A Comparative Study of Technophobia among Government and Private B.Ed. Trainee Teachers

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Abstract

The present study explores the phenomenon of technophobia among trainee teachers in B.Ed. colleges, with a comparative focus on government and private institutions. In the context of rapidly evolving educational technology, teachers are expected to be digitally competent and confident in integrating ICT into classroom practices. However, many trainee teachers continue to face fear, anxiety, and resistance toward technology use, which can hinder effective teaching and learning. This research aimed to assess and compare the levels of technophobia among government and private B.Ed. trainees across various dimensions—confidence and competence, anxiety and fear, perceived impact on professional growth, institutional support, and attitudes toward educational technology. The study employed a descriptive survey method with a sample of 120 trainee teachers selected through random sampling. A standardized questionnaire was used for data collection, and t-tests were applied to determine group differences. The findings revealed significant differences in several dimensions, highlighting the need for structured ICT training, emotional support, and institutional efforts to reduce technophobia and enhance digital readiness in teacher education.

Keywords: *Technophobia, B.Ed. Trainee Teachers, ICT Integration, Digital Competence, Teacher Education, Technology Anxiety, Government and Private Colleges*

Introduction:

In today's globalized and digitized world, technology plays a critical role in reshaping educational practices. Educational institutions, especially teacher training colleges, are expected to integrate Information and Communication Technology (ICT) into curriculum and pedagogy. Teachers are not only knowledge disseminators but also facilitators of technology-enabled learning. However, a growing body of evidence suggests that despitebeing digital natives, many B.Ed. trainee teachers experience discomfort, fear, and avoidance behavior toward digital tools, a phenomenon known as "technophobia."

Technophobia can seriously hinder teacher effectiveness in modern classrooms, where interactive whiteboards, digital assessments, virtual learning environments, and learning management systems are now commonplace. The problem becomes more acute in the context of Indian B.Ed. programs where infrastructural and pedagogical disparities exist between government and private institutions. This study explores the prevalence and patterns of technophobia across these institutional types.

Review of Related Literature:

Technophobia has been studied in various educational contexts around the world. Scholars like Brosnan (1998) and Rosen & Weil (1995) explored the psychological dimensions of technology resistance, highlighting self-efficacy, anxiety, and lack of exposure as central issues. In India, researchers such as Manikandan (2021) and Aruna Reddi (2023) have investigated technophobia among school teachers and B.Ed. students, identifying infrastructural limitations and lack of training as major contributors.

However, few studies provide a comparative view between government and private institutions. This study aims to fill that gap by examining differences in attitudes, confidence levels, and perceived support structures in both environments.

Objectives of the Study:

Major objective

- To compare the level of technophobia among government and private B.Ed. trainee teachers.

Minor objectives

- To examine differences in confidence and competence.
- To assess anxiety and fear related to technology use.
- To analyze perceived professional impact of technophobia.
- To evaluate the role of institutional support and peer influence.
- To compare attitudes toward technology in education.

Hypotheses

Major hypothesis

- H_0: There is no significant difference in technophobia levels between government and private B.Ed. trainee teachers.

Minor hypotheses

- H_01- There is no significant difference in confidence and competence between the two groups.
- H_02- There is no significant difference in anxiety and fear levels.
- H_03- There is no significant difference in perceived professional impact.
- H_04- There is no significant difference in institutional support and peer influence.
- H_05- There is no significant difference in attitudes toward technology.

Methodology

The study employed a descriptive and comparative survey method. The sample consisted of 120 B.Ed. trainee teachers (60 from government colleges and 60 from private colleges), selected using purposive random sampling from colleges affiliated with C.C.S. University, Meerut.

A self-structured Technophobia Measuring Scale (TPMS) was used, consisting of 30 items across five dimensions. Each item is rated on a 5-point Likert scale, ranging from Strongly Agree to Strongly Disagree. Positive items are scored from 5 to 1, while negatively worded items are reverse scored. The tool underwent pilot testing and demonstrated good internal consistency, with a Cronbach's Alpha reliability coefficient of 0.762 overall. Reliability scores for the individual dimensions ranged from 0.673 to 0.919, indicating that the questionnaire is a valid and reliable instrument for assessing technophobia in the context of teacher education. Statistical tools such as Mean, Standard Deviation, and t-tests were applied to analyze the data.

30 items categorized under five dimensions:

1. Confidence and Competence in Using Technology.
2. Anxiety and Fear Related to Technology.
3. Perceived Impact on Professional Development.
4. Institutional Support and Peer Influence.
5. Attitudes toward Technology in Education.

Results and Analysis

Significant differences were found between government and private B.Ed. students in overall technophobia levels. Government trainees scored higher on the technophobia scale (M = 110) compared to private trainees (M = 101.95), indicating more resistance to technology. Yet, paradoxically, government trainees reported higher confidence and competence, suggesting that emotional and institutional factors play a role in technophobia.

