



PRIMARY TEACHERS' KNOWLEDGE AND COMPETENCIES OF ICT IN BURDWAN DISTRICT

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Abstract

Modern-day information and communication Technology is crucial in all fields, including education. As a result, ICT is a significant component of the educational system, allowing for more effective and dynamic instruction methods. Several researchers are exhibiting an increased interest in exploring various aspects of ICT. To understand the existing situation and concerns, the researcher reviewed numerous studies and, using that information, outlined and assessed teacher competency and ICT knowledge in primary schools in West Bengal's Burdwan region. to fulfil the study's objective of comparing primary school teachers' ICT competency and awareness based on their age and gender. Using random sampling, a cross-sectional survey was carried out on 118 participants from 27 elementary schools in the Burdwan district. The findings indicate that primary school teachers have a lower degree of ICT awareness and proficiency than do their younger counterparts, with female elementary school teachers having a greater level than male instructors.

Keywords: *Information Communication Technology, Education in 21st Century, Pedagogical Teaching Strategies*

Introduction

Technology is crucial for human activity in the 21st century. In recent time, we can no longer imagine a day without technology. Specially, mobile phone, laptop, computer. ICT has a significant impact on transportation, communication, service, organisation and education. ICT is particularly crucial in teaching and learning now a days specially following the COVID 19. Although the ICT also have some disadvantages which need to be considered as threats but effort from that ICT has more advantage for the effective teaching and learning in any stage of education. In today's school system, instructional expertise and topic understanding alone are insufficient. As the fifth pillar of education they should also prioritise technology.

Review of related literature

Rahman. A, Rahman. F.M.A. (2013) to measure the knowledge, attitude and practice level of using ICT tools and services by the teachers and students of university in Dhaka metropolitan city in the study the data were collected through random sampling with a total sample size 523 respondent from 31 University were surveyed using data were used for data analysis. In the study the data were analysed using universe

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distribution method by Harriet cross steps method the study found that higher level of knowledge regarding different tools and services of ICT in teaching and learning the practices of those who are not satisfactory finally the findings of the study show that occupation University type and ownership of a PC makes significant difference for knowledge and practice level in using ICT in teaching and learning.

Ana Belen Sanchez, He Ganchez investigated a study the teachers attitude towards the use of ICT in the classroom. 170 in services teachers from kindergarten to high school participated in the study. The results show that teachers attitude towards ICT are highly positive but the use of them in class is scarce and it is subjected to innovative processes. Secondly, they are we are no significant different after instruction. Main conclusion indicate that new ways of teachers training need to be developed.

The study examines teachers Perceptions who work in regional boarding school in the city of girassun, Turkey about the use of ICT for teaching and learning. In this study the data were collected through semi structure interview .10 teachers from primary level as a sample. The result of the study so that teachers of RBS believe that it is necessary to use ICT in education in many ways due to many factors utilization of ICT in teaching and learning process is highly limited. It is suggested that students and teachers of RBS should be supported with more materials and more practical training where the good use of ICT is exemplified

Celebi uluyol, Sami Sahin investigated a study to teacher ICT use in the classroom and their motivator for using ICT. In the study 101 elementary school teacher 24 elementary school participated. This study the data were collected from semi structure interview. overall conclusion from the result is that more concentrate encouragement support and opportunities must be developed to increase teachers' motivation to improve the level and quality of ICT use in classrooms.

Research problem: Primary teachers' knowledge and competencies of ICT in Burdwan district

Operational definition of key term

- **ICT Awareness:** according to the goal of the study ICT awareness refers to the primary teachers understanding of ICT devices and their application in the relief of education and daily activities
- **ICT Competency:** it refers to how primary school instructor are adapting and experience in handling has ICT equipment and applying them to improve children's learning
- **Primary Education:** primary education in India reforms to the basic level of education where children's growth and development begin this level education stage are class 1 to 8 which are divided into two part lower primary class 1 to class 5 and upper primary class 6 to class 8 primary school teachers are those who teach in primary school

Objectives of the study

1. To compare ICT awareness and competency of teachers by gender
2. To see if awareness and competency of ICT changes with age of teacher
3. To find out association between ICT awareness and competency of primary schoolteachers

Research hypotheses

H₀₁: ICT awareness and competency of teachers do not significantly vary with their gender

H₀₂: There is no relation between ICT awareness and competency of teachers and they are age

H₀₃: Teacher awareness is not significantly related with their ICT competency

Method: Methods are the specific tools and procedure you used to collect and analyse data. The main purpose of this research is to measure the emergency competency of primary school teachers regarding the use of ICT the researcher performed is hard bay in Burdwan district purposive sampling was used to select sample that are representative of the entire population

Design of the study: Research design is the framework of research method and technique chosen by researcher to conduct a study. Hindi study the researcher consider a cross-sectional survey design this research approach contributes to the current research issue which is primary teachers attitude and competency of ICT in the postcode context research collect data in quantitative format and measure it in order to get inside into the topic.

