A Study On E-Pedagogy Knowledge And Attitude Towards Digital Learning Among B.Ed. Trainees In Selected Northern Districts Of Tamil Nadu

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ABSTRACT

E-pedagogical knowledge is the understanding of features of learning and teaching along with technology and benefits and drawbacks of use of technologies in the specific pedagogical methods. Teachers or B.Ed. students are usually supporting their pedagogical methods and strategies through efficient integration information and communication technologies to improve interaction with students, to help explain complicated concepts, to maintain attention of students and to teach students according to their personal needs and make teaching more effective. The findings elucidate that significant difference is prevailed amid profile of B.Ed. trainees and their e-pedagogy knowledge excluding type of college. The e-pedagogy knowledge is having significant, positive and substantial relation with attitude towards digital learning among B.Ed. Trainees. Therefore, B.Ed. trainees should improve their use of various techno-pedagogical methods for their learning and teaching and they must enhance their competence in using different educational learning and teaching technologies. B.Ed. trainees should interact and discuss with their faculty members and peers at regular intervals for improving their e-pedagogy knowledge and these measures will improve their attitude towards digital learning and teaching and learning efficacies.

Key Words: Attitude, B.Ed. Trainees, Digital Learning, e-Pedagogy Knowledge.

1. INTRODUCTION.

E-pedagogical knowledge is the professional knowledge on techno-pedagogical methods of teachers or B.Ed. students and it is the combination of technological and pedagogical knowledge (Koehler et al 2011). Technology knowledge is indicating the level of interest in developing new and modern technologies. Pedagogical knowledge is the understanding the process of learning and capability to manage and direct the learning condition and it is the general format of social and cognitive and development aspects of learning theories (Koehler et al 2013).

E-pedagogical knowledge is the understanding of features of learning and teaching along with technology and benefits and drawbacks of use of technologies in the specific pedagogical methods (Koh et al 2010). Teachers or B.Ed. students are usually supporting their pedagogical methods and strategies through efficient integration information and communication technologies to improve interaction with students, to help explain complicated concepts, to maintain attention of students and to teach students according to their personal needs and make teaching more effective(Jang and Tsai, 2012).

Teachers or B.Ed. students are using e-pedagogical methods based on their professional knowledge and ability on use of information and communication technologies and it is also depending on their thinking styles and abilities (Hakkarainen et al 2001). The choice of techno-pedagogical methods among teachers and B.Ed. students are highly based on formal knowledge by means of education and informal knowledge through personal experiences (Tondeur et al 2016).

The good e-pedagogy knowledge of B.Ed. students is useful for enhancement of effectiveness and efficacy of their learning and also for their professional and personal development through integrating technologies (Archambault and Crippen, 2009). E-pedagogical knowledge is highly helping the B.Ed. students for increasing their learning capabilities and interest by proper utilization of technologies and it is also associated with their attitude towards digital learning. Besides, e-pedagogy knowledge is highly essential for B.Ed. trainees who are actively engaged in learning and teaching activities and interaction with others in the society. B.Ed. trainees with higher degree of e-pedagogy knowledge are having higher degree of attitude towards digital learning and it is also improving their e-pedagogy knowledge. Hence, it is necessary

to study e-pedagogy knowledge and attitude towards digital learning among B.Ed. trainees.

2. LITERATURE REVIEW

Disonglo and Limpot (2023) found that teachers had high e-pedagogical knowledge and it was related significantly with their digital literacy and research skills, and professional competence at high level.

Kumar and Praveena (2022) conceded that teacher trainees were having moderate degree of techno pedagogical knowledge and and significant difference was found in techno pedagogical knowledge of teacher trainees among their gender and locality.

Thirunavukkarasu (2021) revealed that B.Ed. students had moderate degree of e-pedagogical knowledge and significant difference was not prevailed in e-pedagogical knowledge amid gender and locality of B.Ed. students.

Bhuyan and Tripathy (2020) indicated that B.Ed. students had higher degree of techno pedagogical knowledge and significant difference was found among techno pedagogical knowledge and gender and academic stream of B.Ed. students.

Beri and Sharma (2019) showed that teacher educators had moderate level of technological pedagogical knowledge and significant difference was found among technological pedagogical knowledge and gender, academic stream, locality and type of college of teacher educators.

Kumar (2018) found that Hindi teachers had satisfactory degree of techno-pedagogical knowledge and significant difference was prevailed among techno-pedagogical knowledge of Hindi teachers and their gender and educational levels.

