. As a result, there is a considerable variation in the stress levels of private and public secondary school instructors. Because the mean stress of private secondary school instructors was 82.00 and the mean stress of government secondary school teachers was 117.63, the null hypothesis, which ascertained there is no significant difference among secondary school teachers" (private and government) was rejected.

Hypothesis:4 - There exists no significant difference between stress level of male and female secondary school teachers.

Table 4.4.

Variable	Gender	Mean	Std. Deviation	Std. Error Mean	T-test
Stress	Male	105.91	33.235	3.323	2.248
	Female	93.72	42.855	4.285	

Table 4.4 shows that the estimated t-value is 2.248, which is more than the table value at the 0.05 level. As a result, there is a considerable disparity in stress levels of secondary school teachers (male and female). Further, male secondary school teachers mean stress level was 105.91 and the mean stress level of female secondary school teachers was 93.72, the null hypothesis, which showed there was no discernible difference between men and women secondary school teachers' levels of stress, was rejected.

Hypothesis:5 - There exists no significant relationship between well-being and stress level of secondary school teachers.

Table 4.5

Variable	N	Df	R	Inference
Well-Being	200	198	4.028	Insignificant at .001 level
Stress	200			

*Significant at .001 level

The table above shows that secondary school teachers' well-being and stress are insignificantly connected with a value of $R = 4.028$ (insignificant at the .005 level). As a result, the null hypothesis claiming that there is no significant association between secondary school teachers' wellbeing and stress was rejected at .005 levels.

Hypothesis:6 - There exists no interaction effect of stress and gender on well-being of secondary school teachers.

Table 4.6.

Gender	High Stress			Low Stress			Total		
	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.
Male	56	275.16	76.019	44	244.59	70.194	100	259.83	73.1065
Female	44	267.82	51.463	56	277.63	60.054	100	272.725	55.7585
Total	100	271.49	63.741	100	261.11	65.124	200	266.2775	64.4325

The high stress level group (Mean 271.49) has a higher mean than the low stress level group (261.11). This shows that groups under high stress had better health than those under low stress. Thus, the idea that stress and gender have no discernible interaction effects on wellbeing was disproved. Table 4.6 shows that male instructors with low levels of stress have a mean well-being score of 244.59, which is considerably lower than the mean well-being score for female teachers with low levels of stress, which is 277.63.

TABLE 4.6.1

Dependent Variable	Independent Variable					
Well-Being	Source	Sum of Squares	Df	Mean Square	f-value	Significant
	STRESS LEVEL (A)	5311.172	1	5311.172	1.236	.032
	GENDER (B)	8131.892	1	8131.892	1.893	
	AXB	20084.948	1	20084.948	4.676	

	INTERACTI ON					
	ERROR	841943.860	196	4295.632		
	TOTAL	15186388.000	200			

The mean score of well-being between high and low stress levels differs significantly, as shown in Table 4.6.1 by the f-value for well-being (A) of 1.236, which is discernible at the 0.05 level. Additionally, at a significance level of 0.05, f-value for interaction effect of gender and level of stress on wellbeing of teachers (secondary schools) is 4.676. The strong interaction effect suggests that gender and stress level have major effects on both well-being and gender. As a result, the idea that stress level and gender have no discernible interaction effects on secondary school teachers' wellbeing is refuted.

Hypothesis:7

There exists no interaction effect of stress and type of school on well-being of secondary school teachers.

TABLE 4.7

Type of School	HIGH STRESS			LOW STRESS			TOTAL		
	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.
Private	35	303.94	68.790	65	276.52	60.152	100	290.23	64.471
Govt.	65	254.69	58.226	35	238.14	71.131	100	246.415	64.6785
Total	100	279.315	63.508	100	257.33	65.6415	200	268.3225	64.57475

Table 4.6 shows that the high stress group (Mean 279.315) has a higher mean than the low stress group (257.33). This shows that groups under high stress had better health than those under low stress. As a result, the conclusion that stress and school type had no discernible interaction effect on wellbeing was adopted. Table 4.6 shows that the mean well-being scores of low-stress private instructors are 276.52, which is significantly less than the mean well-being scores of low-stress government teachers, which are 246.415.

Table 4.7.1

Dependent Variables	Independent Variable					
Well-Being	SOURCE	Sum of squares	Df	Mean square	f-value	significant
	STRESS LEVEL(A)	21991.211	1	21991.211	5.516	.000
	TYPE OF	87350.351	1	87350.351	21.908	

	SCHOOL (B)					
	AXB INTERACTION	1344.116	1	1344.116	.337	
	ERROR	781466.233	196	3987.073		
	TOTAL	15186388.000	200			

The f-value for well-being (A) in the above-mentioned table is 5.516, which is significant at the 0.05 level and shows that the mean well-being scores of people with high and low levels of stress differ significantly. Additionally, at 0.05, f-value for interaction effect of school type and level of stress on wellbeing of teachers (secondary schools) is 0.337, which is non-significant. The lack of interaction effects recommends that the primary effects of school type and stress level on wellbeing are not correlated with one another. As a result, it is acknowledged that there is no discernible interaction effect of stress level and school type on the wellbeing of secondary school teachers.

V. CONCLUSION

In conclusion, it was discovered that the well-being of private instructors was more than that of government teachers, and that the well-being of government teachers was greater than that of private teachers. Furthermore, it has been discovered that well-being and stress level are adversely connected among secondary school teachers, and that gender and stress level have an interactive influence on secondary school teachers' well-being. Aside from that, it can be stated that well-being is unaffected by stress and is substantially influenced by the sort of school teachers.

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BEYOND THE THRESHOLD: STRATEGIES FOR INCREASING WOMEN'S REPRESENTATION IN INDIAN ART GALLERIES

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ABSTRACT

The article explores the underrepresentation of women artists in Indian art galleries, highlighting the complex interplay of historical legacies, socio-economic barriers, and systemic biases that create hurdles for women artists. It delves into the historical context, highlighting the limited access to training and opportunities faced by women within traditional art education and patronage systems. Despite a shift towards inclusivity in the contemporary scene, historical biases continue to influence gallery practices and artist selection. Market biases favour established artists, often male-dominated due to historical limitations on women's artistic careers. Socio-economic barriers, including family responsibilities and access to financial resources, further disadvantage women in pursuing their artistic endeavors. Unconscious curatorial practices and challenges women face with self-promotion contribute to the underrepresentation. The article proposes actionable strategies to achieve greater gender parity, such as proactive gallery initiatives, partnerships with women-centric collectives, and dedicated events showcasing their work. Programs designed to empower women artists through workshops on self-promotion, financial management, and career development can provide crucial support. Art institutions play a crucial role in fostering change through research projects documenting women's artistic contributions and exhibitions highlighting their work. Open discussions and media attention towards gender disparity within the art world are also presented as important drivers for progress. By acknowledging these historical and systemic issues and implementing the proposed strategies, Indian art galleries can create a more equitable environment, leading to a thriving and diverse art world that reflects the full spectrum of artistic talent in India.

Keywords: Gender Gap, Women Artists, Indian Art Galleries, Curatorial Practices, Socio-economic barriers, Case Studies.

Introduction:

India boasts a vibrant contemporary art scene, with artists garnering international recognition and galleries attracting global audiences. However, this success story masks a persistent gender gap. Women artists remain significantly underrepresented in major commercial galleries, limiting their career prospects and artistic influence. This article aims to understand the factors behind this disparity and propose strategies to increase women's representation in Indian art galleries. India boasts a flourishing contemporary art scene, attracting international acclaim and fostering a vibrant ecosystem of artists, galleries, and collectors. Major art fairs like the India Art Fair and Kochi-Muziris Biennale showcase the country's artistic prowess to a global audience (NAVI Mumbai Art Fair, 2023). However, beneath this veneer of success lies a persistent disparity – the underrepresentation of women artists in prominent commercial galleries (Singh, 2017). This discrepancy not only limits the artistic expression and career prospects of women, but also hinders the development of a truly inclusive and diverse art ecosystem in India. Understanding the underrepresentation of women artists requires delving into the historical context of Indian art. Traditional art education and patronage systems have been historically male-dominated, restricting women's access to formal training and opportunities for exhibition (Grewal, 2005). Even the 20th century, marked by pioneering women artists like Amrita Sher-Gil and Mrinalini Mukherjee, presented significant challenges (Jain, 1999). While the contemporary art scene has witnessed an increase in inclusivity, historical biases continue to subtly influence gallery practices and artist selection processes (Benezit, 2011). The contemporary art market itself presents a complex landscape that contributes to the underrepresentation of women. Galleries often prioritize artists with established track records and proven commercial success (Ghosh, 2010). However, due to historical limitations on their opportunities for exhibition and sales, women artists may struggle to gain the market recognition needed to secure gallery representation (Singh, 2017). This creates a self-perpetuating cycle, where women remain underrepresented in galleries, leading to a lack of market recognition and continued difficulty in securing gallery representation. Beyond market forces, socio-economic factors further disadvantage women artists. Balancing artistic pursuits with family responsibilities and societal expectations remains a challenge (Bhattacharya & Mitra, 2018). Additionally, limited access to financial resources can restrict their ability to invest in materials, studio space, and career development opportunities.

(Grewal, 2005). Curatorial practices can also inadvertently contribute to the gender gap. Unconscious biases may lead curators to favour male artists due to ingrained notions of artistic merit or a lack of awareness of talented women artists (Singh, 2017). This highlights the need for a more conscious approach to curation, ensuring diversity in artist selection and representation. Finally, self-promotion itself can be a hurdle for women artists. Compared to their male counterparts, women may be less comfortable with self-promotion or lack the necessary support networks to navigate the art market effectively (Grewal, 2005). This further limit their visibility and access to gallery representation. The underrepresentation of women artists in Indian art galleries is a complex issue with historical roots and contemporary manifestations. The interplay of market forces, socio-economic realities, potential curatorial biases, and challenges with self-promotion all contribute to this disparity. Addressing this issue requires a multi-pronged approach, involving proactive initiatives from galleries, targeted support for women artists, and broader dialogue within the art community. By acknowledging these challenges and implementing effective strategies, Indian art galleries can foster a more equitable environment that allows women artists to thrive and contribute to a richer, more diverse art scene in India.