Sample: To apply the results from the sample to the target group, a sample must be representative of the population. a sample size of 118 students from a population of 3 lakh teachers. The sample for the current study, however, was made up of 118 primary teachers from the 27 school in the district of Burdwan in West Bengal. Teachers were chosen using a random selection technique, and districts were chosen using the purposive method.

Description of variables: The researcher used some independent and dependent variables in this study, which are listed below:

Independent variables:

- Gender: Two categories were considered, i.e., male and female;
- Age: it considered as continuous variable, no categories are done in this study.

Dependent variables:

- Awareness related ICT among the primary teachers.
- Competency of ICT among the primary teachers

Sl. No	Variable	Levels	N	Percentage
1	Gender	Male	57	48.30%
		Female	61	58.69%

Tools for Data Collection: The present study used two main instruments for collecting data:

Demographic Datasheet: The researcher has created a basic information sheet in order to collect demographic and academic data from the primary teachers. Gender, Age, Social category or Caste, Teacher training, Year of teaching experience, and Districts were all requested on the form. Among these variable the researcher choose two demographic variable such as Gender and Age.

ICT Attitude Scale- ICT Attitude scale (2018) is a Bengali self-report questionnaire that measures three dimensions of ICT use. It was created in 2018 by Bijoy Krishna Panda and Prof. Muktipada Sinha, Jadavpur University. The ICT Scale is a collection of questions-related orientations divided into three subcategories: teacher awareness towards ICT, teacher competency linked to ICT use, and knowledge of ICT. The ICT Attitude Scale consists of 33 items divided into these three sub-categories that are measured on both open ended and closed ended versions.

Analysis:

H₀1: ICT awareness and competency of teachers do not significantly vary with their Gender.

Table 1.1: Showing Independent sample t-test on the basis of gender

	Gender	N	Mean	SD	Sig. (two tailed)	Remarks
Awareness	Male	57	4.26	1.239	.041	S* ($P < 0.05$. level)
	Female	61	6.92	1.472		
Competency	Male	57	4.49	1.207	.903	NS* ($p > .05$ level)
	Female	61	4.52	1.013		

An independent sample t test was performed to compare the mean ICT awareness scores of male and female teachers. There was a statistically significant mean difference ($p = .041$). Female teachers were found to be significantly (mean=4.92, sd=1.472) more aware of ICT in teaching learning than their male counterparts. Similarly, an independent sample t test between male and female teachers and ICT competencies was estimated. There were no statistically significant differences ($p = .903$) found between male and female teachers (mean=4.49, sd=1.207) in relation to ICT competency.

H₀₂: There is no significant association between ICT awareness and competency of teachers and their age.

Table 1.2: Correlations among ICT Awareness, Competency score and age

Correlations between	Value	Nature of Association
Age & Awareness	.003	Negative correlation
Age & Competency	.000	Negative correlation

Age was found to have a negative correlation with ICT awareness among the primary teachers. Therefore, the awareness level among primary aged school teachers is showing less rather than the younger teachers.

Age was found to have negative correlation with ICT competency among the primary teachers. Therefore, the competency level among primary aged school teachers is showing less rather than the younger teachers.

H₀₃: Teacher awareness is not significantly related with their ICT competency.

Table 1.3: Correlations between Awareness and teacher's Competency related to ICT.

Correlations between	Value	Nature of Association
Awareness and Competency	.267	positive correlation

Awareness was found to have a positive correlation with competency among the teachers of primary schools in district of Burdwan in West Bengal. Therefore, with increasing awareness with increase the competency.

Discussion and Conclusion

Primary education is the foundation of a country's development. Primary school teachers play an important influence in a child's overall development. As a result, there is a need to raise awareness among primary teachers about the need of employing various technological tools to teach pupils. The primary education sector should be prioritized or focused on by the government. The Government of India launched a plan called Sarva Shiksha Abhiyan (SSA) to attain the goal of universalizing primary education. The project also recommends improvements to the school environment, institutional infrastructure, curriculum, and so on. According to a study, the government of India also implemented ICDS services for children's development, emphasizing cognitive and communicative abilities (Raja et al., 2011). Although the significance of technology in today's society has increased, the primary education system is still not fully prepared to employ it due to the country's 10,37,813 elementary schools' location in rural areas across 581 districts (Kaushik et al., 2009). When it comes to technology education, primary school teachers have a basic level of subject matter knowledge (SMK) but an insufficient level of pedagogical content knowledge (PCK), according to the findings of this study (Rohaani et al., 2012).

Results of this study shows there was no significance difference between the score of ICT awareness and competency among the primary teachers and their various demographic variables like-Gender, age. Mandal, D. (2021) conducted research on teacher educators' views towards ICT in West Bengal. This study found that teacher educators in West Bengal have a positive attitude towards ICT use, but no significant correlation was found when background variables such as gender were considered. In this study researcher found no variation on ICT awareness and competency in terms of demographic characteristics such as age were not significantly associate with attitudes of teachers. ICT awareness among primary school teachers is low, and such districts, particularly Burdwan, lack enough institutional assistance. The findings also challenge the conventional wisdom that women are less aware of ICT use, although there is no substantial difference in terms of proficiency.

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