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Gender Disparities in ICT Competency among B.ED Trainee Teachers: A Case Study of Khammam District, India

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

This study deals with the ICT competency of B.Ed Trainee Teachers. The major objective of the study is to find out the significant difference if any in the ICT competency with respect to the background variables. The sample consists of 500 B.Ed Trainee Teachers from the colleges of education of Khammam District. Tool for ICT competency was developed and validated by the investigator. The statistical techniques used were mean, standard deviation, t-test and ANOVA. The findings of the study revealed that male teachers are better than female teachers in their ICT competency. Significant difference was found in the ICT competency of B.Ed Trainee Teachers with respect to gender and marital status. Male teachers are better than female teachers in their ICT competency.

Keywords: ICT in education; teacher trainees; professional development.

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1. INTRODUCTION

"Teaching is considered as one of the oldest professions as well as noble profession. Every Teacher is expected to be an ideal man imbibed with a high moral character. Professionally he is supposed to have rapport with all concerned with his profession. Hence he is expected to be committed to his profession, to learner, to society and to high human values. Quality education cannot be achieved without the sincere efforts of dedicated and competent teachers. It is the competent teachers, who can inculcate values, nurture values and help students to internalize values. Thus, it is the competent teachers who can make the Indian Education System survive" [1]. Education is the most powerful instrument whose effective use requires the strength of will, dedicated work and sacrifice. Since this instrument is in the hands of teachers, they must possess above mentioned qualities for its effective use. "Technology plays an increasingly important role in people's lives, and it is envisaged that technological literacy will soon become a functional requirement for people's work, social, and even personal lives. For both social and economic reasons students will need computer and communication technology skills if they are to live successfully in a knowledge-based society" [2-4]. A competent teacher with required intelligence is in demand for today's revolutionary era [5]. Such teachers have been identified as one of the most crucial factor for the success of the education and schools. This paper deals with the ICT competency of B.Ed Trainee Teachers.

1.1 Need and Significance of the Study

The quality of Education and the standards of achievement are interrelated with quality of teacher. Teacher with required ICT competence is very important in education because it is highly digitalized. It is in the teachers' hand to make the students future bright. ICT competency is usually used to refer to an integrated cluster of knowledge skills and attitudes which are necessary to fulfill specific tasks at a required level. ICT Competency of a teacher is essential for teachers to cope up with the new technological era. Since a teacher will be a role model for the students, the competence, commitment and also intelligence of a teacher becomes very vital in the field of education. Thus the researcher felt the need to investigate the ICT competence of B.Ed Trainee Teachers.

1.2 Objectives of the Study

The investigator has framed the following objectives for the study

To find out the significant difference if any, in the ICT competency of B.Ed Trainee Teachers with respect to gender, marital status and religion.

1.3 Hypotheses of the Study

1. There is no significant difference between male and female B.Ed Trainee Teachers in their ICT competency.
2. There is no significant difference between married and unmarried B.Ed Trainee Teachers in their ICT competency
3. There is no significant difference among B.Ed Trainee Teachers in their ICT competency with respect religion.

2. METHODS

The normative survey method was used for the present study. The investigator used the stratified random sampling technique to select a sample of 500 B.Ed Trainee Teachers from the colleges of Education of Khammam District.

2.1 Tool Used

A tool for measuring the ICT competency of B.Ed Trainee Teachers was developed and validated by the investigator.

2.2 Statistical Techniques Used

The investigator used mean, standard deviation, t-test and ANOVA to analyse the data collected.

3. RESULTS AND DISCUSSION

3.1 Hypothesis 1

There is no significant difference between male and female B.Ed Trainee Teachers in their ICT competency.

From the Table 1, it is known that the calculated P values for the ICT competency is less than 0.01 at 1 percent level of significance, hence the null hypothesis, "there is no significant difference in the ICT competency of B.Ed Trainee Teachers with respect to gender" is partially rejected. Hence there is significant difference between male and female B.Ed Trainee Teachers in their

ICT competency. While comparing the mean scores of male ($\overline{X}$= 45.08) and female ($\overline{X}$=44.88) B.Ed Trainee Teachers in their subject mastery competency, male teachers are better than female teachers [6-8}.