Review of Related Literature:

The underrepresentation of women artists in Indian art galleries is a well-documented issue that has attracted the attention of scholars and art critics in recent years. This review of related literature explores key themes and findings from Indian sources to provide a context for the present research:

Several scholars have examined the historical roots of the gender gap in Indian art. M. Grewal (2005) highlights the limitations placed on women's access to formal art education and patronage systems in traditional India. This historical exclusion continues to influence contemporary practices, as pointed out by Geeti Jain (1999) in her study of the pioneering artist Mrinalini Mukherjee, who faced significant challenges despite her talent.

The contemporary art market itself presents challenges for women artists. Anandi Singh (2017) argues that galleries often prioritize established artists with proven commercial success, a cycle that disadvantages women due to historical limitations on their artistic exposure and sales. Socio-economic factors further disadvantage women, as studies by Sahana Bhattacharya & Aditi Mitra (2018) demonstrate. Balancing artistic pursuits with family responsibilities and access to financial resources remain significant hurdles.

Curatorial practices can also inadvertently contribute to the gender gap. Singh (2017) suggests that unconscious biases towards male artists may exist due to ingrained notions of artistic merit or a lack of awareness of talented women artists.

Self-promotion itself can be a challenge for women artists. Compared to their male counterparts, women may be less comfortable or lack the support networks to navigate the art market effectively, as Grewal (2005) points out.

Despite these challenges, successful initiatives are promoting gender parity. Galleries like Gallery SKE, with its focus on showcasing women artists, serve as a model (Gallery SKE, n.d.). Artist-run initiatives like Khoj Studios, with their focus on fostering community and alternative exhibition platforms, also demonstrate potential solutions (Khoj Studios, n.d.).

This review highlights the complex interplay of historical, market-based, and socio-economic factors contributing to the gender gap in Indian art galleries. It also acknowledges the existence of successful initiatives working towards greater parity. Building on this existing scholarship, the present research aims to delve deeper into the experiences of key stakeholders and propose actionable strategies for a more equitable Indian art ecosystem.

Significance of the Study:

Despite India's thriving contemporary art scene, a persistent gender gap exists in commercial galleries. This study delves into the historical and contemporary reasons behind this disparity, giving voice to women artists and key stakeholders. By analyzing successful initiatives promoting gender parity, the research proposes actionable strategies for galleries, artists, and institutions. This fosters a more equitable art ecosystem, allowing women artists to flourish and contribute to a richer, more diverse Indian art world. Ultimately, this study contributes valuable insights to the ongoing discussion on gender and representation within the Indian art market.

Objectives of the Study:

- To understand the historical and contemporary factors contributing to the underrepresentation of women artists in prominent commercial galleries in India.
- To explore the experiences of women artists, gallery owners, curators, and art institution representatives regarding the gender gap in the Indian art scene.

- To identify and analyze successful strategies implemented by galleries and artist-run initiatives to promote gender parity in art exhibitions.
- To propose actionable recommendations for galleries, artists, and art institutions to create a more equitable art ecosystem in India.
- To contribute to the ongoing discourse on gender and representation within the Indian art market.

Research Methodology:

This research employed a multi-pronged approach to investigate the underrepresentation of women artists in Indian art galleries and explore potential solutions:

1. Literature Review:

The research began with a comprehensive review of existing literature on the topic. Scholarly articles, books, and reports were examined to understand the historical context of gender disparity in the Indian art world, analyze existing research on the challenges faced by women artists, and explore potential strategies for promoting gender equity. Sources included journals specializing in Indian art, feminist art theory, and the art market, as well as books and reports by historians, sociologists, and art market analysts.

3. Case Studies:

Two contrasting case studies of initiatives promoting gender parity in the Indian art scene were explored in detail. These case studies provided concrete examples of successful strategies implemented by galleries and artist-run initiatives. Data for the case studies was gathered through a review of the organization's website, publications, and media coverage, supplemented by interviews with key individuals involved in the initiatives.

Discussion

❖ Historical Context:

The underrepresentation of women artists has historical roots. Traditional art education and patronage systems in India were often male-dominated, limiting women's access to training and opportunities. Even in the 20th century, pioneering women artists like Amrita Sher-Gil and Mrinalini Mukherjee had to navigate a challenging landscape. While the contemporary art scene has become more inclusive, historical biases continue to influence gallery practices and artist selection. The underrepresentation of women artists in contemporary Indian art

galleries cannot be fully understood without examining its historical roots. Traditionally, the Indian art world has been a space dominated by men, with both art education and patronage systems heavily skewed towards the male experience (Grewal, 2005). Formal training in art was largely unavailable to women. Apprenticeship systems, prevalent in classical Indian art forms like miniature painting and temple sculpture, were primarily accessible to sons within artistic families (Jain, 1999). This limited opportunities for women to develop the technical skills and knowledge deemed essential for artistic success. Furthermore, patronage systems, crucial for an artist's career, were often controlled by wealthy individuals and institutions, further marginalizing women (Grewal, 2005). Royal courts and religious institutions, major patrons of art historically, were typically male-dominated spheres. This limited the opportunities for women artists to showcase their work and gain recognition from potential patrons. Even the 20th century, marked by the rise of modern Indian art, presented significant challenges for women artists. Pioneering figures like Amrita Sher-Gil, known for her powerful self-portraits and depictions of Indian life, navigated a world largely defined by male artists and artistic sensibilities (Jain, 1999). While Sher-Gil achieved international recognition, her journey highlights the difficulties faced by women artists in establishing themselves within the Indian art scene. The establishment of art schools in the late 19th and early 20th centuries, like the Government College of Art & Craft in Kolkata, did create some opportunities for women to receive formal training (Jain, 1999). However, these institutions often remained male-dominated environments, and women graduates still faced challenges in securing recognition and patronage. The historical context reveals a long-standing pattern of limited access to training, patronage, and exhibition opportunities for women artists in India. This legacy continues to influence the contemporary art scene, contributing to the underrepresentation of women in prominent galleries. Understanding this historical context is crucial for developing strategies to create a more equitable and inclusive space for women artists in the future.

❖ **Factors Contributing to the Gender Gap:**

The underrepresentation of women artists in prominent Indian art galleries is a multifaceted issue with historical roots and contemporary manifestations. Here, we explore some key factors contributing to this persistent disparity.

- **Market Bias:** The commercial art market prioritizes artists with established track records and proven marketability (Ghosh, 2010).

However, historical limitations on exhibition opportunities have often impeded women artists from achieving the same level of market recognition as their male counterparts (Singh, 2017). This creates a self-reinforcing cycle where underrepresentation leads to lower marketability, further hindering gallery representation.

- **Socio-Economic Barriers:** Women artists often face greater socio-economic challenges than their male counterparts. Family responsibilities, societal expectations, and limited access to financial resources can restrict their artistic pursuits (Bhattacharya & Mitra, 2018). Compared to men, they may have less disposable income to invest in materials, studio space, or career development opportunities, hindering their artistic growth and professional visibility (Grewal, 2005).
- **Curatorial Practices:** Unconscious biases, even within the art world, can contribute to the gender gap. Curators may hold ingrained notions of artistic merit that favour male artists, or they may simply be less aware of the work of talented women artists due to a lack of exposure (Singh, 2017). This highlights the need for a more conscious and diverse approach to curation, ensuring balanced representation in exhibitions and collections.
- **Self-Promotion Challenges:** Women artists may be less comfortable with self-promotion than their male counterparts (Grewal, 2005). This can be due to societal expectations of female modesty or a lack of experience navigating the art market's promotional landscape. Additionally, they may lack the necessary support networks to effectively market themselves and their work to galleries and collectors. This can significantly limit their visibility and access to gallery representation.

These factors, working in tandem, create a complex web of challenges that hinder women artists' ability to gain a foothold in India's commercial art galleries. Addressing this issue requires a multi-pronged approach, from targeted support for women artists to proactive initiatives from galleries and broader discussions within the art community.

❖ **Strategies for Change:**

Addressing the underrepresentation of women artists in Indian art galleries necessitates a collaborative effort involving galleries, artists, and art institutions.

Here, we propose several actionable strategies to create a more equitable art ecosystem:

1. Proactive Gallery Initiatives:

Galleries have the power to significantly impact the visibility of women artists. Implementing quotas for solo and group exhibitions dedicated to women artists can ensure their voices are heard and their work is showcased effectively (Singh, 2017). Partnering with women-centric art collectives allows galleries to tap into a diverse pool of talented artists (Grewal, 2010). Additionally, organizing thematic exhibitions that explore gender and identity through female artistic perspectives can spark public conversation and raise awareness about the contributions of women artists (Jain, 2020).

2. Empowering Women Artists:

Targeted support programs can equip women artists with the tools and resources they need to thrive in the art market. Workshops on self-promotion, financial management, and career development can empower them to navigate the complexities of the art world effectively (Ghosh, 2013). Mentorship programs connecting established women artists with emerging talent can provide valuable guidance and support (Ghosh, 2013). Additionally, grants and scholarships aimed specifically at women artists can alleviate some of the financial burdens associated with artistic pursuits (NAVI Mumbai Art Fair, 2023).

3. Role of Art Institutions:

Art institutions have a crucial role to play in promoting gender parity in the art world. Research projects documenting the artistic legacies of women and their contributions to Indian art history can help bridge historical gaps and inspire future generations (Grewal, 2005). Organizing retrospective and contemporary exhibitions showcasing the work of women artists can bring their artistic expressions to a wider audience (NAVI Mumbai Art Fair, 2023). Art institutions can also leverage their platforms to host workshops and lectures that address issues of gender representation in the art market, fostering open discussion and collaboration within the art community (Singh, 2017).

4. Breaking the Silence:

Bringing attention to the gender gap in Indian art galleries is crucial for driving change. Media coverage, panel discussions at art fairs, and conferences that address the issue can raise awareness and encourage galleries, collectors, and curators to adopt more inclusive practices (Singh, 2017). Social media

campaigns promoting the work of women artists can further enhance their visibility and empower them to connect with a wider audience.

