



ICT LITERACY OF PRE-SERVICE SPECIAL EDUCATION TEACHERS IN OPEN DISTANCE LEARNING (ODL) MODE

Education

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ABSTRACT

This paper aims to investigate the ICT literacy of pre-service special education teachers in ODL mode educator and total of 247 out of 370 ODL B.Ed. Special Education trainees of the Tamil Nadu Open University, India have participated in the study. Data was collected through online survey. Descriptive statistical analysis such as percentage analysis, Mean, Median, Standard deviation, T-test are used for data analysis. The study reveals that around fifty percent of the sample has average level on their Information and communication technology literacy. On the other hand, it is observed that the low and high levels are equally shared the remaining fifty percent of the sample. This could be interpreted that nearly one fourth of the trainees will have difficulty in utilizing even the basic ICT tools including e-resources in their classrooms. It is imperative to provide periodical ICT trainings to ODL special education teacher trainees for better results in their classroom engagement with ICT tools to cater to the needs of diverse learners.

KEYWORDS

Pre-service teacher, ICT Literacy, open distance learning

INTRODUCTION

The most effective tool for influencing the growth and advancement of the entire country is education. It promotes both personal and national growth, as well as the formation of moral and ethical principles at each person. The foundation of every human being is their education. Teachers help students to build their fundamental knowledge, skills, and attitudes. In the writings of Zurkowi (1974), the idea of literacy which is defined as the capacity to recognize, locate, and evaluate information appear as the first item. According to Gilster (1997), ICT Literacy is also directly related to abilities like information access, evaluation, and management that are used in the teaching and learning process. A set of technical, procedural, cognitive, and social-emotional skills are considered to make up digital learning. Teacher-student relationships require a great deal of effort to provide technology in schools since the 1980s, because educational computing has long been considered to prepare learners with essential digital skills for their future careers. According to the Kothari commission (1964), National Curriculum Framework (2005) worked on the quality enhancement of teacher education and implementation of ICT in teacher education Programme.

Operational Definitions

1. ICT Literacy

ICT Literate is one who has knowledge in computer skills, with utilization of teaching skills in the classroom.

2. Pre Service Teacher

Pre-service teacher is one who pursues B.Ed. Special Education programme through ODL mode.

3. ODL Programme

Open and Distance learning are conducted through online and offline classes for B.Ed. special education students.

Need For The Study

ICT literacy is need of the hour in the present scenario. Preservice teachers play a vital role in the present world to contribute the teaching practice in inclusive school and this hands-on experience makes them a better teacher. Teaching the children with special needs is a challenging job for them. The pre-service teachers' technical competence is very important, during the training period they should update the unlearned skills before entering actual teaching process. Parents and school administration expect technical sound teachers to their school. Parents and students are more attracted to the computer knowledge teachers to overcome burden in the curriculum transaction, evaluation, and monitoring part in different ways. The concept of special education is to address the individual needs with Universal Design Learning. So special education teacher should have sound knowledge and ready to help the students in their academics in specific and career in general.

Statement of the Study

The statement of the problem is to investigate the ICT Literacy of the Special Education Pre-service teachers in ODL mode of Tamil Nadu Open University.

Review of Literature

Yeshuda Peled (2020) investigated Pre-service teachers self-perception on digital literacy. The main purpose of this study is to assess the level of digital readiness of students majoring in education. The research method includes a questionnaire comprising 54 items. The sample consists of 1265 students. The results show that more than half of the participants report an overall high level of literacy in all areas.

The study of Serkan Dinçer (2018) intended to determine the knowledge, skills and attitude about technology use of pre-service teachers. Although most of pre-service teachers said they had knowledge, skills and positive attitude to use technology in teaching activities, the results revealed that they had a low level of technology literacy in terms of knowledge and skills. The results showed that no relationship was found between knowledge/skill test scores and attitude, so pre-service teachers could not correctly describe their level of technology literacy.

Serkan Dincer (2016) investigated Assessing the computer literacy of University graduates. This study aimed to identify the computer literacy levels of the individuals graduated from the University. 525 graduates from various departments participated in the study. According to the results of analyses conducted, their basic computer literacy levels were found to be low.

Akkaya (2016) critically analysed that the pre-service teacher perceptions towards the use of technology and technology integration in mathematics teaching. A training program on the area of technology, pedagogy and content knowledge was implemented on pre-service teachers. Exploratory sequential mixed method was utilized in the study. 34 pre-service teachers were taken as sample. The Perception Scale for Technology Use and interview forms were used as tools. Descriptive statistical methods and t-test used to analyse quantitative data, whereas content analysis was preferred for qualitative data. The results indicated that there was significant difference in the middle school Mathematics pre-service teachers' perceptions regarding the use of technology. It was also concluded that trainings that incorporate technological, pedagogical and content knowledge that are provided during teacher training process enhanced pre-service teachers' perceptions related to the use of technology in mathematics teaching.