Private college students demonstrated more positive attitudes toward educational technology and reported less anxiety. Government college trainees benefited from stronger institutional support and peer interaction, yet still exhibited higher fear and reluctance toward using technology in real classroom scenarios.

Major Objective

Major Objective-1 of the study: To compare the level of technophobia among trainee teachers in private and government B.Ed. colleges. The major hypothesis is there is no significant difference in the level of Government B.Ed. colleges has been verified with the help of t-test, the results obtained from the analysis are shown in table.

TABLE 1

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (df)	Significance Level	T- Value	Calculated Value of T
Government	60	110	13.487	118	0.05	1.96	3.4664
Private	60	101.95	11.902				

Technophobia between trainee teachers of private and the above table (1) shows that the mean of trainee teachers of government B.Ed. colleges are 110 with a standard deviation of 13.487, while for trainee teachers for private B.Ed. colleges, the mean is 101.95 with a standard deviation of 11.902. The calculated t-value of 3.4664 at 118 degrees of freedom is greater than the t-value of 1.96 at a 0.05 significance level. Therefore, the null hypothesis is that there is no significant difference in the level of technophobia between trainee teachers of private and government B.Ed. colleges are rejected. There is a significant difference between the two groups.
Result - There is a statistically significant difference in technophobia levels between government and private B.Ed. trainee teachers. Government trainees reported higher levels of technophobia compared to their private college's trainee.

MINOR OBJECTIVE

OBJECTIVE 1. To compare the confidence and competence in using technology between government and private B.Ed. trainee teachers. The hypothesis Ho1. There is no significant difference in confidence and competence in using technology between government and private trainee teachers. Has been verified with the help of t-test, the obtained from the analysis are shown in table.

TABLE 2

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (df)	Significance Level	T- Value	Calculated Value of T
Government	60	34.82	2.83	118	0.05	1.96	8.3472
Private	60	28.35	5.29				

The above table (2) shows that the mean of trainee teachers of government B.Ed. colleges are 34.82 with a standard deviation of 2.83, while for trainee teachers for private B.Ed. colleges, the mean is 28.35 with a standard deviation of 5.29. The calculated t-value of 8.3472 at 118 degrees of freedom is greater than the t-value of 1.96 at a 0.05 significance level. Therefore, the null hypothesis is that there is no significant difference in confidence and competence in using technology between government and private trainee teachers are rejected.
Result - Government trainee teachers show significantly higher confidence and competence in using technology than private college trainee teachers. This indicates better self-perceived technical ability among government trainees.

OBJECTIVE 2. To compare the levels of anxiety and fear related to technology between the two groups. The hypothesis Ho2 There is no significant difference in anxiety and fear related to technology between the two groups. Has been verified with the help of t-test, the obtained from the analysis are shown in table.

TABLE 3

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (df)	Significance Level	T- Value	Calculated Value of T
Government	60	36.58	9.87	118	0.05	1.96	0.5766
Private	60	35.68	6.99				

The above table (3) shows that the mean of dimension 2 of trainee teachers of government B.Ed. colleges are 36.58 with a standard deviation of 9.87, while for trainee teachers for private B.Ed. colleges, the mean is 35.68 with a standard deviation of 6.99. The calculated t- value of 0.5766 at 118 degrees of freedom is less than the t-value of 1.96 at a 0.05 significance level. Therefore, the null hypothesis is there is no significant difference in anxiety and fear related to technology between the two groups are accepted.

Result - There is no significant difference in anxiety and fear related to technology between government and private B.Ed. trainee teachers. Both groups experience similar levels of tech-related anxiety.

OBJECTIVE 3. To study the difference in the perceived impact of technophobia on professional development between government and private trainee teachers. The hypothesis Ho3 There is no significant difference in the perceived impact of technophobia on professional development between government and private trainee teachers has been verified with the help of t-test, the obtained from the analysis are shown in table.

TABLE 4

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (Df)	Significance Level	T- Value	Calculated Value of T
Government	60	13.33	3.42	118	0.05	1.96	0.3457
Private	60	13.55	3.44				

The above table (4) shows that the mean of trainee teachers of government B.Ed. colleges are 13.33 with a standard deviation of 3.42, while for trainee teachers for private B.Ed. colleges, the mean is 13.55 with a standard deviation of 3.44. The calculated t-value of 0.3457 at 118 degrees of freedom is less than the t-value of 1.96 at a 0.05 significance level. Therefore, the null hypothesis is that there is no significant difference in the perceived impact of technophobia on professional development between government and private trainee teachers are accepted.

Result -The perceived impact of technophobia on professional development is similar for both groups. There is no significant difference between government and private trainee teachers in this regard.

OBJECTIVE 4. To study differences in perceived institutional support and peer influence for technology use between both groups. The hypothesis Ho4 There is no significant difference in the level of institutional support and peer influence between the two groups. Has been verified with the help of t-test, the obtained from the analysis are shown in table.