These strategies, implemented in a coordinated and sustained manner, can contribute to a significant shift in the art market landscape. By fostering a more inclusive environment and providing targeted support systems, we can empower women artists to take their rightful place at the forefront of the Indian art scene.

❖ **Case Studies:**

The underrepresentation of women artists in Indian galleries is a complex issue, but successful initiatives are paving the way for change. This section explores two contrasting case studies that highlight different approaches to promoting gender parity in the art world:

Case Study 1: Gallery SKE, Bengaluru

Gallery SKE, established in 2010 in Bengaluru, has carved a niche for itself by actively exhibiting and promoting women artists. Founder and director, Kiran Nadar, a prominent art collector herself, recognized the underrepresentation of women and committed to a balanced program (Gallery SKE, n.d.).

Their approach is multifaceted (Gallery SKE, n.d.):

- **Curatorial Focus:** Gallery SKE dedicates at least 50% of its annual exhibition slots to solo and group shows featuring women artists. This ensures consistent visibility and a platform for diverse artistic voices.
- **Artist Development:** The gallery actively cultivates relationships with emerging women artists. They provide exhibition opportunities, mentorship programs, and access to their network of collectors and curators (Gallery SKE, n.d.).
- **Public Programming:** Gallery SKE organizes talks, panel discussions, and workshops specifically focused on women artists and their practices. These events raise awareness of the gender gap and create a space for dialogue (Gallery SKE, n.d.).

The impact of Gallery SKE's commitment is undeniable. Several of the women artists they have exhibited have gained national and international recognition (Gallery SKE, n.d.). Their success story demonstrates that a gallery-driven focus on gender parity can be a powerful driver of change in the art market (Singh, 2017).

Case Study 2: Khoj Studios, New Delhi

Founded in 1997, Khoj Studios in New Delhi is a unique artist-run initiative that provides studio space, residencies, and workshops for artists (Khoj Studios, n.d.). While not a traditional gallery, Khoj Studios plays a crucial role in supporting women artists through various initiatives:

- **Gender-Neutral Selection:** Khoj Studios employs a blind application process for their residency programs, ensuring gender neutrality in artist selection (Khoj Studios, n.d.). This approach prioritizes artistic merit and removes any potential subconscious bias.
- **Community & Support:** The studio fosters a supportive community environment for artists, many of whom are women. This allows them to share ideas, network with peers, and access resources crucial for their artistic development (Bhattacharya & Mitra, 2018).
- **Alternative Exhibition Platforms:** Khoj Studios utilizes alternative exhibition spaces to showcase the work of resident artists. This provides exposure beyond the traditional gallery circuit and opens up new avenues for recognition (Khoj Studios, n.d.).

Khoj Studios' model demonstrates the power of artist-driven initiatives in addressing the gender gap (Grewal, 2005). By creating a space that fosters artistic growth and removes selection bias, Khoj Studios empowers women artists to develop their practice and gain recognition outside the limitations of the commercial gallery system.

These two case studies offer contrasting approaches to promoting gender parity in the Indian art scene. Gallery SKE's model highlights the effectiveness of a gallery-driven commitment to showcasing women artists. Khoj Studios, on the other hand, demonstrates the potential of artist-run initiatives to create supportive environments and alternative exhibition platforms. Both these cases showcase the importance of proactive strategies to address the underrepresentation of women artists. By replicating and adapting these models, galleries, artist collectives, and art institutions can work together to create a more equitable and vibrant art ecosystem in India.

Conclusion:

While India's contemporary art scene has witnessed remarkable growth, the underrepresentation of women artists remains a pressing issue. Addressing this disparity requires acknowledging historical biases, dismantling systemic barriers,

and fostering a more inclusive art ecosystem. By implementing the proposed strategies and empowering women artists, Indian art galleries can ensure a truly thriving and diverse art world. This research has shed light on the persistent gender disparity within prominent Indian art galleries. The underrepresentation of women artists stems from a complex interplay of historical legacies, market forces, socio-economic realities, and subtle biases in curatorial practices and self-promotion. However, this study also offers a glimmer of hope. The success stories of galleries like Gallery SKE, with their commitment to exhibiting women artists, and artist-run initiatives like Khoj Studios, fostering supportive communities and alternative platforms, demonstrate that change is possible. Moving forward, a multi-pronged approach is required. Galleries can implement proactive measures like quotas for women's exhibitions, partnerships with women-centric collectives, and dedicated events. Empowering women artists through workshops on self-promotion, financial management, and career development is crucial. Art institutions can play a vital role by supporting research documenting women's contributions and organizing exhibitions that highlight their work. By dismantling historical biases, addressing socio-economic challenges, and fostering a culture of inclusivity, Indian art galleries can create a more equitable environment. This will pave the way for a thriving art scene that celebrates the full spectrum of artistic talent, irrespective of gender, contributing to a richer and more diverse artistic landscape in India.

Limitations of the study:

This research acknowledges some limitations. The study focused on major commercial galleries and may not fully capture the experiences of women artists exhibiting in alternative spaces or smaller galleries. Additionally, the interview sample size could be expanded for a more nuanced understanding of the perspectives held by different stakeholders.

Further Research:

This research lays the groundwork for further exploration. Future studies could delve deeper into the experiences of women artists from marginalized communities or analyze curatorial practices in greater detail. Additionally, quantitative research methods could be employed to measure the extent of the gender gap in Indian art galleries.

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**DESIGNING A PROTOTYPE OF DEPTH CLASSIFICATION OF THE
SUBJECT “POVERTY”: AN ANALYTICAL STUDY**

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ABSTRACT

Poverty is a problem that involves many aspects as it relates to low income, illiteracy, low health status and the degree of inequality between the sexes and poor environment. Overcoming the problem of poverty cannot be done separately from the problems of unemployment, education, health and other problems that are explicitly associated with the problem of poverty. Hence, classifiers and LIS schools all over the country are facing severe problem in assigning the numbers of newly formed states and districts of India. Therefore, this study is an attempt to provide a solution to the above problem by giving a depth schedule for common auxiliaries of places for Indian states, districts, and historically significant entities.

Keyword: Classification schemes, India, poverty, depth classification

1. Introduction:

Depth Classification of a micro-document helps in representing the thought-contents extensively which is not possible in General Classification Schemes. As the depth classification allows to accommodate maximum number of isolates associated with a micro-document, searching and locating that particular document becomes easier than ever. It is expected that depth classification would be much useful in scientific research institutes as the researchers are mostly in need/search of micro-documents of their interests. Construction of a Depth Classification Schedule helps too in revision of existing schedules in a regular interval as per their policy. Depth classification helps to identify a subject's relation with other subjects and their interdependence. In India, being a developing country, poverty is a burning issue. In India, 21.9% of the population lives below the national poverty line in 2011.

In 2018, almost 8% of the world's workers and their families lived on less than US\$1.90 per person per day (international poverty line). To hold India as a world power, it is important to take major steps in the subject. It is also important to

promote research and survey in the matter and depth understanding of it and designing a depth classification scheme on poverty can serve to the purpose.

2. Why This Study Needed?

The classification schemes like Dewey Decimal Classification (DDC), Colon Classification (CC), Universal Decimal Classifications (UDC) and others since their inception has undergone many changes in context of growth and development, expansion and extension and revision of new classes and knowledge. But the need was felt since a long time for revision and expansion of complex concepts like poverty, particularly for India and its states, due to their inter-disciplinary nature and proper classification. Therefore, the present study is very relevant and would be very useful in providing the depth schedule numbers for poverty.

3. Objectives Of Study

The main objective was to expand the common auxiliaries of poverty. In addition, the study intended to serve the following specific purposes:

- To identify the new concepts related with poverty
- To prepare a base document for common auxiliaries interdisciplinary/complex concepts like poverty;

4. Scope And Methodology:

The study covers different aspects of poverty and analyses its impact/relation with other subject like rural development/social work etc.

Definition/Meaning of The Subject:

- (1) Poverty may be defined as an insufficiency of material necessities of life. It is distinguished poverty as the normal condition of the poorest stratum of population and indigence or misery as the economic helplessness of people who have no regular source of income.
- (2) Poverty is the state of condition of having little or no wealth or material possessions; want or deficiency in some property, quality or ingredient;
- (3) Poverty is relative concept whereby people are regarded as poor if they suffer from relative deprivation i.e., they do not have access to diets, comforts and the standard of living which are customary to their society.

2 Terminological Developments

2.1 *Development of the Subject terms*

The term “poverty” is coming from Old French *Poverté* (Modern French: *pauvreté*), in late 12 century from Latin word *paupertas* from *pauper*(poor). In 1899, Seebohm Rowntree publishes *Poverty: A Study of Town Life*, in which he coins the term secondary poverty meaning poverty resulting from a failure of character rather than from a lack of financial resources. It was the first time the word is used to describe the conditions of poor, unprivileged people. The word poverty is used much before in nineteenth century literature by many novelists, story- writer but the word is popularized by Victor Hugo in his “*Les Misérables*” (1862), [“Seeing much poverty everywhere makes me think that God is not rich. He gives the appearance of it, but I suspect some financial difficulties.”].

2.1.1 **Synonyms**

- 1 *Destitution*: Destitution is a form of poverty in which people are so lacking in material goods that they have nothing, normally caused by cataclysmic natural disaster, human-caused disaster like war etc.
- 2 *Indigence*: Indigence refers to a state in which people are unable to obtain basic human needs, especially foods, because of poverty. It is also known as primary poverty.
- 3 *Wants*: Wants are things that people desire to get, which are more than the needs of people.

2.2 **Related term**

- 1 *Deprivation*: Deprivation refers to the effects that extreme poverty has upon the poor and which makes worse the basic conditions of life.
- 2 *Poor*: Poor are the sufferer of poverty.
- 3 *Poverty trap*: Poverty trap refers to situation in which a household (or a firm) has very low wealth and a small increase in its wealth will do nothing to help it permanently escape poverty.
- 4 *Poverty line*: Poverty line is specified by finding the consumption expenditure at which a person typically attains the food energy.
- 5 *Economic insufficiencies*: Economic insufficiency stands for individuals or families in which working members are underemployed or incapable of fulfilling the basic needs with wages earned or have opportunity for

economic advancement.