Can et al (2017) concluded that pre-service science teachers were having moderate degree of technological pedagogical knowledge and significant difference was found amongst technological pedagogical knowledge and gender and location of pre-service science teachers.

Jang and Chang (2016) revealed that university physics instructors had moderate degree of techno-pedagogical knowledge and significant difference was found in technological pedagogical knowledge among their teaching experiences.

Mahdum (2015) indicated that English teachers had higher degree technological pedagogical knowledge and

significant difference was found in technological pedagogical knowledge among their gender and teaching experience.

Solak and Cakır (2014) showed that male pre service EFL teachers were having higher techno pedagogical knowledge than their female counterparts and no significant relation was found amongst techno pedagogical knowledge and their academic achievement.

3. OBJECTIVES OF THE STUDY

1. To study difference amid e-pedagogy knowledge of B.Ed. trainees and their gender, subject group and type of college.
2. To examine difference amid e-pedagogy knowledge of B.Ed. trainees and their location of college, medium of instruction and residential area.
3. To analyze relation amid e-pedagogy knowledge and attitude towards digital learning among of B.Ed. trainees.

4. HYPOTHESES OF THE STUDY

1. There is no difference amid e-pedagogy knowledge of B.Ed. trainees and their gender, subject group and type of college.
2. There is no significant difference amid e-pedagogy knowledge of B.Ed. trainees and their location of college, medium of instruction and residential area.
3. There is no significant relation amid e-pedagogy knowledge and attitude towards digital learning among of B.Ed. trainees.

5. RESEARCH METHODOLOGY

The Chennai, Chengalpattu and Tiruvallur districts in Tamil Nadu state are chosen for carrying out the current study. B.Ed. trainees are selected by employing random sampling method and data are gathered from 945 B.Ed. trainees by using structured questionnaire. Percentage analysis is used to study profile of B.Ed. trainees. t-test and ANOVA tests are applied to scrutinize difference amid profile of B.Ed. trainees and their e-pedagogy knowledge . Correlation analysis is used to study relation amid e-pedagogy knowledge and attitude towards digital learning among of B.Ed. trainees.

6. RESULTS

6.1. PROFILE OF B.ED. TRAINEES

The profile of B.Ed. trainees is disclosed in Table-1.

Table-1. Profile of B.Ed. Trainees

Profile	Frequency	%
Gender		
Male	434	45.93
Female	511	54.07
Subject Group		
Arts	361	38.20
Science	584	61.80
Type of College		
Government	94	10.05
Government Aided	241	25.50
Private	610	64.55
Location of College		
Urban	544	57.57
Rural	401	42.43
Medium of Instruction		
Tamil	348	36.83
English	597	63.17
Residential Area		
Urban	371	39.26
Semi – Urban	337	35.66
Rural	237	25.08

The results show that 54.07% of B.Ed. trainees are femalxs, whilst, 45.93% of them are males, 61.80% of them are belonging to science group, whilst, 38.20% of them are belonging to arts group and 64.55% of them are studying in private colleges, whilst, 10.05% of them are studying in Government colleges. The results also indicate that 57.57% of them are studying in colleges located in urban area, whist, 42.43% of them are studying in colleges located in rural area, 63.17% of them are studying in English medium, whilst, 36.83% of them are studying in Tamil medium and 39.26% of them are residing in urban area, whilst, 25.08% of them are residing in rural area.

6.2. PROFILE OF B.ED. TRAINEES AND e-PEDAGOGY KNOWLEDGE

The difference amid profile of B.Ed. trainees and their e-pedagogy knowledge is disclosed as below.

6.2.1. Gender and E-Pedagogy Knowledge

The difference amid gender of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-2.

Table-2. Gender and E-Pedagogy Knowledge

Gender	N	Mean	SD	t-value	Level of Significance
Male	434	35.57	4.92	2.529	0.05
Female	511	30.58	4.69		

Male B.Ed. trainees (Mean=35.57) are having higher degree of e-Pedagogy Knowledge than Female B.Ed. trainees (Mean=30.58). The t- value of 2.529 demonstrates that significant difference is found amid gender of B.Ed. trainees and their e-pedagogy knowledge.

6.2.2. Subject Group and E-Pedagogy Knowledge

The difference amid subject group of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-3.

