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Relationship Between Knowledge and Awareness of ICT Among The B.Ed Teacher Trainees in Thanjavur Distract

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Abstract:

Information and Communication Technology (ICT) plays a vital role in improving the quality of teaching and learning in the modern educational system. the present study aimed to examine the relationship between knowledge and awareness of ICT among B.Ed teacher trainees in Thanjavur District. The study adopted the normative survey method. A representative sample of B.Ed teacher trainees from various colleges in Thanjavur District was selected using appropriate sampling techniques. Data were collected through a standardized questionnaire designed to measure the level of ICT knowledge and awareness among the trainees. The findings revealed that a majority (66.0%) of the trainees possess a moderate level of knowledge and awareness of ICT, while 18.7% have a low level and only 15.3% have a high level. Significant differences were found based on gender, subject specialisation, and locality. Female trainees performed better than male trainees, science subject trainees outperformed arts trainees, and urban trainees showed higher levels of ICT knowledge and awareness than their rural counterparts. The study highlights the need for strengthened and practice-oriented ICT training in B.Ed programmes, especially for arts and rural trainees. Enhancing both awareness and practical knowledge of ICT will better equip future teachers to integrate technology effectively in classrooms. The results of the study provide useful insights for teacher educators, curriculum planners, and policymakers to design targeted interventions for developing digitally competent teachers.

Keywords: Knowledge And Awareness, ICT, B.Ed Teacher Trainees.

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INTRODUCTION OF THE STUDY

In the 21st century, Information and Communication Technology (ICT) has become an integral part of the educational system. The rapid development of digital technologies has transformed the way knowledge is created, shared, and applied in classrooms. Modern teaching–learning processes are no longer confined to chalk and talk methods; instead, they increasingly depend on computers, the internet, multimedia resources, smart classrooms, and online learning platforms. In this context, teachers play a crucial role in integrating ICT effectively into classroom practices.

Teacher education institutions, especially B.Ed colleges, are responsible for preparing future teachers who are competent in using technology for instructional purposes. For effective integration of ICT in schools, teacher trainees must not only possess technical knowledge of ICT tools but also have adequate awareness of their availability, relevance, and educational benefits. Awareness helps trainees understand the possibilities and importance of ICT, while knowledge enables them to use these tools confidently and appropriately in real teaching situations.

Knowledge and awareness of ICT are closely related but not identical. Awareness refers to familiarity with ICT concepts, tools, and their potential role in education, whereas knowledge refers to deeper understanding and practical ability to operate and apply those tools. A teacher trainee may be aware of smart boards, educational apps, or online assessment tools, but without sufficient knowledge, they may not be able to use them effectively.

Likewise, awareness often acts as a motivating factor that encourages individuals to acquire more detailed knowledge and skills. Therefore, examining the relationship between ICT knowledge and ICT awareness is important for strengthening teacher preparation programmes. In districts like Thanjavur, where educational institutions range from well-equipped urban colleges to comparatively resource-limited rural colleges, variations in exposure to ICT are likely. Such variations may influence how teacher trainees perceive, understand, and use technology. Studying the relationship between knowledge and awareness of ICT among B.Ed teacher trainees in Thanjavur District can provide valuable insights into their readiness to integrate technology in future classrooms. Understanding this relationship will help teacher educators and policymakers design suitable training programmes, workshops, and support systems that enhance both awareness and practical knowledge of ICT. Ultimately, strengthening these two dimensions among teacher trainees will contribute to more effective, engaging, and technology-enabled teaching–learning processes in schools.

STATEMENT OF THE PROBLEM

The rapid advancement of Information and Communication Technology (ICT) has significantly influenced all spheres of life, especially the field of education. Effective teaching in the present digital era requires teachers who are not only familiar with technological tools but are also capable of integrating them meaningfully into classroom instruction. Teacher education programmes are therefore expected to equip B.Ed teacher trainees with adequate ICT-related competencies. However, mere availability of technological resources does not guarantee their effective use. Many teacher trainees may have a basic awareness of ICT tools such as computers, the internet, smart boards, and educational software, but they may lack sufficient knowledge and practical understanding to use these tools confidently for pedagogical purposes. On the other hand, some trainees may possess technical knowledge but may not be fully aware of the wide range of educational applications and possibilities offered by ICT. This gap between awareness and knowledge can hinder effective technology integration in future classrooms.