- 6 *Economic insecurities*: Economic insecurity is a condition in which an individual or household's economic well-being and stability are compromised.

3. Scope of The Subject:

What is Poverty: Poverty as a social problem first recognized in Europe and the United States during the Industrial Revolution at the end of the 1700's. A slow, stately agriculture economy gave way to the hustle and bustle of factories. working people abandoned the spaciousness of farms for the day life and distempers of factories and slums. the industrial revolution transformed the Western world, created great private fortunes and permitted giant steps in man's material progress accomplishing considerable price for human.

Poverty is a situation in which an individual lack sufficient foods, housing, clothing and other basic items to sustain life.

How to measure poverty:

Sen's Capability Approach: In his book *Development as Freedom*, Amartya Sen introduces the poverty research the ability of an individual to lead his life's sees as worthy.

3.1.1 By Severeness of poverty

Absolute Poverty: Absolute Poverty means the inability to attain a specific standard of living often, measured in terms of income or consumption. It is also called subsistence poverty since it is based on assessment of minimum subsistence requirements.

Relative Poverty: Relative poverty is characterized by comparing one income or standard of living with living standards of other reference group.

3.1.2 By duration of occurrence

Situational poverty: Situational poverty is often temporary and is generally caused by a sudden crisis or loss, environmental disasters, jobless divorce or severe health problems.

Generational poverty: Generational poverty occurs in families where at least two generations have been born into poverty and in this type of poverty the families are not equipped with the tools to move out of their situations.

3.1.3 By the location

Rural poverty: job market in small towns is limited, which prevents people

with an already low-income from improving their finances and gaining access to certain services.

On availability of the land for farming, Rural poverty is further divided:

- i) *Interstitial poverty*: Interstitial poverty is the poverty of farm laborers.
- ii) *Peripheral Poverty*: Peripheral poverty is the poverty of the marginal subsidence area in rural area.
- iii) *Traumatic or Sporadic Poverty*: traumatic or sporadic poverty is the poverty which is induced by civil war, natural disaster in rural area.
- iv) *Endemic poverty*: Endemic as a term suggests particular place or people. Endemic poverty is persistent long-term poverty of particular people or region that may span not just many years but may extend over generations.

Urban Poverty: Specific to metropolitan areas with population over 50000 inhabitants. The urban poverty is often deal with the inadequate housing and services common to people of other type of poverty and special features like violence overcrowding and another chronic stressor.

- i) *Income/ Asset Poverty*: Income or Asset poverty is the inability of an individuals or family to build up sufficient savings or other, to carry themselves through periods of economic hardship.
- ii) *Housing Poverty*: Housing poverty refers to the urban poverty which is characterized by homelessness, overcrowding and very poor access to infrastructure.

3.1.4 Based on sufferers of poverty

Individual Poverty: The term “Individual Poverty” may be used to denote the inability or failure of a family to obtain the necessary income for the minimum.

Collective Poverty: Collective Poverty exists in nations or regions where economic resources do not meet the needs of the populations. examples India.

3.1.5 Based on priority

Primary poverty/Extreme poverty: Primary poverty is defined families whose total earnings are insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency and is based on nutritional standards, a standard diet pattern and others’ opinion of minimum expenditures.

Secondary Poverty: Secondary poverty involves incomes which were sufficient to purchase the minimum necessities, but which we spent in ways such that minimum was not achieved.

3.1.6 Based on aspects

Economic Poverty: Lack of monetary demands for providing themselves with food, cloth and shelter.

Social poverty: Social poverty is a poverty which is controlled by the economic power of the rich place. It is a condition of want which results from individual misfortune or incapacity, where the poor is kept poor in the service of the rich.

3.1.7 Based on period of occurrences

Cyclical Poverty: Cyclical poverty is the widespread but temporary deprivation which occurs because of failure of crops in an agricultural economy or a breakdown of commercial economy.

Seasonal Poverty: Seasonal poverty occurs where the extent of poverty depends upon on the electrical cycle, important forthcoming in democracy and when government tends to lower the cost of living and to create additional employment opportunities in perception for an election-economic system and underdevelopment.

Endemic Poverty: Endemic, as a term, suggests nativity to particular place or people. Endemic poverty is persistent long-term poverty of a particular people or region that may span not just many years but may extend over generations.

4 **Laws of the subject or any division(s) of it:** Not available in the subject

5 Historical developments of the subject:

The scientific study of poverty in the Anglo-Saxon world is usually taken to date from the investigations of Booth and Rowntree at the end of the 19th century. In Britain it is true that the King and others have given estimates of the numbers of paupers, and that *That State of The Poor* by Eden (1797) contained great deal of family budgets. Engles and Mayhew provided insight into the condition of the urban poor in urban England. But it was Booth's *Life and Labor* (1892-7) survey of London, combined the elements of first-hand observation with a systematic attempt to measure the extent of the problem.

Later, the survey method is used by Bowley, who already pioneered the use of sampling, in his survey of *London Life and Labor* published in early 1930s. It was not however until the 1960s that the problems of poverty received systematic study, with a few exceptions. Such as the work of Lampman (1959), *The Other America* (1962) by Harrington and *The Affluent Society* (1958) by Galbraith.

Similar study has been carried out in many countries and researchers have increasingly interested in cross – country relationships. The OECD made an early attempt at such comparisons and a more extensive exercise is carried out by in the Luxembourg Income Study. Any assessment of world poverty depends on the availability of information about the distribution of living standards within individual countries, and here both the World Bank and the International Labor Organizations. In some low-income countries, like India, there have been extensive research on poverty. ILO and the World Bank have also been influential in the widespread interest, reflected in the Brandt Report (1980), in the concept of “basic needs” or a minimum set of specific goods and environmental conditions.

3.2 Application of the subject “Poverty” on another subject:

- 1 *Anthropology*: The study of human societies and cultures and their development
- 2 *Demography*: Demography is the study of population characteristics conducted by often through census by population.
- 3 *Ethnology*: Ethnology is the study of human race.
- 4 *Nutrition*: Nutrition is the science of foods, the nutrients and other substances therein, their action, interaction, and balance in relationship to health and disease, the process by which the organism ingests, digests, absorbs, transports, and utilizes nutrients and disposes of their end products.
- 5 *Rural Development*: Rural development is the process of development of rural area using rural economy and resources.
- 6 *Social Work*: Study of the organized work, directed towards the betterment of social condition in the community, as by seeking to improve the condition of poor, the welfare of the children.

3.3 Tool subjects (i.e. other subjects applicable to subject concerned for its development)

3.3.a *Sociology*: Sociology is the science or study of the origin, development, organization and functioning of human society, the fundamental laws of human relation, institutions etc.

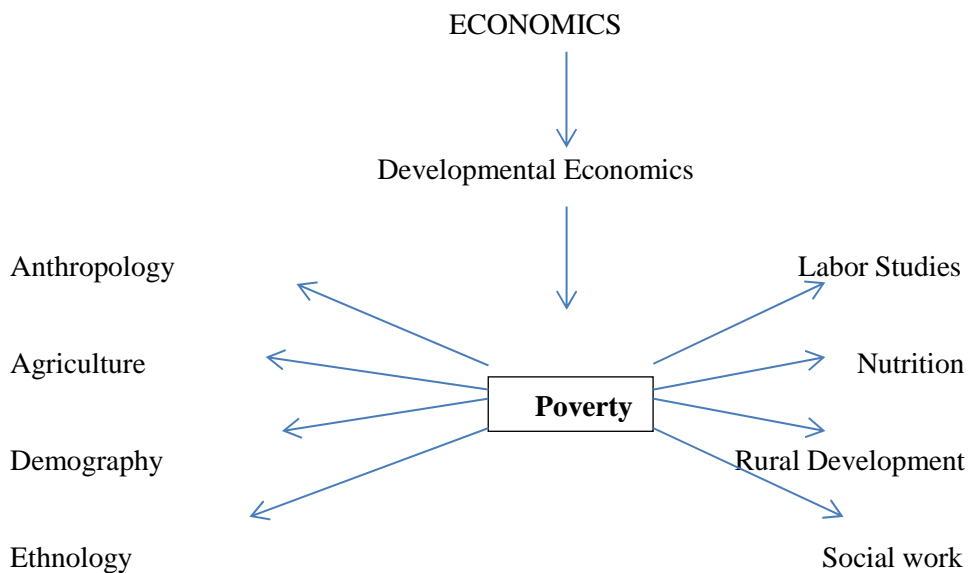
3.3.b *Public Administration*: A branch of political science dealing primarily with the structure and workings of agencies charged with governmental functions.

3.3.c Agriculture: The science, art or practices of cultivating the soil, producing crops and raising livestock and in varying degree the preparations and marketing of the resulting products-farming.

3.3.d Political Science: A social science concerned chiefly with the description and analysis of political and especially governmental institutions and processes.

3.4 Penumbra areas (Related subjects)

Note: The penumbra subjects of poverty are shown here in schematically.



3.5 Classification

3.5.1 Special Classification

Not Available.

3.5.2 Document/Library Classification

(A) Classification Schemes(A.1) Colon Classification

Y Sociology

4 Social Pathology

43 Destitution

434 Poverty

(A.2) Dewey Decimal Classification

- 300 Social Sciences
- 360 Social services, associations
- 362 Social welfare problems and welfare
- 362.5 Problem and services to the poor; poverty

(C) Subject Heading Lists

(C.1) Library of Congress subject HeadingsPoverty

UF DestitutionBT Wealth

RT Basic Needs

BeggingPoor

Subsistence economy

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EXPLORING PRACTICES AND CHALLENGES OF PRESCHOOL EDUCATION IN GAMO ZONE, ETHIOPIA

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ABSTRACT

This study explored the practices and challenges encountered in preschool education in Gamo zone. Employing a descriptive survey research design, data were gathered from 102 preschool teachers using stratified and simple random sampling methods. Questionnaire and classroom observations served as primary data collection tools. Quantitative data from the questionnaires underwent analysis using frequency counts and percentages, while qualitative data from observations were analyzed to complement the quantitative findings. The study identified significant shortages in crucial curriculum materials such as policy documents, syllabi, teacher guides, and student textbooks. Additionally, inadequacies in preschool environments, both indoor and outdoor, were noted, alongside a lack of standardized teaching methods and assessment techniques. Challenges including low salaries, material shortages, inadequate play materials, and weak community participation were also observed. Finally, based on the findings of the study, results were discussed and conclusion and recommendations were made.

