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A Study of Attitude of Primary School Teachers towards the Use of Technology and Its Role in Shaping Inclusive Classroom Environment in 21st Century

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Abstract:

The present research was undertaken to explore the attitude of primary school teachers towards the use of technology and its role in shaping the 21st century inclusive classroom environment. For this motive total 120 teachers from primary schools of west bengal are selected as a sample of this study by purposive method of sampling technique. In this study researcher utilized descriptive survey method. For collect the riquesite data from the targeted sample researcher utilize a self made standardized questionnaire. The outcome demonstrated that according to gender, habitat and stream of study wise attitude of the primary school teachers are not significantly different regarding the use of technology and its role in shaping the 21st century inclusive classroom environment. But in the case of economic status wise attitude of the teachers of primary schools, are seen similar and significant regarding the use of technology and its role in shaping the 21st century inclusive classroom environment.

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Introduction:

"Technology will not replace great teachers, but technology in the hands of great teachers can be transformational."

— George Couros

Education in the 21st century is undergoing rapid transformation, influenced strongly by the integration of technology in classrooms (Voogt &Roblin, 2012). Nowadays, schools have shifted away from the old

traditional teaching methods, teaching aids, and teaching methods like chalk and talk and towards new technology related education systems (Sahni et al., 2025). Digital tools, online platform and interactive resources are very important components of 21st century teaching learning process (Mishra &Koehler, 2006). At the primary level of schooling, it is a learning stage where the teaching and learning process of students begins, where the development of children's foundational skills and their attitude towards teaching and learning is formed (Govinda &Varghese, 1993). The role of technology become even more significant in 21st century. It has the potential not only to make lesson engaging, smooth learning process and interactive classrooms but also to support diverse learning needs and create an inclusive classroom environment for all learners (UNESCO, 2017). Inclusive education emphasizes that every child's regardless of they are ability, family background, or socio economic condition of the family, should have equal accessibility to perceive quality teaching learning opportunities (Florian &Beaton, 2018). In the 21st century, the role of technology in making the teaching and learning process easier and more necessary for students' is immense (Prensky, 2010). Technology services as a bridge in this process by offering flexible, adaptive, and you know better ways of teaching and learning (Selwyn, 2021). For instance various technology related aids like, audio - visual aids; Different types of learning applications; assistive and ai based assistive technologies can helps children's with special educational needs to participate meaning fully in classroom activities (Al-Azawei et al., 2016). In this context, nowadays since the use of technology has become very serious (Nietschke & Dabrowski, 2023). So to know the attitude of the teachers, especially at the primary level, towards these technology have become an important and significant factor of the teaching and learning process (Tondeur et al., 2017). Also their willingness to adopt and effectively use technology determines whether these tools will be integrated in a way that truly benefits for all students (Teo, 2019). Therefore, it is essential to know the attitude of teachers who teach students at the primary level of schooling (Sharma & Nuttal, 2016). Teachers are at the four front of educational change, and their attitude towards technology directly safe classroom practices (Ertmer & Ottenbreit-Leftwich, 2010). Positive attitude may lead to creative, students centred and inclusive teaching approaches while resistance or apprehension can hender the full potential of digital innovations (Mncube et al., 2019). Exploring these attitude provides inside into how inclusive education can be further developed within the current technology-enabled education system (Ainscow et al., 2006). It also provides insights into the advantages, disadvantages, and barriers that can be encountered when incorporating technology into inclusive education, and how those barriers can be overcome (Chatterjee, 2024). This study focuses on examining how primary school teachers perceive the role of technology in shaping inclusive classroom environments (Domingo & Garganté, 2016). By doing so, it highlights the importance of teacher education, professional development, and supportive policies that can encourage effective and equitable use of technology for the benefit of every child (Darling-Hammond et al., 2017).