In regions like Thanjavur District, differences in institutional facilities, locality (urban and rural), and exposure to digital environments may further influence the level of ICT awareness and knowledge among B.Ed trainees. If awareness and knowledge do not develop together, teacher trainees may graduate without the readiness required for technology-enabled teaching, which ultimately affects the quality of education delivered to school students.Therefore, it becomes necessary to systematically examine how far ICT knowledge and ICT awareness are related among B.Ed teacher trainees. Identifying the nature and strength of this relationship will help to understand whether increasing awareness also leads to higher knowledge, or whether separate and targeted interventions are needed for each. Hence, the present study is undertaken to investigate the relationship between knowledge and awareness of ICT among the B.Ed teacher trainees in Thanjavur District.

NEED AND SIGNIFICANCE OF THE STUDY

In the present digital age, the quality of education largely depends on how effectively technology is integrated into teaching and learning. Schools are increasingly adopting smart classrooms, online resources, virtual laboratories, and digital assessment methods. To make meaningful use of these facilities, future teachers must be well prepared during their teacher education programme itself. This preparation requires not only technical knowledge of ICT tools but also proper awareness of their educational value, scope, and applications. Many B.Ed teacher trainees use digital devices in their personal lives, yet this personal use does not automatically translate into professional competence in classroom situations. Without adequate awareness of how ICT can enhance pedagogy, trainees may limit technology use to basic functions. Similarly, without sufficient knowledge and hands-on skills, even an aware trainee may feel hesitant to apply ICT in real teaching. Therefore, understanding how knowledge and awareness of ICT are related is essential for developing effective teacher training strategies. The need for the present study arises from the growing

demand for technology-enabled teaching in schools of Thanjavur District and elsewhere. Teacher education institutions must know whether increasing awareness alone is enough to improve ICT knowledge, or whether structured skill-based training is separately required. By examining the relationship between these two variables, the study helps identify existing strengths and gaps among B.Ed trainees.

TITLE OF THE STUDY:

"Relationship between Knowledge and Awareness of ICT among the B.Ed Teacher Trainees in Thanjavur Distract"

OBJECTIVES OF THE STUDY

- To find out the level of knowledge and awareness of ICT among the B.Ed Teacher Trainees
- To find out the Level of Knowledge and Awareness of ICT of B.Ed Teacher Trainees with respect to Gender
- To find out whether any significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to subject
- To find out whether any significant difference between Knowledge and Awareness of ICT of B.Ed Teacher Trainees with respect to location of the students

3.6 HYPOTHESES OF THE STUDY

The following hypotheses are formulated based on the above objectives

- There is no significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to Gender.
- There is no significant difference between Knowledge and Awareness of ICT amog B.Ed Teacher Trainees with respect to subject
- There is no significant difference between Knowledge and Awareness of ICT of B.Ed Teacher Trainees with respect to location of the students

METHOD USED FOR THE STUDY

The present study adopts the normative survey method. This method is considered appropriate as it enables the investigator to collect data from a large group of B.Ed teacher trainees and describe the existing status of their knowledge and awareness of ICT

POPULATION FOR THE STUDY

The population of the present study is the among the B.ED college teacher trainees in thanjavur distract

SAMPLES FOR THE STUDY

The investigator used simple random sampling technique. 300 B.Ed Teacher Trainees were taken for this investigation. The investigator collected the data from B.ED college teacher trainees in Thanjavur districts.

NULL HYPOTHESIS 1.1

There is no significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to Gender.

