

The Value of Technological Approaches in Teacher Education for Integrating Digital Learning Technologies of Teaching Learning Process

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Abstract: These days, no teacher preparation course is complete without instruction in technological literacy. Technology is seen as an essential component of teacher education by governments, education systems, researchers, school administrators, instructors, and parents on a global scale. The researchers set out to find out how useful technical methods are for incorporating digital learning tools into teacher preparation programmes. Technology usage and school competency, the teacher-student relationship, the classroom setting and pedagogical methods, and the incorporation of digital learning tools were the four primary areas of discussion. All schools that prepare teachers should include ICT into their pedagogical methods, which is central to the research. The researchers in this study used a mixed-methods strategy. Teachers and students from different schools participated in interviews, questionnaires, and classroom observations to compile the data. Four statistics studies' quantitative data and four case studies' qualitative data were pooled. Data were used in this investigation to supplement one another. The findings show that there have been significant shifts in pedagogical methods at schools that train teachers and have used technology initiatives to improve education. The gender gap in the usage of digital learning tools for instruction is a direct outcome of this. In the classroom, male instructors tend to utilise their superior talents for more technologically focused initiatives, while female teachers and trainee teachers choose to employ more commonplace technology for teaching and learning. The purpose of this research is to provide light on the potential for incorporating technology into the teaching and learning process, which may then be used by administrators, policymakers, and teacher educators as a whole.

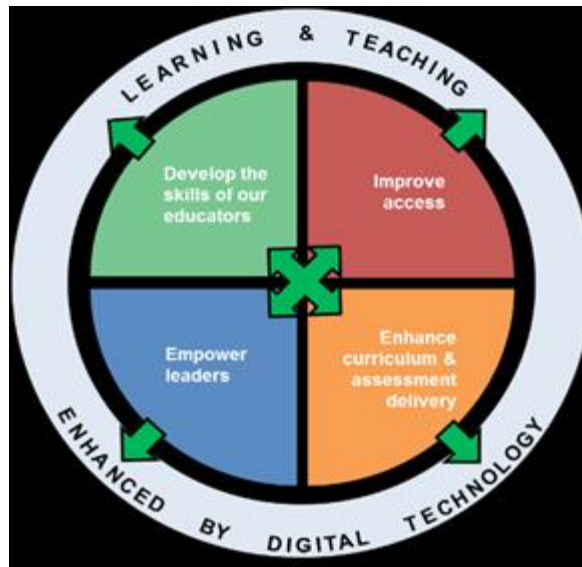
Key points: Digital Learning Technology; Technological Approach; Integrating Digital Technology; Values of Technological Learning.

Introduction:

"Teaching children to compete on an equal footing is one of the greatest benefits of technology in the classroom." I am a student. Joseph King, Jr. The information economy and society of the twenty-first century revolve on learning. For students, we are currently becoming more and more demanding. Modern competencies, including deep learning and the ability to continue learning throughout life, are considered essential. To achieve these lofty goals in our dynamic, ever-evolving information society, innovation is key. When used effectively, technology has the potential to revolutionise education. The bond between teachers and their pupils may be strengthened and progressed via its use. It is important for teacher educators to actively seek out new information and develop their own abilities so that they may better assist trainee teachers in their learning. Those in charge of education should have a long-term goal of designing lessons that provide every student the resources they need to succeed. Many different types of workers, including those who educate future teachers, call the Teacher Education Institute their workplace.

In the realm of education, digital technologies serve as a catalyst for change, allowing for the delivery of educational experiences that were previously impossible. Everything from our jobs to

our companies to our daily routines is being affected by digital technology. It is revolutionising the ways in which kids and teens play, get information, interact, and study. When it comes to education, digital technology has enormous potential.



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How we teach is evolving as a result of technological advancements. We were having this same conversation in this same classroom five years ago, over the use of smart phones. It is not only the technology that is important, but also how it is used that improves learning and teaching procedure. In view of this, since not much was known about the use of technologies in teacher education colleges in West Bengal, this study was designed to establish how instructional technologies were used by teacher in teacher education colleges. The technologies studied were e-learning, smart classroom, ICT, digital projectors, videos, computers and local resources from the environment.

Significance of the Study: We must explore the importance of technology techniques in teacher education if we are to advance educational practices, improve learning outcomes, and prepare both students and educators for a future when we are all digitally linked. More effective, inclusive, and equitable learning environments are being achieved via this continual change of education.

Objectives:

- 1) To observe and find out the values of technological approaches in teacher education for integrating digital learning process.
- 2) To compare the values of technological approaches in teacher education for integrating digital learning process in relation to sex (that is male teachers and female teachers),locality (that is rural area and urban area) and work place (that is govt. institutes and private institutes).

Methodology:

In this study, mixed methods approach was used. The qualitative data from four cases studies and the quantitative data from four statistical studies were combined.

Data analysis and interpretation:

This study is based on sources like survey report, observations, various articles and expert opinion of different resource persons. Descriptive analytic method used for data analysis and interpretation.

Why do use digital learning technologies of teaching leaning process in teacher education?

Incorporating and making use of digital technology in teacher education is one need or problem. Despite the widespread use of digital technologies in the classroom, some online reports claim that these tools are primarily used for administrative purposes rather than to enhance teaching and learning. Another issue is the limited use of digital technologies in teacher education. It would be a

mistake to discount the significance of embracing and making use of digital technology in teacher education given the difficulties associated with doing so in the classroom. That this is important has been taken into consideration by NCTE.

