Teacher Educators Teaching Competency of West Bengal towards ICT

Debdas Mandal*

Research Scholar & Assistant professor of Bhangar Mahavidyalaya, Department of education, University of Calcutta, E-mail:debdasmandaldm@gmail.com, Mobile No-7872755740.
https://orcid.org/0000-0001-6371-7023

Abstract

Teacher education today is an integral part of any educational system. ICT has taken a key role in this system of the present knowledge society. Now ICT has become important part of Indian school curriculum as well as teacher education. The importance of ICT in empowering teachers and learners, and enhancing teaching and students' achievement has been highlighted in several studies. This study assessed Teaching competency of teacher educators of West Bengal towards ICT. To achieve the goal of the study, the researcher developed and standardized 5 point Likert type scale, ***"Scale for teaching Competency of Teacher Educators towards ICT",*** *which is highly reliable (α = 0.776) and. A survey was conducted on 180 (One hundred and eighty) samples selected from 30 (Thirty) teacher education colleges in West Bengal, through simple random sampling technique. Collected data were analyzed through SPSS 22.0 Version and significance of t values and F values were tested at 0.05 level. The results Show that most of the teacher educators are competent towards ICT. No significant difference was established between male and female teacher educators towards ICT.*

KEYWORDS: ICT, Teaching competency, Teacher educators.

1.0. INTRODUCTION

The world is rapidly evolving with Information and Communication Technology (ICT). The use of ICT at different aspects of life makes it easy and comfortable. The use of ICT in education especially in higher education can play a huge role in effectively and quickly transferring and receiving knowledge and in making education more universal and rich. In India, the use of ICT is spreading very fast across all age barriers. The Government of India has, therefore, developed a policy on ICT. However, the success of this project has implications for teaching competency of teacher educators towards ICT.

1.1. RESEARCH PROBLEM

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1.2. STATEMENT OF THE PROBLEM

The role of ICT in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. Teaching being both a skill and an art was found amenable to transmission in the early years of the 19th century. Now teacher education is no longer limited to primary or secondary levels of teachers but extends far beyond. The creation of the academic staff college under the aegis of the UGC is a case in point. No wonder then that teacher education has emerged as an important area of educational research.

The problem might thus be stated as-"Teacher Educators Teaching Competency of West Bengal towards ICT".

1.3. OPERATIONAL DEFINITION OF KEY TERMS/ VARIABLES

ICT: For the present study ICT (Information and Communication Technology) means (computers for word processing, power point, spreadsheet, CAI (Computer Assisted Instruction) and related software, internet for e-mail, chat, searching, web designing, and for giving project work, LCD projector for Power Point presentation, and T.V. presentation and OHP, Television, and Radio) meant for classroom practice, professional development and personal development of teachers and students.

Teaching Competency: In the present study, teaching competency refers to the proficiency of secondary school teacher educators in using computer in the classroom, sending and receiving e-mail messages, and creating documents with graphics, accessing online resources, creating desktop publishing documents, developing multimedia presentations, selecting and customizing instructional software to fit students' needs.

Teacher Educator: A trained or qualified person (as per NCTE and UGC norms & standards) who engages himself or herself in providing training or education through teaching in any Secondary teacher education institution is a teacher educator.

Academic Discipline: A branch of knowledge that is taught in higher education. In this study Academic Discipline is a special field of study that the teacher educator has graduated (like Arts, Science and Commerce) and is teaching in the related special branch (like Language Education, Science Education and Social Science Education) in any teacher education institution

1.4. OBJECTIVES OF THE STUDY

The present study is based on the following objectives:

1. To study the teaching competency of teacher educators towards ICT.
2. To study the teaching competency of teacher educators towards ICT in relation to their Sex.
3. To study the teaching competency of teacher educators towards ICT in relation to their academic discipline.

1.5. HYPOTHESES OF THE STUDY

Based on the research questions the following hypotheses are derived:

Ho1: Teacher educators do not have positive teaching competency towards ICT.

Ho2: There is no significant difference in the teaching competency of teacher educators towards ICT in relation to their Sex.

Ho3: There is no significant difference in the teaching competency of teacher educators towards ICT in relation to academic discipline.

2.0. REVIEW OF RELATED LITERATURE

Saminathan. V (2021) examined on a review on studies related to teacher's perception about ICT usage for teaching. The study found that teachers were pleased with the benefits of using their new technology in their LMS and also found that teachers have positive attitude towards technology.