Keywords: *Preschool Education, Challenges, Practices*

1. BACKGROUND OF THE STUDY

The early years of a child's life serve as the cornerstone for their future development and success. As emphasized by Bibi (2013), this critical window of opportunity during the first years lays the groundwork for a child's cognitive, social, emotional, and physical growth. Early childhood education (ECE) programs play a pivotal role in nurturing these developmental domains, setting the stage for lifelong learning and well-being (Ministry of Education, 2010).

Investments in high-quality early childhood education yield substantial returns, as highlighted by Bose (2008). These returns extend beyond individual benefits such as increased earnings and improved physical and mental health to include positive societal outcomes such as reduced crime rates and enhanced tax

revenues. Additionally, early intervention programs, as noted by Carencro and Heckman (2003), are more cost-effective than remediation efforts later in life, emphasizing the importance of investing in early childhood education.

In Ethiopia, the significance of early childhood education is underscored by its inclusion in the Education and Training Policy (MoE, 2002), which aims to prepare children for primary school through a three-year preschool program for children aged four to six. Furthermore, Ethiopia's Education Sector Development Program IV (ESDP IV) recognizes the potential of early childhood education in improving the quality of education, reducing dropout rates, and facilitating the acquisition of basic literacy skills (MoE, 2010).

To address the holistic development of children from prenatal stages to seven years of age, the Ethiopian government, represented by the Ministries of Education, Health and Women's Affairs, endorsed a National Policy Framework for Early Childhood Care and Education in 2010 (Yigzaw & Abdirahman, 2017). The vision of the policy is to ensure the fulfillment of every child's right to a healthy start in life, to grow in a nurturing, safe, caring and stimulating environment, and to develop to their full potential.

Despite efforts to improve preschool education in Ethiopia, significant challenges hinder its effective implementation. Teague (2014) identified several key issues in his research on preprimary education practices and challenges in Addis Ababa. These challenges include a shortage of trained personnel, high employee turnover rates, limited opportunities for teacher training, low teacher salaries, and insufficient parental involvement (as cited in Yigzaw & Abdirahman, 2017). Additionally, a national assessment survey on the status of early childhood care and education (ECCE) in Ethiopia conducted by Tirussew et al. in 2007 highlighted various obstacles. These include large class sizes, a lack of educational materials, absence of a standardized curriculum, overcrowded classrooms, shortages of both educational and play materials, inadequate playgrounds, and the use of developmentally inappropriate teaching methods such as lecture-style instruction and the employment of under qualified teaching staff.

The SNNPR state education bureau has established minimum standards for preschool education programs, but implementing these standards, especially in the Gamo zone, faces significant challenges. Researchers have observed shortage of trained teachers, overcrowded classrooms, and shortages of both play materials and inadequate playgrounds in most of preschool centers in the study

area. However, research experience on early childhood education is very limited. Therefore, this study aims to explore the practices and identify challenges by thoroughly examining how preschools operate in the Gamo zone. By understanding their practices and identifying the main obstacles they encounter, the study aims to provide insights that can help improve preschool education in the region.

This study focuses on exploring preschool education in the Gamo zone of Ethiopia, with two primary objectives. Firstly, it seeks to investigate how preschools operate in the area, including the materials they use, teaching methods, and assessment practices. Understanding these aspects is crucial for enhancing preschool education and ensuring children have a strong foundation for learning. Secondly, the study aims to identify and understand the main challenges that preschools encounter in effectively educating children. By doing so, the study aims to find solutions to improve preschool education in the Gamo zone, providing children with better opportunities to learn and succeed. Ultimately, the study aims to gather valuable insights to enhance preschool education in the region and set children up for success in their future endeavors.

2. METHODS AND MATERIALS

2.1. Research Design

The study used a descriptive survey design, which helps to understand the current situation. It allows collecting information on how preschool education is practiced and the challenges it faces. Both qualitative and quantitative data were used to describe the practices and challenges preschool education in the zone.

2.2. Sources of Data

This study gathered information from both primary and secondary sources. Primary data came from teachers while secondary data were obtained from written documents such as syllabi, teacher guides, student textbooks, and policy guidelines.

2.3. Sample and Sampling Techniques

The study targeted preschool teachers within the study area. Researchers utilized a combination of stratified and simple random sampling to select samples. In the Gamo zone, which comprised fourteen woredas and four town administrations, there were a total of 554 primary schools offering preschool. From these, researchers randomly selected four woredas (A/Minch Zuria, Gerese, Boreda, and M/abaya) and three town administrations (Arba Minch, Kemba, and

Chencha). Each woreda and town administration had an equal chance of being chosen. Additionally, 35 preschools were randomly selected from the total of 130 preschools in the selected woredas and town administrations. All preschool teachers (102) from the selected preschools were included in the study.

2.4. Instrument of Data Collection

The study employed two methods to collect data: questionnaire and classroom observation.

Questionnaire

In this study, researchers used a self-developed questionnaire to gather data from preschool teachers. Since the participants were diploma-holding teachers, the questionnaire was administered in English.

Observation

Observation was used to collect additional data for the study. This included directly observing classrooms while teachers conducted their lessons. Consequently, various elements such as the indoor and outdoor school environments, teaching methods, and assessment techniques were observed and recorded.

2.5. Pilot Testing

To check the reliability of the questionnaire, a pilot test was conducted in two private preschools in Arba Minch town. The results showed a reliability coefficient of 0.88 which means the instrument was reliable. This meets the recommendation in statistical literature, which suggests that a reliability test result of 0.65 (or 65%) and above indicates reliability.

2.6. Ethical considerations

The Institutional Research Ethics Review Board (IRB) of Arba Minch University's School of Pedagogical and Behavioral Sciences granted ethical approval for this study with a protocol number of SPBS/1995/22. Members of review committee were; Digafe Darza (PhD), Shitaye Shambel (MA) and Zebiba Temam (MA). Participation of respondents was strictly on voluntary basis. Before enrolling in the study, all study participants were informed about the purpose of the study, and their right to refuse and withdraw from the study without penalty. Moreover, written and signed voluntary consent from teachers was obtained. The participant's anonymity was maintained by using code numbers rather than the participant's name.

2.7. Data Analysis Techniques

After the collection of data from the respondents, the next step was analyzing the collected data. The data obtained by the questionnaire was presented by the use of tables, frequencies and percentage. While the data gathered through observation was used to triangulate the data gathered by questionnaire.

3. RESULTS

3.1. Demographic Characteristics of Participants

Out of the total 102 questionnaires distributed, 95 were returned. However, 2 of these were discarded because they were incomplete. Therefore, the data collected from the remaining 93 respondents, which accounts for 97.89% of the total sample, were used in the data analysis.

Table 1: Demographic characteristics of participants

Variable	Labels	No.	%
Sex	Male	12	12.9
	Female	81	87.1
Age	20-25	51	54.83
	26-30	23	24.73
	>31	19	20.43
	1-5	57	61.29
Experience	6-10	29	31.18
	>10	7	7.52
	10+0	6	6.5
	Certificate	27	29.0
Qualification	ECCE diploma	43	46.2
	Primary school diploma	17	18.3

Table 1 illustrates that out of the 93 teacher respondents, 81 (87.1%) were females, while 12 (12.9%) were males. This indicates a high representation of female teaching staff in preschools, which aligns with the preference for female teachers in such settings, as suggested by the standard adopted by the SNNPR Education Bureau (MoE, 1995). It emphasizes the qualities of tolerance and motherly love typically associated with female teachers in preschools.

In terms of age, the majority of respondents, 51 (54.83%), fell within the age range of 20-25 years, followed by 23 (24.73%) in the range of 26 to 30 years, and 19 (20.43%) aged 31 years and above. This suggests that the majority of teachers in preschools were in their productive years in the study area.

Regarding work experience, most teachers, 57 (61.29%), had worked for 5 years or less, while 29 (31.18%) had 6 to 10 years of experience, and the remaining 7 (7.52%) had 11 years or more of experience. This indicates that the majority of teacher respondents had relatively limited experience in teaching.

In terms of qualifications, 43 (46.2%) of the teachers were ECCE (Early Childhood Care and Education) diploma holders, 17 (18.3%) held primary school diploma, 27 (29%) held certificate, and the remaining 6 (6.5%) were 10th grade completers. Therefore, it can be inferred that most teachers had the required level of qualification to teach in preschools, although there were a few untrained individuals among them.

3.2. Availability of Curriculum Materials

The study inquired about the availability of curriculum materials, alongside observational assessments. Here are the findings.

Table 2: Availability of curriculum materials

Curriculum Materials	Available		Not available	
	No.	%	No.	%
Policies and standards	14	15.1	79	84.9
Syllabus	-	-	93	100
Teacher guide	13	16	80	86
Text book	46	49.5	47	50.5

According to the data presented in Table 2, the majority of respondents (84.9%) indicated that preschool policies and standards were not available in their respective schools, with only a small percentage (15.1%) confirming their availability. Regarding the availability of the preschool syllabus, all respondents reported that it was not available in their schools.

Similarly, a significant majority of respondents (86%) stated that teacher guides were not available in their schools, while only 16% confirmed the availability. In terms of preschool textbooks, almost half of the respondents (50.5%) reported that they did not have textbooks, while the remaining 49.5% confirmed their availability.

In addition to the questionnaire data, observations conducted in the preschools revealed that the majority of schools in the study area lacked preschool policies, standards and syllabus, with few exceptions found in preschools located in the Arba Minch town administration, where preschool policies and standards were present. Furthermore, most preschool teachers in the study area were unaware of

the existence of preschool policy, standards, and syllabus at the regional or national level.

Regarding the availability of teacher guides and textbooks, most observed schools did not have these teaching materials. Additionally, there was a lack of consistency in the content of the textbooks used across preschools that did have them, alongside their shortage.