Different strategies for applying digital learning technology in teacher education:

- 1) Applying digital learning technology in the curriculum of teacher education programme.
- 2) Using smart classroom for better improvement of teaching learning process.
- 3) Using various application software for development of teaching learning process.
- 4) Providing technical support, class atmosphere and infrastructure for both teacher educators and trainee teachers.
- 5) Providing sufficient funds for using digital learning technology of teaching process.

Sample: For this study a sample of 282 teacher educators from 96 teacher education institutions of Purba Medinipur And Paschim Medinipur District were selected. Various categories like urban and rural, male and female and govt. And private Were included as sample. The sample was as follows.

Table 1: Sample size in different group

Locality		Employee		Sex	
Rural area	Urban area	Govt. Institutes	Private Institutes	Male Teacher educators	Female teacher educators
138	144	135	147	176	106

Tool Used: A self standardized attitude scale for measuring the technological approaches in teacher educators was used for the collection of data. The TRL scale as a recharge and innovation policy tools assist to develop my scale considered for the duty and responsibility scale were:

The items for the questionnaire were constructed by identifying positive and negative statements for each type of situation. The scoring principles are shown in table 2.

Table 2: Scoring Principles of Response

Response	Positive statement	Negative statement
Strongly Agree	5	1
Agree	4	2
Indifferent	3	3
Disagree	2	4
Strongly disagree	1	5

Statistical Techniques: Collected data were analyzed with the help of mean, Sd and t test in the SPSS version 20.

Data Analysis and Interpretation:

Table 3: 't' test value of technical approaches in teacher education for integrating digital learning technologies of teaching learning process between urban area and rural area:

Duty and Responsibility	N	Mean	SD	SEM	df	t
Urban area	144	143.27	33.24	2.77	280	3.10*
Rural area	138	132.25	26.15	2.23		

* : 't' – value insignificant at 0.05 level.

This table show that teacher educators of urban area use better skills especially in purely technological projects in classroom than teacher educators of rural area. The mean score for approaches in teacher education for integrating digital learning technologies in Urban areas is

143.27, with a standard deviation of 33.24. The mean score for approaches in teacher education for integrating digital learning technologies in Rural areas is 132.25, with a standard deviation of 26.15. The t-test statistic of 3.10* suggests that there is a statistically significant difference in perceptions of approaches in teacher education for integrating digital learning technologies between Urban and Rural areas (* indicates significance at $p < 0.05$).

Table 4: 't' test value of technical approaches in teacher education for integrating digital learning technologies of teaching learning process between Pvt. and Govt. institutes.

Duty and Responsibility	N	Mean	SD	df	t
Private. Institute	147	142.03	34.52	280	2.83*
Govt. Institute	135	131.29	28.42		

*-significant at 0.05 level.

It is found that teacher educators of Pvt. Institutes use better skills especially in purely technological projects in classroom than teacher educators of Govt. institutes. The mean score for approaches in teacher education for integrating digital learning technologies in Private Institutes is 142.03, with a standard deviation of 34.52. The mean score for approaches in teacher education for integrating digital learning technologies in Government Institutes is 131.29, with a standard deviation of 28.42. The t-test statistic of 2.83* suggests that there is a statistically significant difference in approaches in teacher education for integrating digital learning technologies between Private and Government Institutes (* indicates significance at $p < 0.05$).

Table 5: 't' test value of technical approaches in teacher education for integrating digital learning technologies of teaching learning process between male and female.

Duty and Responsibility	N	Mean	SD	df	t
Male teacher educators	176	122.46	28.23	280	0.42
Female teacher educators	106	126.71	126.71		

It is found that male teacher educators use better skills especially in purely technological projects in classroom than female teacher educators. The mean score for approaches in teacher education for integrating digital learning technologies among Male teacher educators is 122.46, with a standard deviation of 28.23. The mean score for approaches in teacher education for integrating digital learning technologies among Female teacher educators is 126.71. The t-test statistic of 0.42 indicates that there is no statistically significant difference in approaches in teacher education for integrating digital learning technologies between Male and Female teacher educators.

Summary of Result:

1. Significant mean difference was found in attitude of teachers of the technological approaches in teacher education for integrating digital learning technology of teaching learning process between Rural and Urban area ($t=3.10$; $df= 280$) its indicates show that teacher educators of urban area use better skills especially in purely technological projects in classroom than teacher educators of rural area.
2. Significant mean difference was found in attitude of teachers of the technological approaches in teacher education for integrating digital learning technology of teaching learning process between govt. and private institute It was also found that duties and responsibilities of govt. employee was significant high than private employee ($t= 2.88$; $df=284$, significant at 0.05 level) it is show that teacher educators of Pvt. Institutes use better skills especially in purely technological projects in classroom than teacher educators of Govt. institutes.
3. Significant mean difference was found in attitude of teachers of the technological approaches in teacher education for integrating digital learning technology of teaching learning process between male and female ($t= 1.39$; $df= 342$, significant at 0.05 level) its show that male teacher educators use better skills especially in purely technological projects in classroom than female teacher educators.

Conclusion:

The greater use of technology in teacher education today is changing students everyday lives and the way they connect at work and in civil society technological integration offering social integration expression and recognition entertainment and diversion information and learning work and progressions in individual One trend in both humanities research and teaching practice is the more concrete building (aka constructionist) activities, expending deep thought process to include creation practices that are it creative and technologically mediated (Papert and Harel 3) within the teaching and learning space, this has led to maker movements where the active thinking that underpins cognitive theories is extended to include student participation in artefact creation (Lewis, A 2009). Technology integration in teacher education is largely influenced by this approach. The approach of technology integration in educational practices is largely influenced by a consideration of the educational technology being used. This study concludes with a suggested process to a how government and me teacher training institutes can work collaboratively to maximize me use of digital technologies in teaching and learning process for prospective teacher.

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