Balasubramanian. T & Govindarajan. K (2020) in their study found that there is no significant difference between male and female secondary school teachers with respect to attitude, competency, and job satisfaction towards ICT and also found that there is a significant difference between rural and urban are secondary school teachers with respect to attitude, competency and job satisfaction towards ICT.

Deepti (2018) conducted a study on teaching competency of secondary school teachers in relation to their role conflict, Vocational maturity and attitude towards teaching. The study revealed that female teachers have found to have higher level of teaching competency than male teachers.

Joshi. R. D (2017) worked on a study on the use of ICT in mathematics teaching in secondary school Nepal. The study was found no significant difference in the confidence level between male and female mathematics teachers in using ICT. And also examined that significant difference was found in the

confidence level between urban and rural school mathematics teachers in fundamental concept of computer and internet.

Bamigboye, O. B. & Bankole, O. M. (2013) examined on teachers attitude and competence towards the use of ICT Resources: A case study of University or agriculture lecturers' Abeokuta ogun state Nigeria. In their study finding revealed that majority of the lecturers' have positive attitude and competency towards the use of ICT resources in their lectures, and the use of ICT in instructions enhance academic performance of students.

Kumar (1993) found that the majority of teachers and students considered academic discipline and ICT courses useful. It was observed that academic discipline and ICT play a crucial role in inculcating honesty, discipline, creativity, leadership, tolerance, happiness, generosity, friendliness, and scientific attitude.

3.0. METHODOLOGY OF THE STUDY

3.1. DESIGN OF THE STUDY

In the light of critical appraisal of previous literature, it is found that Teacher Educators Teaching Competency of West Bengal towards ICT have some relevance to the sex and age group**.** Therefore samples were categorized in different levels: sex (Male and Female) and academic discipline. In order to get the proper reflection the researcher used survey research design of descriptive research method in his study. A survey of secondary level teacher educators of B.Ed colleges recognized by the N.C.T.E. and affiliated to "The West Bengal University of Teachers' Training, Education Planning and Administration" regarding teaching competency of teacher educators towards ICT was done. Since the of teacher educators towards ICT existing among the teacher educators are in different extents, survey research method is quite effective.

3.2. POPULATION

All fulltime teacher educators of different secondary teacher education colleges in West Bengal recognized by the N.C.T.E. and affiliated to The West Bengal University of Teachers' Training, Education Planning and Administration were considered as population of the study.

3.3. SAMPLE

A total of 180 (One hundred and eighty) teacher educators were selected from 30 (Thirty) teacher education colleges in West Bengal, through simple random sampling technique. Teacher educators were taken from Sex and academic discipline wise.

Table 1: Sex and academic discipline wise distribution of sample.

Academic discipline	Male	Female	Total	%
Language	28	28	56	31.11
Social science	34	34	68	37.78
Science	28	28	56	31.11
Total	90	90	180	
%	50	50		100

3.4. VARIABLES

In this study the researcher considered two types of variables. These were given below:

- **Major Variables:** teacher educators teaching competency of towards ICT.
- **Categorical Variables:** Sex and academic discipline.

3.5. RESEARCH TOOL

The following tool used to collect data from the respondents.

- **Scale for teaching Competency of Teacher Educators towards ICT.**

It was properly Standardized by researcher with the help of supervisors and other university external subject experts and having high content validity (0.79) and reliability (($\alpha = 0.776$).

3.6. COLLECTION OF DATA

Data was collected through the **Scale for teaching Competency of Teacher Educators towards ICT** from 30 (Thirty) teacher education colleges in West Bengal.

3.7. METHOD OF ANALYSIS OF DATA

Descriptive and Inferential statistical analyses were done here. Descriptive statistics like mean, standard deviation were calculated for all the groups and for all the scores. After that, t-test and ANOVA were done to find out the mean differences of two and three groups respectively. The Significance of t values and F values were tested at 0.05 level of Significance.. The data were analyzed through SPSS 22.0 Version.

4.0. PRESENTATION, ANALYSIS AND INTERPRETATION OF THE DATA

Based on this ground of analysis the results of the data are demonstrated in the different tables and its interpretation follows below:

For Objective 1.To study the competency of teacher educators towards ICT, the Hypothesis 1 is tested here. The Result is presented in table 4.1

Table 2: Result of descriptive group statistics based on Teaching competency of teacher educators towards ICT

Descriptive **Group Statistics**					
	Sex	N	Mean	Std. Deviation	Std. Error Mean
teacher educators teaching competency towards ICT	Female	90	112.7111	7.69539	0.81116
	Male	90	110.2667	9.56915	1.00868

Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Teacher educators Competency	180	84.00	126.00	111.4889	8.74498

as presented in table2 reveal that in competency scale the mean value of scores lies in between 102.8 - 120.2. This may imply that most of the teacher educators agree with the items given in the teaching competency scale. Overall teaching competency of teacher educators was found to be positive towards ICT. Hence, the research hypothesis no.1 is rejected.