3.3. Indoor and Outdoor Environment of Preschools

Respondents were also asked as to indicate their agreement or disagreement on suitability of preschool indoor and outdoor environment for preschools students. Beside, observation was conducted.

Indoor environment

Table 3: Indoor environment of the preschools

Indoor Environment	Agree		Disagree	
	No.	%	No.	%
Provision of adequate light and ventilation	66	70.96	27	29.03
Adequate classroom space for free movement	56	60.21	37	39.78
Child sized tables, chairs, shelves and benches	24	25.80	69	74.19
Neat, comfortable and attractive classroom	28	30.10	65	69.89

The data in Table 3 reveals that 66 (70.96%) of respondents agreed that there was adequate light and ventilation in the classrooms, while 27 (29.03%) disagreed. However, observations noted a lack of adequate lighting and ventilation in most preschool classrooms. Similarly, 56 (60.21%) teachers agreed that there was ample space for free movement in the classrooms, while 37 (39.78%) disagreed. Yet, observations highlighted overcrowded classrooms with insufficient space, contradicting respondents' perceptions. Regarding child-sized furniture, only 24 (25.80%) respondents agreed that they were available, with 69 (74.19%) disagreeing. Observations corroborated this, showing a lack of appropriate furniture in most preschools, forcing children to sit on the floor. Moreover, 28 (30.10%) respondents agreed that classrooms were neat, comfortable, and attractive, while 65 (69.89%) disagreed. Observations concurred, revealing unattractive and uncomfortable classroom environments in most preschools.

Outdoor environment

Table 4: Outdoor environments of the preschools

Outdoor Environment	Agree		Disagree	
	No.	%	No.	%
Away from the sources of excessive noise	9	9.67	84	90.32
Clean water source in the school compound	31	33.33	62	66.66
Area for garbage disposal and latrine service	17	18.27	76	81.72
Space available for children outdoor play	63	67.74	33	35.48
Availability of equipment for outdoor play	28	30.10	65	69.89

In terms of outdoor environments, 84 (90.32%) respondents agreed that preschools were situated away from excessive noise sources, while 9 (9.67%) disagreed. However, observations confirmed this, noting that most preschools were indeed located away from main roadsides. Regarding clean water sources, only 31 (33.33%) respondents agreed that they were available, with 62 (66.66%) disagreeing, which observations supported by revealing a lack of water taps in school compounds. Similarly, 76 (81.72%) respondents disagreed that there were areas for garbage disposal and latrine services, with only 17 (18.27%) agreeing, corroborated by observations showing a lack of designated areas for such services in most preschools. Regarding outdoor play, 63 (67.74%) respondents agreed that there was adequate space, while 33 (35.48%) disagreed, but 65 (69.89%) disagreed that there were sufficient play materials, findings supported by observations showing inadequacies in outdoor space and play materials in most preschools.

3.4. Teaching Methods used in Preschools

Respondents were asked to choose the teaching methods which they employ frequently in their class.

Table 5: Teaching methods used in preschools

Teaching methods	Frequently		Sometimes		Not at all	
	No.	%	No.	%	No.	%
Play	55	59.13	31	33.33	7	7.52
Field trip	-	-	85	91.39	8	8.60
Discussion	20	21.50	44	47.31	29	31.18
Question and answer	64	68.81	24	25.80	5	5.37
Cooperative learning	32	34.40	25	26.88	36	38.70
Learning by doing	26	27.95	40	43.01	27	29.03
Lecture/explanation	68	73.11	18	19.35	7	7.52

Table 5 outlines the prevalent teaching methodologies employed in preschools, with a clear inclination towards traditional approaches such as lecture/explanation and question and answer sessions. A significant majority of teacher respondents, comprising 68.81% and 73.11% respectively, acknowledged the frequent utilization of these methods in their instructional practices. Surprisingly, more interactive techniques like discussion, cooperative learning, and learning by doing received notably less emphasis, as reported by only around one-fifth to one-fourth of the respondents. Even more striking is the stark underutilization of field trips, with an overwhelming 91.39% of respondents indicating their infrequent deployment. Such findings suggest a predominant reliance on traditional teaching approaches over more participatory and experiential methods, potentially limiting the richness of learning experiences available to preschool students. Observations conducted during class sessions corroborate these survey results, revealing a predominant reliance on lecture-style instruction, often lacking in structured engagement and interactive learning opportunities. Despite the curriculum's recommendations advocating for varied pedagogical approaches like discussions and hands-on activities, their implementation appears to be limited in practice.

3.5. Assessment Techniques used in Preschools

Respondents were also asked to choose the commonly used assessment techniques used in the preschools.

Table 6: Assessment techniques used by preschool teachers

Assessment techniques	Frequently		Sometimes		Not at all	
	No.	%	No.	%	No.	%
Test	80	86.02	9	9.67	4	4.3
Observation	40	43.01	47	50.53	6	6.45
Class participation	35	37.63	30	32.25	28	30.10
Writing and drawing work of children	37	39.78	53	56.98	3	3.22
Classwork and homework	66	70.96	22	23.65	5	5.37

Table 6 presents the assessment techniques commonly employed in preschools, with a clear preference for traditional methods like tests and classwork/homework. A significant majority of respondents, representing 86.02% and 70.96% respectively, indicated frequent use of these assessment methods to evaluate children's development. Writing and drawing tasks, along with observation, which are also commonly recommended assessment methods, were chosen by 56.98% and 50.53% of respondents, indicating somewhat lower

but still significant usage. However, more interactive assessment techniques such as class participation and evaluating children's writing and drawing tasks were reported to be used only occasionally, with 37.63% and 37.63% respectively. Observation further revealed a predominant reliance on traditional assessment practices, notably testing and assigning homework/classwork.

3.6. Challenges of Preschool Education

Respondents were asked to identify major challenges of preschool education. The given options were “Yes” or “No”.

Table 7: Challenges of preschool education

Challenges	Yes		No	
	No.	%	No.	%
Inadequate indoor and outdoor play materials	87	93.54	6	6.45
Lack/shortage of trained teachers	47	50.53	46	49.46
Inadequate government budget support	93	100	-	-
Weak/ lack of community participation	64	68.81	29	31
Shortage of curriculum and teaching materials	93	100	-	-
Low teacher salaries	93	100	-	-

Table 7 sheds light on the primary challenges identified by teachers in the realm of preschool education. It is unanimous among respondents that low preschool teacher salaries, scarcity of teaching materials, and insufficient government budgetary support pose significant obstacles. A notable majority, representing 93.54% and 68.81% respectively, pinpointed the inadequacy of indoor and outdoor play materials, as well as weak community participation, as pressing concerns. Additionally, 50.53% of respondents highlighted the shortage or inadequacy of trained teachers as a major issue. Beyond the closed-ended survey responses, teachers elaborated on further challenges they perceive in preschool education. These included a lack of professional development opportunities, pest infestations in classrooms, and substandard working conditions within schools.

4. DISCUSSION

4.1. Availability of Curriculum Materials

The assessment of curriculum material availability in sampled preschools revealed significant shortcomings, consistent with findings from Mesay et al. (2019) in Hawassa city. Both survey responses and observations indicated a lack of essential materials such as preschool policy, standard, syllabus, teacher guides, and textbooks. This deficiency not only compromises the quality of

teaching and learning but also points to broader systemic neglect of preschool education. Observations confirmed the absence of crucial materials across most preschools, echoing the findings of Beide and Yigzaw (2019) in Dire-Dawa City, where the majority of preschool centers lacked materials for preschool children. These studies underscore the urgent need for comprehensive measures to rectify these deficiencies and align educational resources with established standards.

4.2. Indoor and Outdoor Environment of Preschools

The indoor and outdoor environments of preschools emerged as critical factors influencing early childhood education quality. While respondents generally perceived adequate lighting, ventilation, and outdoor space, observations revealed significant discrepancies. Overcrowded classrooms and a lack of child-sized furniture compromised comfort and functionality, consistent with Chowdhury and Choudhury (2002), who emphasized the importance of suitable indoor environments for effective preschool education. Similarly, inadequately equipped and unsafe outdoor play areas limited children's opportunities for exploration and physical activity, aligning with findings from Beide and Yigzaw (2019) regarding the shortage of outdoor materials and playgrounds in preschool centers. These findings highlight the importance of aligning physical learning environments with established standards and investing in infrastructure and resources to support optimal early childhood development.

4.3. Teaching Methods Used in Preschools

Traditional teaching methods such as lecture/explanation predominated in preschool settings, with limited engagement with child-directed approaches. While explanation and question-answer methods were commonly employed, more interactive and experiential approaches like cooperative learning and field trips were underutilized, consistent with the findings of Mesay (2009). This imbalance may hinder children's cognitive and socio-emotional development, emphasizing the need for teacher training and professional development initiatives to promote a more diverse and child-centered pedagogical approach.

4.4. Assessment Techniques Used by Preschool Teachers

The assessment practices in preschools revealed an overreliance on tests and homework, indicating a narrow understanding of assessment among teachers. Neglect of observation, class participation, and other formative assessment techniques undermines the holistic evaluation of children's progress, echoing the findings of Curtis (2003). This underscores the importance of promoting a

comprehensive assessment framework that aligns with the developmental needs of young children and provides teachers with the necessary training and resources to implement effective assessment practices.

4.5. Challenges of Preschool Education

Identified challenges such as low teacher salaries, inadequate teaching materials, and limited government support underscore systemic issues undermining the quality and accessibility of early childhood education, consistent with findings from Tolosa (2019). Lack of community participation, professionally qualified teachers, and essential curricular materials further compound these challenges, echoing the concerns raised by teachers in the study. Addressing these issues requires a multifaceted approach, encompassing policy reforms, increased investment in preschool education, and community engagement initiatives to support the holistic development of young children and ensure equitable access to quality early childhood education for all.

5. CONCLUSION

Based on the study's findings, several key points emerge regarding preschool education in the Gamo zone. First, there's a noticeable shortage of crucial curriculum materials like policies, standards, and teacher guides in preschools. This indicates a need for better distribution and implementation by the SNNPR Education Bureau.