Need and Significance:

The present study holds great significance as it seeks to understand the attitude of primary school teachers towards the use of technology and its contribution to shaping inclusive classrooms in the 21st century. In the current era of rapid digital transformation, the use of technology in education is a widespread part (Kumar et al., 2020). Educational technology played, important role not only in advance in education, but also in introducing students to technology through education, taking education to the part of improvement (Shrivastava &Sharma, 2023). Also technology has become an integral part of the teaching learning process, not only as a medium of instruction but also as a powerful tool for addressing the diverse needs of learners (Kirkwood &Price, 2014). There is an important reason behind conducting this because it is very essential to investigate the perspective of teachers, who is the architect of the future society, the key facilitators of learning, From what do they view the use of technology in education. And this is very important to investigate the attitude of the primary school teachers to use of technology in creating equitable and educational opportunities for all children including those with special needs. The findings of this research

will provide valuable insights into the readiness and openness of teachers in adopting technology for inclusive practices. Also this study will help to identify or can provide information about the challenges, barriers and opportunities that primary school teachers may face when integrating technology in education and try to create inclusive classroom environment.

Objectives:

1) To know the attitude of male and female primary school teachers regarding the use of technology and its role in shaping the 21st century inclusive classroom environment.

2) To know the attitude of urban and rural primary school teachers regarding the use of technology and its role in shaping the 21st century inclusive classroom environment.

3) To know the attitude of APL and BPL primary school teachers regarding the use of technology and its role in shaping the 21st century inclusive classroom environment.

4) To know the attitude of science and arts primary school teachers regarding the use of technology and its role in shaping the 21st century inclusive classroom environment.

Null hypothesis

$H_0$1: There are no significant differences in the attitude of male and female primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

$H_0$2: There are no significant differences in the attitude of urban and rural primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

$H_0$3: There are no significant differences in the attitude of APL and BPL school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

$H_0$4: There are no significant differences in the attitude of science and arts primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Methodology:

Research approach: The researcher done this study through Quantitative Approach.

Method: For this study researcher uses descriptive survey method to know the attitude of primary school teachers towards the use of technology and its role in shaping the 21st century inclusive classroom environment

Population: For this particular study, researcher selected all the primary school teachers of West Bengal are the population.

Sample: Total 120 teachers of primary schools select as a sample of the study.

Sampling technique: For this study researcher uses purposive method of sampling to select the sample from the targeted population.

Tools: To collect the requisite data from the targeted sample researcher uses a self made standardized questionnaire, namely “Scale on attitude of primary school teachers”

Analysis and Interpretation of the Data:

Analysis of the data pertaining to the hypothesis-1

$H_0$1: There are no significant differences in the attitude of male and female primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Table 1

Variables	N	Mean	SD	't'	Level of Significance
Male	60	33	6.04	1.076	Not Significant at 0.05 level
Female	60	38	5.34		

Results: Table number 1 shows that the comparison of mean difference in the attitude of male and female primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment. The results revealed that, 'mean' score of male teachers of primary schools is 33 where 'mean' score of female teachers of primary schools is 38 and there 'SD' is 6.04 and 5.34 respectively. And the calculated 't'-value is 1.076 which is less than the tabulated value 1.96 at 0.05 level and 2.58 at 0.01 level of significance. So the result conclude that the null hypothesis, '$H_0$1: There is no significant differences in the attitude of male and female primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment' is accepted, therefore we can say that there is no significant differences in the attitude of male and female primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Analysis of the data pertaining to the hypothesis-2

H_o2: There are no significant differences in the attitude of urban and rural primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Table 2

Variables	N	Mean	SD	't'	Level of Significance
Urban	60	33	6.38	1.002	Not Significant at 0.05 level
Rural	60	32	13.80		

