# Prospective Teachers' Attitudes Towards ICT Awareness and E-Learning: A Review of Related Literature

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**ABSTRACT:** ICT has created several difficulties and possibilities, as well as influencing the globe like no other innovation in modern history. ICTs have had a significant impact on the field of education, which has transformed the entire educational process. In order to successfully employ contemporary techniques and technology for potential teachers, teacher educators must have a positive attitude as well as appropriate understanding and usage of ICT tools and devices in the educational process. The goal of this study is to find out how teacher-educators at teaching training institutions feel about using ICT, as well as their expertise and levels of ICT tool and device usage. The study's findings indicated that teacher-educators have a favourable attitude toward the use of ICT and its tools and gadgets in the teacher education process to some level. The current finding reveals that teacher-educators are under-trained and lack technological support. The present survey also shows that teachers and educators are apprehensive about adopting ICT tools and gadgets in the classroom. Similarly, teacher-educators lack motivation and excitement for using ICT tools and gadgets in the teacher-education process. It was discovered that if teacher-educators are familiar with ICT-training, technical assistance, ICT resources, motivation, management support, and the benefits of ICT in the education process, they would be able to successfully include ICT in the teacher education process.

**Key Words**: Attitude, Information and Communication Technology (ICT), teacher educators, teacher-training colleges.

## INTRODUCTION

A literature review is an evaluation of information available in the literature that is relevant to the topic of my research. The literature is described, summarised, evaluated, and clarified in this study. It provides a theoretical foundation for the study and aids the investigator in determining the scope of my study. Irrelevant works should be deleted, but those that are on the periphery should be scrutinised.

A literature review is more than just a search for information; it's also more than just a list of detailed annotated bibliographies. All of the works that are part of the review are read, appraised, and examined. In respect to your subject of research, relationships between the literature must also be recognised and described.

"The objective of a literature review is to communicate to the reader what information and ideas have been established on a topic, as well as their strengths and limitations. A guiding notion must be used to define the literature review (e.g. your research objective, the problem or issue you are discussing, or your argumentative thesis). It's not merely a list of what's available or a collection of summaries ".

In India, the Ministry of Human Resource Development (MHRD) established the UGC-Infonet Digital Library Consortium, which was formally launched in December 2003 by Honourable Dr A P J Abdul Kalam, the former President of India, shortly after the UGC-Infonet programme began providing Internet connectivity to universities in 2003. The Consortium has proven to be a winning formula for university libraries who have been cancelling intellectual journal subscriptions due to the "Serials Crisis." The term "serials crisis" refers to the exponential and ongoing rise in the cost of scientific journal subscriptions. The crisis is the result of journal prices rising significantly faster than inflation, an increase in the quantity of journals, and a lack of money accessible to libraries.

## SOURCES OF RELATED LITERATURE

We must consider major works as well as studies that respond to key works when reviewing the literature. We mostly use primary sources, but secondary sources can also be useful.

## Primary Sources

The phrase "primary source" is used to refer to any source that is unique. Primary sources contain the most up-to-date, firsthand knowledge about the subject of study. Primary sources of information are original research reports published in academic journals that detail the methods employed in the study, as well as in-depth descriptions and discussions of the findings. Speeches, letters, diaries, memoirs, interviews, official reports, court records, artefacts, photographs, and drawings are all examples of primary sources.

## Secondary Sources

A secondary source is a data or information source that is not original or firsthand. Primary sources are discussed in secondary sources. Secondary sources include research summaries found in textbooks, periodicals, and newspapers. They usually give broad descriptions of the outcome with little information on the technique. Biographies and critical studies of an author's work are examples of secondary sources.

## Conceptual/theoretical Sources

Conceptual/theoretical Sources are publications that describe or analyse theories or concepts related to the subject.

## Anecdotal/opinion/clinical Sources

Anecdotal/opinion/clinical refers to unresearched, unreviewed, or theoretical ideas or opinions about a subject (case studies or reports from clinical settings)

## REVIEW OF THE RELATED LITERATURE

**Henderson (2020)** The emergence of COVID-19 in the United Kingdom in March 2020 necessitated a major reorganisation of the medical personnel at the Royal Free London NHS Foundation Trust in order to prepare for the expected increase in hospital admissions. Relevant education and training was immediately highlighted as a need, particularly for personnel who were working outside of their usual medical specialisation. Instead of providing face-to-face training, the Trust's doctors used Microsoft Teams, an online communications and collaboration platform, to offer a multidisciplinary Trust-wide education programme tailored to the requirements of polled medical personnel. To far, Trust members from 18 departments have presented 51 virtual teaching sessions, which have been seen 3,814 times. The virtual education programme has allowed quick transmission of fresh material and offered a venue for debate and solidarity among colleagues throughout this pandemic, with overwhelmingly favourable comments from both students and instructors.