Secondly, while indoor environments generally have sufficient lighting and ventilation, there's a lack of child-friendly furniture and overall cleanliness in classrooms. Outdoor play areas also lack proper equipment and designated spots for garbage disposal and clean water sources. These shortcomings suggest a need for improvements in the physical infrastructure of preschools.

Moreover, teaching methods primarily involve lectures, with minimal interactive approaches like discussions. Assessment techniques mainly rely on tests and homework, neglecting observation-based evaluations. Furthermore, preschool education faces various challenges including material shortages, insufficient government funding, lack of qualified teachers, poor management, and low teacher salaries. Addressing these issues is crucial for enhancing preschool education quality in the region.

6. RECOMMENDATION

To enhance preschool education in the Gamo zone, several steps should be taken. First, the SNNPR Education Bureau needs to focus on distributing and

enforcing crucial preschool curriculum materials. This ensures that all preschools have access to necessary resources, promoting consistency and quality throughout the region.

Second, it's essential for school administrations to prioritize improving indoor and outdoor environments in preschools. This involves providing sufficient space, materials, and safety measures to create conducive learning environments for young children. Additionally, zonal education offices should organize training programs for preschool teachers, emphasizing effective teaching methods and assessment techniques tailored to preschool education. By addressing challenges such as material shortages, inadequate budget support, and teacher qualifications, authorities can improve preschool education quality. Further research is also recommended to identify and address additional critical issues not covered in this study. Implementing these measures will contribute to better preschool education, supporting the early development and learning of children in the Gamo zone.

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TODAY'S EDUCATION SYSTEM & VALUE EDUCATION

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ABSTRACT

Explosion of knowledge and rapid development in science and technology has led to the emergence of high life style and raised the standard of living of people, but has declined the standard of life. Humankind is in a state of flux, discontent and unrest despite so much of material prosperity and opulence. Today humankind is passing through a turbulent phase as there is an erosion of values at all levels and in every facet of society. Indeed the survival of human race at this present critical juncture depends on education, which can help to overcome all these evils and will thereby, help man in becoming a rational and human being.

Role of Education

Education is the powerful and pervasive agent for the all-round development of individual and thus, social transformation. Education alone can sustain culture and civilization together. A balanced development of mind and body in harmony with the spirit is the key to the enrichment of human personality, and also the key to 'true education', and will ultimately help humanity to rise to a higher level of consciousness. **Gandhiji** (1974) said, "Unless the development of the mind and body goes hand in hand with a corresponding awakening of the soul, the former alone would prove to be a poor lopsided affair... By education I mean an all-round drawing out of the best in child and man—body, mind and spirit." **Dr. Radhakrishnan** (1965) said, "The three things- vital dynamism, intellectual efficiency and spiritual direction together constitute the proper aim of education. Moral and spiritual training is an essential part of education. What we need today is the education of the whole man- physical, vital, mental, intellectual and spiritual... If education is to help us to meet the moral challenge of the age and play its part in the life of the community, it should be liberating and life giving." **Swami Vivekananda** (1992) stated, "Education is not the amount of information

that is put into your brain and runs riot there, undigested all your life. We must have life-building, man making, character making and assimilation of ideas. We want that education by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet."

The education system of a country plays a significant role in shaping the future of its youth. As far as our education system is concerned it is neither congenial nor imparting its role in true sense in weaving the true personality of our children. But the picture of present education scenario is dismal and gloomy. Education has become materialistic and knowledge oriented education leading to the development of lopsided personalities. It has pushed back the religious, moral and spiritual values of our great tradition which misbalances the modern man between material prosperity and spiritual prosperity. There is a lack of harmony between the outer life of action and inner life of emotions of man, ultimately leading to crisis in character and deterioration of values in all spheres of life social, political, economic, cultural, moral and religious.

Need of Value Education:

Values are those standards or codes of conduct conditioned by one's cultural tenets, guided by conscience, according to which one is supposed to conduct himself and shape his life pattern by integrating his benefits, ideas and attitudes to realize the cherished ideals and aims of life. Values are the norms, which hold and sustain life and society and establish a symbiotic and interdependent relationship between humankind and ecosystem. In order to redeem the modern man from all these maladies, the concern for value education is imperative.

Robb (1998) defines value education as an activity which can take place in any organisation during which people are assisted by others, who may be older, in authority or more experienced, to make explicit those values underlying their own behaviour, to assess the effectiveness of these values and associated behaviour for their own and others' long term wellbeing and to reflect on and acquire other values and behaviour which they themselves realise are more effective for long term well-being of self and others.

Value education as an approach which inculcates or transmits a set of values which often come from societal or religious rules or cultural ethics or a way whereby people are gradually brought to realize what is good behaviour for themselves and for their community. Values education is ultimately about changing behaviour for the better. Value education can take place at home, schools, colleges, universities, voluntary youth organisations as well as in jails.

Value Education cannot be limited to subject matter, rather goes beyond in the learning styles employed, the scheduling of the classroom, co-curricular activities and parental involvement. In fact value education is instrumental to secure the fullest possible development of body, mind and heart. Today it is in the hands of educationists, to develop a new dimension of education, so that education not only build the defenses of peace in minds and hearts of people but also build bridges between past and the future and serve great ends of dialogue among civilization.

Value education is needed:

- To prepare children for future roles in society whether as parents, teachers or citizens at national or global level.
- Nuclear family setup, working parents, unhealthy relations between parents, dearth of time of part of parents, etc. are some of the reasons that moral values are not being inculcated in the children, so it is the obligatory for schools to fill this void by guiding children to distinguish between good and bad.
- Chaos, disorder, confusion, violence, dishonesty and other social problems in society is being witnessed by the students directly or indirectly through media and internet. Children are consciously or unconsciously imbibing this violence in their behavior. School shootings, cheating in exams, bullying in school, fights between gangs is very much prominent in school situation. If moral values are taught in schools, there would be fewer of such problems.
- To counter bad influences in society ranging from sexual promiscuity, degrading of women, advocacy of violence, and condoning of dishonesty in order to succeed.
- To conduct one's life morally in this world and thus attain liberation. Moral values teach us what is right or wrong, what is good or evil This type of learning helps us to conduct our life morally in this world.
- For building of human beings with strength and power based on our Ancient values of Truth, Goodness and Beauty. If the people of a country become good and great, that country will automatically become good and great.
- Due to globalization, the modern society is becoming increasingly interdependent, hence learning to live together at family, society,

national and international level is essential. Values like compassion, cooperation, respect, truthfulness, care, tolerance, etc. should be developed in the youth so as to live a good life.

- Values promote efficiency, as it shows a clear line of action by keeping man free from realms of confusions and sorrows that forbid him to grow in life.
- If education is to be value based, it cannot be achieved if teachers themselves lack the understanding, knowledge, appreciation and upholding of the moral values. So moral values should be an integral part of teacher training programmes.
- Value education builds character, promotes personality development and culminates in social cohesion, national regeneration and nation building
- Promotes ideal of humanity and peaceful world order through acquisition of ability to live together along with cognitive capital.
- Builds foundation of quality of life and leads growth in spiritual values.

Conclusion:

A society without values will cease to be human. The more human values are cherished; the better will be the growth of society, the nation and the world. We cannot be content with an educational system which is confined to academic achievement. It has to promote human virtues simultaneously. The main problem of our education today is how to adapt the spiritual and cultural traditions we have inherited from the past to our present day life. It is quite evident that mere economic prosperity and material wealth cannot result in a lasting well-being of mankind. The inner strength of mankind springs from within, which needs to be nourished through value education, and by making value education an integral part of education system in letter and spirit.

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SECONDARY SCHOOL STUDENTS' METACOGNITIVE AWARENESS WITH REFERENCE TO THEIR ACADEMIC ACHIEVEMENT

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ABSTRACT

Metacognition is the understanding of one's own cognitive processes and the capacity to regulate, organize, and adjust them in response to new information. Academic success frequently depends on a student's capacity for autonomous, effective thought so they can take ownership of their education. These students have mastered basic but essential skills including organizing their workspace, finishing assignments on time, creating a learning plan, tracking their progress, and figuring out when it might be helpful to shift directions. Students who master cognitive and metacognitive techniques can "drive their brains." Being more mindful, introspective, and cognizant of one's development as a learner is akin to being metacognitive. The goal of the current study is to determine how secondary students' academic achievement and metacognitive awareness relate to one another. One hundred secondary pupils from various West Bengali schools made up the study's sample. The results showed a substantial difference between undergraduate students' academic achievement with high and low metacognitive awareness scores.

Keywords: Metacognition, Metacognitive awareness, Knowledge about Cognition, Regulation of Cognition, Academic achievement.

INRODUCTION

The definition of metacognition is as simple as "thinking about thinking." A better way to put it is that metacognition is the consciousness or understanding of the knowledge that one has learned. This comprehension can be demonstrated

by using the knowledge in practice or by being able to explain it orally. Put another way, it has to do with being conscious of your own thoughts and the options that come to mind when you solve issues, decide what to do, or analyze a text. It also entails deliberately selecting your approach when faced with obstacles, confirming the path you are on, and regularly monitoring your progress. It is about being able to reflect on your own learning and approaching things with an active, thoughtful, and methodical attitude.

Learning is aided by metacognition, which also serves as a reliable indicator of academic achievement (Dunning, Johnson, Ehrlinger, and Kruger, 2003; Kruger and Dunning, 1999). When compared to kids who have low metacognition, those who have strong metacognition perform better academically. Metacognitive training can help students who struggle with metacognition to become more proficient in both their academic and metacognitive domains. Metacognition varies from person to person, and those who struggle with it are labeled as "incompetent" since they don't measure up to their peers (Kruger and Dunning, 1999). By learning new material instead of concentrating on reviewing previously taught material, for example, metacognition empowers students to be strategic learners (Everson and Tobias, 1998).

RIVEWS OF RELATED LITERATURE:

The metacognitive awareness of pupils at different levels has been the subject of numerous research. Narang, D. and SainiS., (2013) investigated how metacognition affected rural teenagers' academic performance (ages 13 to 16). The majority of subjects who demonstrated a high level of metacognition also outperformed the average in their academic performance, according to the results.