Results: Table number 2 shows that the comparison of mean difference in the attitude of urban and rural primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment. The results revealed that, 'mean' score of urban teachers of primary schools is 33 where 'mean' score of rural teachers of primary schools is 32 and there 'SD' is 6.38 and 13.80 respectively. And the calculated 't'-value is 1.002 which is less than the tabulated value 1.96 at 0.05 level and 2.58 at 0.01 level of significance. So the result conclude that the null hypothesis, '$H_0$2: There is no significant differences in the attitude of urban and rural primary school teachers regarding the use technology and its role in

shaping the 21st century inclusive classroom environment' is **accepted**, therefore we can say that there is no significant differences in the attitude of urban and rural primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Analysis of the data pertaining to the hypothesis-3

$H_0$3: There are no significant differences in the attitude of APL and BPL school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Table 3

Variables	N	Mean	SD	't'	Level of Significance
APL	60	33	6.04	2.848	Significant at 0.01 level
BPL	60	25	17.22		

Results: Table number 3 shows that the comparison of mean difference in the attitude of APL and BPL primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment. The results revealed that, 'mean' score of APL teachers of primary schools is 33 where 'mean' score of BPL teachers of primary schools is 25 and there 'SD' is 6.04 and 17.22 respectively. And the calculated 't'-value is 2.848 which is greater than the tabulated value 1.96 at 0.05 level and 2.58 at 0.01 level of significance. So the result conclude that the null hypothesis, $H_0$3: There is no significant differences in the attitude of APL and BPL primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment' is **rejected**, therefore we can say that there is significant differences in the attitude of APL and BPL primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Analysis of the data pertaining to the hypothesis-4

$H_0$4: There are no significant differences in the attitude of science and arts primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Table 4

Variables	N	Mean	SD	't'	Level of Significance
Science	60	25	17.14	1.022	Not Significant at 0.05 level
Arts	60	45	12.81		

Results: Table number 4 shows that the comparison of mean difference in the attitude of science and arts primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment. The results revealed that, 'mean' score of science teachers of primary schools is 25 where 'mean' score of arts teachers of primary schools is 45 and there 'SD' is 17.14 and 12.81 respectively. And the calculated 't'-value is 1.022 which is less than the tabulated value 1.96 at 0.05 level and 2.58 at 0.01

level of significance. So the result conclude that the null hypothesis, $H_0$4: There is no significant differences in the attitude of science and arts primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment' is **accepted**, therefore we can say that there is no significant differences in the attitude of science and arts primary school teachers regarding the use technology and its role in shaping the 21st century inclusive classroom environment.

Discussion and Conclusion:

The contribution of technology to the improvement of education in the present era is also comparable. Educational technology has taken education out of its traditional mold and shown a new path. Educational technology has advanced education and said new light on a single subject, it has also made it easier to integrate the idea of inclusivity by bringing or student into the learning environment. In the present study was undertaken to examine the attitude of primary school teachers toward the use of technology and its role in saping the 21st century inclusive classroom environment. The findings reveal interesting variation across different groups of primary school teachers. The findings conclude that gender doesn't play a significant role in shaping teachers' attitude, as both male and female teachers displayed a similar perspective regarding the importance of technology in inclusive education. Also teachers' from urban and rural areas there is no significant differences in the attitude regarding the use technology and its role in shaping the 21st century inclusive classroom environment. In the same way, Science and Arts teachers also shared a common attitude, indicating that subject background does not create major difference in their perception of technology integration. However, the study also revealed that there is significant difference in the attitude of teachers who belonging from APL and BPL categories. This suggests that socio economic background has a considerable impact on how teachers perceive and adopt technological tools for inclusive practices. Teachers from economically backward, disadvantaged groups mein face various challenges in using technology, which can a lead to differences in their attitudes towards technology. In conclusion, the study emphasizes that while most demographic factors such as gender, locality, and subject discipline do not create significant differences, socio economic status remains a critical factor influencing teacher's attitude towards technology in inclusive classrooms. Therefore, policymakers, higher authorities and educational planners must fully flash on bring down the digital divide and set the seal on equally access to technological resources and training for teachers accross socio-economic backgrounds. This support will help to build a more strong and equitable and a inclusive learning environment in the 21st century.

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