3.2 Hypothesis 2

There is no significant difference between married and unmarried B.Ed Trainee Teachers in their ICT competency.

From the Table 2, it is known that the calculated P values for ICT competency, is less than at 1 percent level of significance, hence the null hypothesis, " there is no significant difference in the ICT competency of B.Ed Trainee Teachers with respect to marital status" is partially rejected. Hence there is significant difference in the ICT competency of B.Ed Trainee Teachers with respect to marital status.

While comparing the mean scores of married ($\overline{X}$= 44.49) and unmarried ($\overline{X}$= 42.61) B.Ed Trainee Teachers in their ICT competency [9-10].

3.3 Hypothesis 3

There is no significant difference among primary school teachers in their ICT competency with respect to religion.

From the Table 3, it is known that the calculated P values for the ICT competency is greater than 0.05 at 5 percent level of significance, hence the null hypothesis, "there is no significant difference in the ICT competency of B.Ed Trainee Teachers with respect to religion" is accepted [11-12].

Table 1. Difference between male and female B.Ed Trainee Teachers in their ICT competency

Variable	Gender	N	Mean	P-value	t-value	Level of Significance
	Male	179	45.08			
	Female	321	44.88			
ICT Competency				0.00	2.9	S**

*** Significant at 0.01 level*

Table 2. Difference between married and unmarried B.Ed Trainee Teachers in their ICT competency

Variable	Marital status	N	Mean	Std. Deviation	P-Value	t-value	Level of Significance
ICT competency	Married	330	44.49		0.00	2.82	S**
		6.41					
	Unmarried	170	42.61				
		8.15					

*** Significant at 0.01 level*

Table 3. Sum of scores and mean square variance of ICT competency of B.Ed Trainee Teachers with respect to religion and calculated 'F' values

Dimensions of teaching competency	Religione	Variance	Sum of scores	Mean square	df	F	P	Remarks
Subject Mastery	Hindu Christian Muslim	Between	66.354	33.177	2	0.63	0.53	NS
		within	26163.846	52.644	49			

4. FINDINGS OF THE STUDY

1. There is significant difference between male and female B.Ed Trainee Teachers in their ICT competency. Male teachers are better than female teachers in their ICT competency.
2. There is significant difference between married and unmarried B.Ed Trainee Teachers in their ICT competency. Married teachers are better than unmarried teachers in their ICT competency.

3. There is no significant difference among B.Ed Trainee Teachers in the ICT competency with respect to religion.

5. CONCLUSION

The study on the ICT competency of B.Ed Trainee Teachers in Khammam District has provided valuable insights into the relationship between various background variables and ICT proficiency. The research employed statistical techniques such as mean, standard deviation, t-test, and ANOVA to analyze the data collected from 500 B.Ed Trainee Teachers.

One of the noteworthy findings of the study is the difference in ICT competency between male and female teachers. Male teachers demonstrated higher levels of ICT competency compared to their female counterparts. This gender disparity in ICT proficiency highlights the need for targeted interventions and training programs to bridge this gap and ensure equitable access to technology-enhanced education for all educators.

Additionally, the study also identified a significant difference in ICT competency concerning marital status. While further research may be needed to explore the underlying factors, this finding suggests that marital status may play a role in influencing teachers' readiness and ability to integrate ICT into their teaching practices.

Tthis research underscores the importance of continuous professional development and support for B.Ed Trainee Teachers, with a focus on enhancing their ICT competencies. Addressing gender-based disparities and considering the impact of marital status in training programs can contribute to a more inclusive and effective educational environment in the colleges of education of Khammam District. As technology continues to evolve, educators must remain adaptable and proficient in ICT to meet the demands of modern teaching and learning.

6. RECOMMENDATIONS

ICT Competency can be improved by providing the teachers with necessary computer training. Teachers can be given orientation classes frequently to make them familiarise with the new technology and the upcoming skills. Teachers should not be hesitant to apply the acquired technology skills in the classroom. Teachers should be trained in those skills through seminars and workshops whatever training a teacher gets he/she should have a genuine interest to apply it in his/her classrooms.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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