Table 5

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (Df)	Significance Level	T-Value	Calculated Value of T
Government	60	13.17	2.40	118	0.05	1.96	5.3198
Private	60	10.78	2.50				

The above table (5) shows that the mean of trainee teachers of government B.Ed. colleges are 13.17 with a standard deviation of 2.40, while for trainee teachers for private B.Ed. colleges, the mean is 10.78 with a standard deviation of 2.50. The calculated t-value of 5.3198 at 118 degrees of freedom is greater than the t-value of 1.96 at a 0.05 significance level.

Therefore, the null hypothesis is there is no significant difference in the level of institutional support and peer influence between the two groups are rejected.

Result - Government B.Ed. colleges provide significantly more institutional support and peer influence for technology use compared to private colleges, which may positively affect digital confidence.

OBJECTIVE 5. To compare the attitudes toward technology in education between government and private B.Ed. trainee teachers. The hypothesis Ho5 There is no significant difference in attitudes toward educational technology between government and private trainee teachers. Has been verified with the help of t-test, the obtained from the analysis are shown in table.

Table 6

Group (G)	Number (N)	Mean (M)	Standard Deviation (S.D.)	Degree of Freedom (Df)	Significance Level	T- Value	Calculated Value of T
Government	60	12.42	2.09	118	0.05	1.96	2.5107
Private	60	13.65	3.18				

The above table (6) shows that the mean of trainee teachers of government B.Ed. colleges are 12.42 with a standard deviation of 2.09, while for trainee teachers for private B.Ed. colleges, the

mean is 13.65 with a standard deviation of 3.18. The calculated t-value of 2.5107 at 118 degrees of freedom is greater than the t-value of 1.96 at a 0.05 significance level. Therefore, the null hypothesis is that there is no significant difference in attitudes toward educational technology between government and private trainee teachers are rejected.

Result - There is a significant difference in attitudes toward educational technology. Private college trainee teachers hold more positive attitudes toward integrating technology in education than government trainees.

Findings

1. Technophobia is significantly higher in government college trainee teachers.
2. Government trainees show better technical skills but greater emotional resistance.
3. Private trainees have more positive attitudes toward educational technology.
4. Both groups agree that technophobia affects professional development.
5. Institutional support is stronger in government colleges, but attitudes are more modern in private ones.

Educational Implications

Teacher education programs must be redesigned to address technophobia holistically. Emotional preparedness should be integrated into ICT training modules. Peer mentoring, regular workshops, and personalized digital support systems should be implemented to reduce fear and increase digital engagement. NEP 2020's focus on digital literacy should be aligned with psychological readiness.

Limitations

- Study restricted to one university region (C.C.S. University).
- Small sample size (120 participants).
- Tool was self-constructed and may require further standardization.

Suggestions for Further Research

- A Pan-India study comparing rural vs urban technophobia levels.
- Gender-based analysis of digital anxiety in teacher education.
- Impact of specific interventions like digital boot camps on technophobia.

Conclusion

The review of related studies shows that many teachers and trainee teachers still feel afraid or uncomfortable using technology in teaching. This fear, known as technophobia, is a big problem in making good use of ICT (Information and Communication Technology) in education. Studies from India and other countries have found that this fear is not always related to gender or age but is often higher among teachers in rural areas and those with more teaching experience. Lack of proper training, low confidence, poor infrastructure, and limited support from institutions are common reasons for this fear. The review also

highlights that B.Ed. trainee teachers in government and private colleges may face different challenges when it comes to using technology. This makes the present research important and helpful in understanding the problem better. Overall, this chapter shows that to reduce technophobia, teacher'sneed regular training, motivation, and better support from their institutions.

References:

Reddi, A. (2023). *A study of technophobia in the use of ICT among secondary school teachers*. Vizianagaram District, Andhra Pradesh.

Manikandan, K. (2021). *B.Ed. trainees' knowledge about using smart classrooms in relation to communication skills, attitude towards new technology, and technophobia*.

Basha, S. A. F. (2019). *Integration and utilization of information and communication technologies (ICTs) in schools*. Vellore District.

Kshema, P. (2018). *Changing roles and responsibilities of library and information professionals in knowledge society*.

Baskaran, R. (2018). *Attitude of high school teachers towards smart classrooms in relationship to their technophobia and challenges faced by them during instruction through modern technologies*.

Rafat, B. (2017). *Study on modern interpretive techniques and their role and potential in Indian museums and heritage sites*.

Kepeghom, O. M. (2018). *Availability and impact of ICTs in teaching and learning in secondary schools*.

Mousavi, M. (2014). *Feasibility and application of ICT in secondary schools: A survey study*.

Kaur, G. (2018). *Teachers' attitude towards ICT in relation to gender, motivation, computer competence, and computer anxiety*.

Karuppusamy, A., & Senthilkumaran, M. (2024). *Technophobia and academic excellence among higher secondary school students in the Nilgiris District*.