**Eaton, et al., (2017)** investigate the concept of hallmark pedagogies in the realm of e-learning for higher education in this paper. We build on earlier research on signature pedagogies in education by connecting the notions of signature pedagogies, the profession of education, and e-learning as a way to assist educators improve their practise and knowledge of the profession. We demonstrate how signature pedagogies may be used in both synchronous and asynchronous parts of higher education e-learning. The distinctions between traditional and online learning must be considered when designing learning in an e-learning environment. While educators may integrate comparable learning activities (e.g., case-based learning, group discussion), the manner of learning (e.g., learning platforms, tools) and online learning participation may differ. Signature pedagogies should be chosen based on their efficacy in developing educational capacity and fostering a community of inquiry. Implementing a trademark pedagogy, whether it's surface, deep, or implicit, should help all students. Signature pedagogies may be incorporated into e-learning programme and course design to guarantee that components of surface, deep, and implicit learning are included. While educators may opt to include comparable learning activities (e.g., case-based learning, group discussion), the method of learning (e.g., learning platforms, tools) and online learning participation may differ. Signature pedagogies should be chosen based on their efficacy in creating educational capacity and fostering a community of inquiry. Implementing a trademark pedagogy should help all learners, whether it is surface, deep, or implicit. Signature pedagogies may be incorporated into programme and course design by e-learning designers to guarantee that components of surface, deep, and implicit learning are present.

**Pilten et. al. (2017)** conducted a study on the impact of ICT-assisted project-based learning practises on pre-service classroom teachers' ICT integration abilities. The study used a mixed technique approach. The research's quantitative component included pre- and post-test control groups. A case study was used to perform the qualitative dimension. The

research work group consisted of 72 preservice teachers who were enrolled in the third grade of a state university's department of classroom teaching in the province of Konya during the 2015-2016 academic year; 34 of the participants were in the experiment group and 38 were in the control group. The quantitative data collecting instruments for the current study, the ICT Self-Efficacy Perception Scale (ICTSEPS) and the ICT Attitude Scale (ICT-AS), were collected from the literature. The interview form, which is used to collect qualitative data for the study, was created by the researchers after consulting the relevant literature. The data gathered before and after the 12-week experimental method indicated that ICT supported project-based learning practises had beneficial effects on pre-service teachers' ICT self-efficacy views and attitudes, as well as predicted ICT integration levels.

**Gokah (2015)**  Due to the region's rapid expansion of e-Learning in higher education, e-Learning is becoming a popular delivery method across numerous institutions and colleges in Dubai. The key drivers driving e-Learning growth in higher education in Dubai include adequate infrastructure, changes in demographic profile, globalisation, government efforts, outsourcing, and rising need for IT knowledge-based professions. A research was started utilising an online questionnaire to assess the satisfaction levels of e-Learners in higher education to highlight the growing demand for e-Learning based courses in the region. According to the results of this study, e-Learners have a very high degree of comprehension of the potential and usefulness of e-Learning. Respondents in the survey shared a wide range of opinions on course material, faculty assistance, grading systems, and their degree of satisfaction with e-Learning methods. The findings of this study are expected to provide possibilities to strengthen e-Learning policy and practise in higher education in the area, allowing it to cement its position as an e-learning powerhouse in the Gulf region.

**Gupta (2015)** Conduct a study on "potential teachers' attitudes about the use of information and communication technology (ICT) in teacher education."
   The study's goals were to:
   1. investigate potential teachers' attitudes about the use of ICT in teacher education.
   2. Determine how potential teachers, both male and female, feel about the use of ICT in teacher education.
   3. To compare the attitudes of potential teachers in rural and urban areas about the use of ICT in teacher education.
   4. To investigate potential teachers with a scientific or arts background's attitudes on the use of ICT in teacher education.

**Upadhyaya, P. (2013)** Conduct a study of B. Ed. students' attitudes toward computers. The study's goals were to I compare male and female B. Ed. students' attitudes about computers, and (ii) compare B. Ed. students in the Arts and Science streams' attitudes toward computers. The study's sample consisted of 68 students from Allahabad. The study employed the Computer Attitude Scale, which was created by T. Khatoon and M. Sharma. The study's findings show that male and female B. Ed students have similar attitudes regarding computers; however, B. Ed students in the Science stream have a more favourable view toward computers than their Arts stream peers.