Table-3. Subject Group and E-Pedagogy Knowledge

Subject Group	N	Mean	SD	t-value	Level of Significance
Arts	361	33.48	5.22	2.762	0.01
Science	584	32.49	5.48		

B.Ed. trainees in Arts Group (Mean=33.48) are having higher degree of e-Pedagogy Knowledge than Science Group (Mean=32.49). The t-value of 2.762 demonstrates that significant difference is found amid subject group of B.Ed. trainees and their e-pedagogy knowledge.

6.2.3. Type of College and E-Pedagogy Knowledge

The difference amid type of college of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-4.

Table-4. Type of College and E-Pedagogy Knowledge

Type of College	N	Mean	SD	F-value	Level of Significance
Government	94	32.59	4.94	2.158	0.05
Government Aided	241	32.31	5.79		
Private	610	33.13	5.29		

B.Ed. trainees studying in Private colleges (Mean=33.13) are having higher degree of e-Pedagogy Knowledge than Government (Mean=32.59) and Government Aided colleges (Mean=32.31). The F-value of 2.158 demonstrates that significant difference is not found amid type of college of B.Ed. trainees and their e-pedagogy knowledge.

6.2.4. Location of College and E-Pedagogy Knowledge

The difference amid location of college of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-5.

Table-5. Location of College and E-Pedagogy Knowledge

Location of College	N	Mean	SD	t-value	Level of Significance
Urban	544	33.47	5.18	4.016	0.01
Rural	401	32.06	5.59		

B.Ed. trainees studying in Urban colleges (Mean=33.47) are having higher degree of e-Pedagogy Knowledge than B.Ed. trainees studying in Rural colleges (Mean=32.06). The t-value of 4.016 demonstrates that significant difference is found amid location of college of B.Ed. trainees and their e-pedagogy knowledge.

6.2.5. Medium of Instruction and E-Pedagogy Knowledge

The difference amid medium of instruction of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-6.

Table-6. Medium of Instruction and E-Pedagogy Knowledge

Medium of Instruction	N	Mean	SD	t-value	Level of Significance
Tamil	348	33.89	5.48	4.496	0.01
English	597	32.27	5.27		

B.Ed. trainees studying in Tamil Medium (Mean=33.89) are having higher degree of e-Pedagogy Knowledge than B.Ed. trainees studying in English Medium (Mean=32.27). The t-value of 4.496 demonstrates that significant difference is found amid medium of instruction of B.Ed. trainees and their e-pedagogy knowledge.

6.2.6. Residential Area and E-Pedagogy Knowledge

The difference amid residential area of B.Ed. trainees and their e-pedagogy knowledge is disclosed in Table-7.

Table-7. Residential Area and E-Pedagogy Knowledge

Residential Area	N	Mean	SD	F-value	Level of Significance
Urban	371	34.07	5.12	15.583	0.01
Semi – Urban	337	32.02	5.35		
Rural	237	32.21	5.57		

B.Ed. trainees residing in Urban (Mean=34.07) are having higher degree of e-Pedagogy Knowledge than Rural (Mean=32.21) and Semi – Urban areas (Mean=32.02). The F-value of 15.583 demonstrates that significant difference is found amid residential area of B.Ed. trainees and their e-pedagogy knowledge.

6.3. RELATION AMID e-PEDAGOGY KNOWLEDGE AND ATTITUDE TOWARDS DIGITAL LEARNING AMONG B.ED. TRAINEES

The relation amid e-pedagogy knowledge and attitude towards digital learning among of B.Ed. trainees was studied by employing correlation analysis and the result is disclosed in Table-8.

Table-8. e-Pedagogy Knowledge and Attitude towards Digital Learning among of B.Ed. Trainees

Particulars	Correlation Coefficient
e-Pedagogy Knowledge and Attitude towards Digital Learning among of B.Ed. Trainees	0.451**

** Significance in 1% level

The coefficient of correlation amid e-pedagogy knowledge and attitude towards digital learning among of B.Ed. trainees is 0.451 and it clarifies that they have significant, positive and substantial relation among them.

7. CONCLUSION

The outcomes of this study reveal that significant difference is prevailed amid profile of B.Ed. trainees and their e-pedagogy knowledge excluding type of college. The e-pedagogy knowledge is having significant, positive and substantial relation with attitude towards digital learning among B.Ed. Trainees. Therefore, B.Ed. trainees should improve their use of various techno-pedagogical methods for their learning and

teaching and they must enhance their competence in using different educational learning and teaching technologies. B.Ed. trainees should interact and discuss with their faculty members and peers at regular intervals for improving their e-pedagogy knowledge and these measures will improve their attitude towards digital learning and teaching and learning efficacies.

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