Objectives of the Study

1. To assess the level of ICT literacy among pre-service special education teachers.
2. To investigate whether there is any difference among pre-service special education teachers in ICT literacy with respect to Gender, Locality, parent of Child with Disability.

Hypotheses of the Study

1. The ODL pre-service teachers would have high level ICT literacy.
2. There is no significant difference in the level of ICT literacy of ODL pre-service teachers with respect to gender, locality, and parent of child with/without disability.

Tools Used

- a) Personal Data sheet
- b) Used Standardized Scale Teacher Techno Pedagogical Competency Scale developed by Dr.S.Rajashaker and K.Sathiya Raj (2013) is used for the present study with little modification by the researchers to identify the ICT Literacy among teacher educators. The tool has 51 items with three dimensions such as Fundamental ICT literacy, Online ICT literacy, and ICT literacy in teaching and learning. It is a four-point rating scale ranging from Strongly Agree to Strongly Disagree. The tool has been validated with experts' opinion. The reliability of the tools is found to be 0.972 which shows that the tool is highly reliable.

Methodology

The research design selected for the present study is survey method. A total of 247 out of 370 ODL B.Ed. Special Education trainees of the Tamil Nadu Open University, India have participated in the study. Data was collected through online survey.

Data Analysis

Descriptive statistical analysis such as percentage analysis, Mean, Median, Standard deviation, T-test are used for data analysis. The result of the same are tabulated below.

H₀1: The ODL pre-service teachers would have high level of ICT literacy.

Table 1: Percentage Analysis Of Pre-service Teachers On Various Dimensions Of ICT

Dimensions of ICT	Low		Moderate		High	
	N	%	N	%	N	%
Basic	63	25.2	126	50.4	61	24.4
Online	67	26.8	126	50.4	57	22.8
Teaching	65	26.0	126	50.4	59	23.6
Overall	62	24.8	126	50.4	62	24.8

From the above percentage analysis, it is observed that 50.4% of the pre-service student teachers have moderate level of ICT literacy skills on Basic, Online, Teaching dimensions and on the overall ICT literacy, and 25.2%, 26.8%, 26.0% and 24.8% respectively on the lower end, and 24.4%, 22.8, 23.6, and 24.8% respectively at the higher end. Therefore, it can be interpreted that 24.8% of the ODL B.Ed. Special Education trainees have lower level of ICT literacy.

H₀2. There is no significant difference in the level of ICT literacy of ODL pre-service teachers with respect to gender, locality, and parent of child with/without disability.

Table 2: Calculated 't' value on the level of ICT literacy of ODL pre-service teachers with respect to gender, locality, and parent of child with/without disability.

Sub-variable		N	Mean	SD	't' value	Remarks
Gender	Male	61	2.08	0.714	1.035	NS
	Female	189	1.97	0.703		
Locality	Rural	131	1.96	0.673	0.89	NS
	Urban	119	2.04	0.741		
Parent of child with disability	Yes	42	2.17	0.696	1.70	NS
	No	208	1.97	0.705		

Significance at 0.05 level. NS=Not Significant.

The calculated t value for gender, locality and parent of child with/without disability are 1.035, 0.89, and 1.70 respectively. All the three calculated t values are found to be higher than the table value at 0.05 level of significance. Therefore, it can be interpreted from the above table that there is no significant difference in the level of ICT literacy of ODL B.Ed. Special Education trainees with respect to their

gender, locality, and parent of child with/without disability.

Hence, the null hypothesis is accepted.

Educational Implications

ICT helps Pre-service teachers in preparing lesson plans and using different strategies of teaching during their training. Different ICT tools are used in education improves engagement and knowledge retention and enhance the quality of teaching learning process. By using ICT integrated lessons students can be more engaged in their learning tasks. Technology provides different opportunities to make learning more engaged and enjoyable. It also allows the teacher to cater to the learning needs of diverse learners.

Current scenario is focused on inclusive education children with special needs are finding difficult to memorise the concepts with one-time instructions. ICT will help the students by motivating and practice the concepts by doing and explanation through multiple modes attract them into best learning. Pre-service teachers should have the awareness and utilise this knowledge into their classroom practice.

The findings of this study implies that ODL teacher education institutions have to provide training on the ICT skills to all the trainees aligning to the recent advancements in the field of teaching and learning across the globe.

CONCLUSION

The present study examined the level of ICT literacy among the pre-service ODL special education teacher trainees at the Tamil Nadu Open University in India. The general finding of the study reveals that around fifty percent of the sample has average level on their ICT literacy. On the other hand, it is observed that the low and high levels are equally shared the remaining fifty percent of the sample. This could be interpreted that nearly one fourth of the trainees will have difficulty in utilising even the basic ICT tools including e-resources in their classrooms. It is imperative to provide periodical ICT trainings to ODL special education teacher trainees for better results in their classroom engagement with ICT tools to cater to the needs of diverse learners.

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