For Objective 2.To study the competency of teacher educators towards ICT in relation to their sex, the Hypothesis 2 is tested her. The Result is presented in table 3

Table 3: Result of descriptive group statistics based on competency of teacher educators towards ICT in relation to their Sex.

Descriptive **Group Statistics**					
	Sex	N	Mean	Std. Deviation	Std. Error Mean
teacher educators teaching competency towards ICT	Female	90	112.7111	7.69539	0.81116
	Male	90	110.2667	9.56915	1.00868

Table 4: Result of independent sample‘t’ test based on teaching competency of teacher educators towards ICT in relation to their sex.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
teacher educators teaching competency towards ICT	Equal variances not assumed			1.225	177.526	0.222	0.35556
	Equal variances assumed	4.916	0.028	1.889	178	0.061	2.44444
	Equal variances not assumed			1.889	170.168	0.061	2.44444

The result in table 3 reveal that basis of Mean, overall competency towards ICT between Male & Female teacher educators is approximately same. It may indicate that Male & Female teacher educators do not differ significantly with respect to their competency towards ICT. It is found from the table 4 that computed values of **‘t’** are not Significant (p>0.05) .Therefore H1 is Rejected. Overall competency of teacher educators was found to be positive towards ICT in relation to their sex. In the light of present finding the research hypothesis H2 has been accepted.

For Objective 3.To study the competency of teacher educators towards ICT in relation to their academic discipline, the Hypothesis 3 is tested here. The Result is presented in table 5 & 6

Table 5: Result of descriptive statistics based on competency of teacher educators towards ICT in relation to their academic discipline.

Descriptive Statistics

	Academic discipline	N	Mean	Std. Deviation	Std. Error
teacher educators teaching competency towards ICT	Language	51	112.7059	9.05603	1.26810
	Social science	78	110.3974	9.05013	1.02473
	Science	51	111.9412	7.87759	1.10308
	Total	180	111.4889	8.74498	0.65181

Table 6: Result of ANOVA based on competency of teacher educators towards ICT in relation to their academic discipline.

ANOVA						
	Academic discipline	Sum of Squares	df	Mean Square	F	Sig.
teacher educators teaching competency towards ICT	Between Groups	178.887	2	89.443	1.172	0.312
	Within Groups	13510.091	177	76.328		
	Total	13688.978	179			

Table 5 shows that teacher educators belonging to the three age groups i.e. 26-35, 36-45 and 46-55 years did not differ overall competency towards ICT with respect to their Mean value. And **table 6** reveled that 'F' value is not significant at 0.05 level of significance ($p>0.05$). Therefore the null hypothesis is accepted. This means that significant differences do not exist among teacher educators Competency towards ICT with respect to their academic discipline.

5.1. MAJOR FINDINGS AND CONCLUSION OF THE STUDY

The statistical treatment of the data reveals the following major findings of the study:

1. For Objective 1 to study the teaching Competency of teacher educators towards ICT, the result of the study found that Teacher educators have positive teaching competency towards ICT.
2. For Objective 2 to study the teaching competency of teacher educators towards ICT in relation to their sex, the result of the study found that there is no significant difference in the teaching competency of teacher educators towards ICT in relation to their sex.
3. For Objective 3 to study the teaching competency of teacher educators towards ICT in relation to their academic discipline, the result of the study found that there is no significant difference in the teaching competency of teacher educators towards ICT in relation to their academic discipline.

The study points out to the fact that almost all the teacher educators were willing to use technology in their courses effectively as understood by their positive teaching competency towards ICT. As per the findings of present study, there is no significant difference in the teaching competency towards ICT in relation to their sex and their academic discipline.

5.3. EDUCATIONAL IMPLICATIONS FOR THE STUDY

1. All Universities of West Bengal should enrich their B.Ed. curriculum with a view to incorporating the usage of ICT- based teaching-learning system as per NCFTE (2009) and NPICTSE (2010).
2. Teaching competencies of Teacher Educators should be increased through regular seminar, symposium, workshop, project and training.
3. Moreover, educational policy makers, educational planners and administrators should be given importance to proper use of ICT in the field of teacher education.
4. Educational stakeholders may get a synoptic view about teaching competency of teacher educators towards ICT of West Bengal.

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