Additional study showed that the adolescents' academic performance was highly influenced by both the "Knowledge of Cognition" and "Regulation of Cognition" components of metacognition. Two research by McCabe J. (2011) investigated undergraduates' metacognitive awareness of six learning strategies that have been empirically supported. Overall, Study 1's findings indicated that it was impossible to forecast the learning outcomes of instructional scenarios that described the dual-coding, static-media presentations, low-interest extraneous details, testing, and spacing strategies. The strategy of creating one's own study materials, however, received only mediocre support. Additionally, there was a correlation between scenario performance and an independent measure of metacognitive self-regulation. Study 2 showed that students who had gotten

specific instruction in applied memory subjects in their psychology courses had better prediction accuracy, and that students who were exposed directly to the original empirical studies from which the scenarios were developed performed at their best. Overall, this study indicates that undergraduates are not well-versed in a number of specific tactics that could help them remember material from courses; additionally, instruction in applied learning and memory-related issues may enhance their ability to make metacognitive assessments in these areas. In order to gather information about students' actual study habits, Karpicke, JD., Butler, AC., & Roediger, HL. (2009) polled 177 college students and asked them to (1) list their study strategies (an open-ended free report question) and (2) indicate whether they would reread or practice recall after studying a textbook chapter (a forced report question). The answers to both questions lead to the same conclusion: while self-testing and retrieval practice are very uncommon during the study session, most students read their notes or textbooks multiple times (despite the strategy's low benefits). They proposed that many students suffer from illusions of competence when they are studying, and that these illusions have a big impact on the methods that students choose to control and monitor their own learning.

The relationship between academic success, metacognition, mastery goals, and performance objectives was investigated by Savia A. Coutinho in 2007. The results of research that indicate pupils who set mastery goals benefit from academic success are corroborated by this study.

A substantial association was discovered between the regulation of the cognitive factor and the knowledge of the cognitive factor by Sperling et al. (2004), who used the MAI to assess the metacognitive awareness of college students. Individual differences in metacognitive accuracy are often assumed to represent differences in metacognitive skill, as noted by Kelemen WL, Frost PJ, and Weaver CA (2000).

There is a strong positive association between students' academic success and metacognitive awareness, according to the research described above on the correlation of metacognition with academic and achievement indicators. Based on the theory that academic accomplishment is entirely mediated by metacognition, the current study looked at the relationship between academic achievement and metacognitive awareness. Because this field of study has not been explored previously, it adds to the amount of knowledge already available on achievement goals and metacognition in connection to academic success.

OBJECTIVES:

1. To study gender differences in academic achievement among secondary students.
2. To study gender differences in metacognitive awareness among secondary students.
3. To study the academic achievement by secondary students having high or low level of metacognitive awareness

HYPOTHESES:

1. There is no significant difference in academic achievement among secondary students in relation to gender.
2. There is no significant difference in metacognitive awareness among secondary school students in relation to gender.
3. There is no significant difference in academic achievement among secondary students having high or low level of Metacognitive awareness.

DESIGN AND SAMPLE OF THE STUDY:

The research approach used for the study was a descriptive survey. The most well-liked and frequently applied research methodology in education has without a doubt been the descriptive survey approach. This approach needs a sample in order to conduct the study, along with specific research instruments. In any research effort, trying to involve every member of the population is not just difficult, but impossible. Therefore, sampling is a necessary tool in all research. The typical process for a researcher is to choose a representative portion of the population from which to extrapolate findings and generalizations about the entire population. The study's population consisted of class X pupils from several schools in the Howrah District of West Bengal. A random sampling technique was used to gather a sample of 100 pupils, both boys and girls, for the current study.

TOOLS USED:

1. Metacognitive Awareness Inventory (MAI) by Schraw & Dennison (1994)
2. Academic achievement of the students was taken from their previous class results.

The Metacognitive Awareness Inventory (MAI) consists of 52-items which measure an individual's knowledge of cognition and regulation of cognition (Schraw & Dennison, 1994). Within these two constructs, the MAI also

examines individuals' monitoring, evaluation of learning, debugging strategies, conditional knowledge, planning, declarative knowledge, information management strategies, and procedural knowledge.

The Knowledge about Cognition dimension covers the areas of declarative, procedural and conditional knowledge as described below:

- i. **Declarative Knowledge**, or the factual information a student must possess before processing or applying critical thinking to the subject; understanding of what, that, or about; awareness of one's own abilities, knowledge bases, and capacity for learning; understanding that pupils may learn through talks, presentations, and demonstrations.
- ii. **Procedural Knowledge**, or the use of knowledge to bring a method or process to completion; understanding of how to use learning techniques, such as strategies; demands that students understand the procedure and when to use it in different contexts. It also assumes that students can learn through problem-solving, cooperative learning, and exploration.
- iii. **Conditional knowledge**, or knowing when and why to use learning procedures; figuring out the conditions in which particular processes or skills should transfer; Students can learn through simulation by applying declarative and procedural knowledge under specific settings.

The following are the topics covered by the Regulation of Cognition dimension, which looks at an individual's planning, information management techniques, understanding monitoring, debugging techniques, and evaluation:

- Setting objectives and devoting resources before gaining knowledge is known as reliability planning.
- Skills and sequences of strategies used to handle information more effectively are known as management strategies (e.g., organizing, elaborating, summarizing, selective focussing)
- Monitoring comprehension, or evaluating one's learning or application of a technique
- Debugging techniques, or methods for fixing comprehension and performance flaws
- Evaluation, or the study of performance and the efficacy of a technique following a learning experience

The internal consistency for the instrument was found to be $\alpha = .95$ (Schraw & Dennison, 1994). Validity Schraw and Dennison (1994) found evidence for the MAI's structural validity through confirmatory factor analysis, in which a 2-factor solution explained 65% of the variance in one sample, and 58% of the variance in another.

DELIMITATIONS OF STUDY

1. The study was restricted to the secondary students of Howrah District in West Bengal.
2. The sample consisted of class X of govt. schools

Statistical Techniques Used The data obtained was subjected to statistical analysis and following statistical tools were used:

1. Descriptive analysis as mean, median and standard deviations were used wherever required.
2. Independent t test were used to find the differences.

RESULTS AND DISCUSSION:

Table 1: Mean differential in the academic achievement of male and female secondary student

Variable	Female (N= 50)		Male (N= 50)		t-value	Level of Significance
	Mean	S.D.	Mean	S.D.		
Academic Achievement	72.18	8.42	65.08	8.04	3.975	.01

The results entered in table 1 clearly indicate significant difference ($t=3.975$) in academic achievement of secondary male and female students. Further, higher mean scores of females ($M=72.1818$) indicates that academic achievement of girls was significantly higher than the male students ($M= 65.0862$)

Table 2: Mean differentials in the knowledge about cognition, Regulation of cognition and total metacognitive awareness of secondary male and female students

Variable	Female (N= 50)		Male (N= 50)		t-value	Level of Significance
	Mean	S.D.	Mean	S.D.		
Knowledge about cognition	12.70	3.64	11.63	3.12	1.467	NS
Regulation of cognition	25.88	6.29	24.30	5.368	1.263	NS

Total of both dimensions= Metacognitive awareness	36.79	9.276	36.33	9.554	,223	NS
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From the results in table 2, it is clear that there was no significant difference in knowledge about Cognition, Regulation of Cognition and total Metacognitive awareness. The results show that there is no gender difference in the knowledge about Cognition, Regulation of Cognition and total Metacognitive awareness. Girls and Boys are equally aware of their own Metacognitive processes.

Table 3: Mean differentials in the academic achievement of secondary students with high and low scores in total dimensions of metacognitive awareness

Variable	High score (N= 24)		Low score (N= 24)		t-value	Level of Significance
	Mean	S.D.	Mean	S.D.		
Knowledge about cognition	15.72	.93	7.75	2.50	14.86	.01
Regulation of cognition	31.56	1.80	18.00	4.28	14.54	.01
Total of both dimensions= Metacognitive awareness	46.92	2.61	26.54	6.607	14.30	.01

The results entered in table 3 show that there was a significant difference in the academic achievement of secondary students with high and low scores in knowledge of cognition, regulation of cognition and total metacognitive awareness. This indicates that students with high scores in total dimensions of metacognitive awareness i.e. Knowledge of Cognition, Regulation of Cognition and Total Metacognitive Awareness have scored high in academic achievement.

CONCLUSION:

The current research examined the connection between students' academic success and metacognitive awareness in secondary students. Overall, the results showed a strong positive correlation between metacognitive awareness and students' academic success. Male and female secondary students did not significantly differ in their levels of metacognitive awareness, but there was a significant difference in their academic achievement, with female students

demonstrating higher levels than male students. Students that are excellent in organizing, managing information, monitoring, troubleshooting, and evaluating are also highly metacognitive self-regulated. Thus, it may be said that students who employ metacognitive methods are more effective than those who do not, and that teachers have a significant role in helping students develop these strategies. When a student discusses a subject with his peers and himself, he is really articulating his thought processes. Before learning any new material, students should assess what they already know and what they don't. They can accomplish this by using a self-asking technique at the start of each class. The goal is to enable the students to intentionally choose their role as learners, specifically for the objectives of that particular course and their prior knowledge of the subject matter they are studying. This includes deciding what they already know and what they hope to learn from the class.

In order to promote training programs that educate students metacognitive abilities and methods that aid improve their achievement and academic performance, it is vital to identify and understand the links between metacognition and academic performance. The findings might potentially be utilized to modify university teaching methods to better suit students' higher order thinking skills and learning requirements.

RECOMMENDATIONS FOR MORE RESEARCH:

1. This study was limited to schools located in Howrah District in West Bengal. The study might be expanded to include additional districts in West Bengal with comparable educational environments.
2. Only 100 students were included in the current study. Future research endeavors can include a greater sample size because the study's findings require validation.
3. Students in colleges can also take the same kind of study.
4. To increase the validity and reliability of the results, a comparable study at several levels can be carried out.

It is possible to design and construct a module that will better meet the demands of Indian adolescents by improving their metacognitive skills.

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