TABLE - .1

Significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to Gender

Variable	Male (N=123)		Female (N=171)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
ICT	49.70	12.45	51.29	14.31	2.26	S

NULL HYPOTHESIS 1.2

There is no significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to subject

TABLE - 2

Significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to subject

Variable	Arts (N=162)		Science (N=132)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
ICT	48.89	9.93	52.75	10.33	3.25	S

(At 5% level of significance the table value of't' is 1.96)

NS- Not significant, S- Significant

NULL HYPOTHESIS 1.3

There is no significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to location of the Trainees

TABLE - 3

Significant difference between Knowledge and Awareness of ICT among B.Ed Teacher Trainees with respect to location of the B.ED teachers

Variable	Rural (N=145)		Urban (N=155)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
ICT	47.22	10.37	52.15	9.89	3.83	S

(At 5% level of significance the table value of't' is 1.96)

FINDINGS OF THE STUDY

- A majority of the B.Ed teacher trainees possess a moderate level of Knowledge and Awareness of ICT. Specifically, 18.7% of the trainees fall under the low level, 66.0% under the moderate level, and only 15.3% under the high level. This indicates that while most trainees have a basic to average understanding of ICT, only a small proportion demonstrate a high level of competency and awareness.
- With regard to gender, among male B.Ed teacher trainees, 23.6% have low, 61.0% have moderate, and 15.4% have high levels of Knowledge and Awareness of ICT. Among female trainees, 15.2% have low, 69.6% have moderate, and 15.2% have high levels. This shows that female trainees have a comparatively lower percentage in the low category and a higher percentage in the moderate category than male trainees.
- There is a statistically significant difference between male and female B.Ed teacher trainees in their Knowledge and Awareness of ICT, indicating that gender plays an important role in influencing ICT-related competence and awareness.
- A significant difference is found between Arts and Science subject B.Ed teacher trainees. The mean score of Science subject trainees is higher than that of Arts subject trainees, indicating that Science trainees possess comparatively better Knowledge and Awareness of ICT than their Arts counterparts.
- A significant difference is also observed between rural and urban B.Ed teacher trainees. Urban trainees have higher mean scores than rural trainees, showing that trainees from urban areas demonstrate better Knowledge and Awareness of ICT compared to those from rural areas, possibly due to greater access to digital resources and exposure to technology.

RECOMMENDATIONS OF THE STUDY

- Since the majority of B.Ed teacher trainees fall under the moderate level of ICT knowledge and

awareness, structured and intensive ICT training programmes should be incorporated into the B.Ed curriculum to help them progress to a high level of competency.

- Special support and orientation programmes may be organised for trainees who fall under the low level category to ensure minimum essential ICT proficiency for all future teachers.
- As a significant gender difference is observed, targeted capacity-building initiatives should be provided to ensure equal opportunities and encouragement for both male and female trainees to enhance their ICT skills.
- Separate practical ICT workshops can be designed for Arts subject trainees to bridge the gap between Arts and Science groups and to promote subject-specific digital pedagogy.
- More ICT exposure and infrastructure should be provided to rural B.Ed colleges, including well-equipped computer labs, reliable internet access, and regular hands-on training sessions.
- Collaboration with schools that effectively use digital teaching tools can be arranged so that trainees gain real classroom experience in ICT integration during their teaching practice.
- Continuous professional development programmes, seminars, and refresher courses on emerging educational technologies should be conducted periodically for teacher trainees.

SUGGESTIONS OF THE STUDY

- Future studies may be conducted with a larger sample covering more districts to generalise the findings at the state level.
- Experimental studies can be undertaken to measure the impact of specific ICT training interventions on improving knowledge and awareness.
- Qualitative studies such as interviews and case studies may be used to explore the challenges faced by trainees in using ICT.
- Comparative studies can be made between government and private B.Ed colleges regarding ICT facilities and trainee competency.
- Further research may examine the relationship between ICT knowledge and actual classroom teaching effectiveness during internship.

CONCLUSION

The present study reveals that most B.Ed teacher trainees in Thanjavur District possess only a moderate level of knowledge and awareness of ICT, with a relatively small proportion demonstrating a high level. Significant differences are found based on gender, subject specialisation, and locality, with science and urban trainees showing comparatively better ICT competency than arts and rural trainees.

These findings indicate that although ICT exposure exists among trainees, it is not yet sufficient to ensure strong and confident integration of technology in future classrooms. There is a clear need for systematic, inclusive, and practice-oriented ICT training within teacher education programmes. Strengthening both knowledge and awareness of ICT among all categories of trainees will enhance their professional readiness and enable them to adopt innovative, technology-supported teaching methods. Ultimately, improving ICT competency in teacher trainees will contribute to better quality, more engaging, and future-ready education in schools.

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