**Sampath Kumar and Biradar (2010)** Analyze the ICT infrastructure, the level of library automation, impediments to library automation adoption, and librarians' attitudes toward the use of ICT in 31 college libraries in Karnataka, India. The survey was conducted with the use of a questionnaire, observation, and an informal conversation with chosen college students. The major obstacles for not automating library tasks, according to librarians, are a lack of funding, personnel, competent employees, and training. Despite a favourable attitude toward the use of ICT applications and library automation among library professionals, the majority emphasised the need for proper training to utilise ICT tools.

**Vajargah, Jahani, and Azadmanesh  (2010)** ICTs may be utilised to assist teaching and learning as well as research activities such as collaborative learning and questioning in educational settings. Students may use ICT to perform a variety of activities with various gadgets. It provides a platform for simple access to knowledge and the storage of that knowledge in recorded form for future use.

**Araba Sey and Michelle (2009)** A Literature Review on the Impact of Public Access to Information and Communication Technologies was done. The review did not include materials that merely describe specific initiatives, debate public access typologies, definitions, or policy, or critically comment on public access methods, according to the findings. Documents that focus on the socioeconomic impact of ICTs in general are also excluded. Ricardo Gomez, Elizabeth Gould, Rucha Ambikar, and Chris Rothschild of the Center for Information and Society oversaw the creation of this comprehensive database of related material. Members of the project's scientific teams, International Advisory Committee, funders, and partners were among them. We do not rate the research's quality or discuss effect evaluation techniques at this time.

**Ramesh Babu et al., (2007)** A survey of librarians' ICT capabilities at engineering educational institutions in Tamil Nadu is reported. The major goal was to identify the different types of ICT skills that librarians possessed, to assess the level/extent of different types of ICT skills, to identify the methods for learning ICT skills, and to identify the barriers to librarians acquiring ICT skills. Operating systems, packages, and programming languages, library automation software, web awareness, knowledge of online facilities/services, as well as technical and management abilities, are all covered by ICT expertise. The findings suggest that these institutions' librarians are learning a lot of fundamental ICT skills. They should, however, put greater emphasis on network-based services and digital library services.

**Razaand and Upadhyay (2006)** The use of journals by Aligarh Muslim University scholars was investigated through a survey. They utilised a questionnaire to find out why research researchers use e-journals and where they use them. According to the study, all AMU scholars are aware of e-journals. Many research academics use their departmental laboratories and computer centres to examine e-journals, not only for research but also to keep up with their own expertise. Some issues, such as a lack of training and sluggish downloading, were discovered, prompting the researchers to consider the necessity for both print and electronic journals.

**Adeyoyin (2005)** In Nigerian libraries, the level of ICT literacy among library workers is being investigated. This study was conducted using a questionnaire approach. The information was gathered by self-assessment and covered 18 Nigerian university libraries. It demonstrates that Nigerian university libraries, which constitute the country's knowledge foundation, lack professional librarians with the necessary skill set to fulfil the ICT applications required for knowledge acquisition, organisation, provision, and dissemination. For its part, library administration should recognise the wide-ranging benefits of both ICT and increase ICT literacy levels for university libraries and their parent organisations.

## CRITICAL REVIEW OF RELATED LITERATURE

The investigator has gone through many related reviews both Indian and Foreign studies. But there only 35 reviews presented in this paper. In most of the study, random sampling techniques have been used for selecting the sample. In most of the studies, the investigators have used psychological tests and psychological inventories to show their results. It's not that all study results give a positive impact on the use of ICT. In some review, we find that some research shows that ICT does not play a very significant role in the development of the student. So this way we can say that ICT and E-Learning have both positive and negative impact on the society. it all depends on the demographic area and the condition available there.

The technological innovation is constantly and pervasively altering the way in which work is done, which, in turn, requires that workplace learning and training occur on a just-in-time, just-what needed and just-where-it-needed basis. Many researchers agree that technology will never replace trainer or instructional designers, but technology brings with it more demands for teamwork and collaboration among a diverse group of workers. Trainers, in specific, will need to take on new roles as their work design and environment changes. The follow ing is a review of the trainers' roles in e-learning. Trainers represent the major link between the old and new training paradigm in organizations. For trainers to continue being champions of employee training and development, new roles and competencies are desirable and inevitable. While a review of new roles and competencies have been presented they by no means are exclusive as roles and competencies will continue to be dynamic as they respond to the external and internal environmental changes affecting the new economy.

## CONCLUSION

The goal of this study was to look into teacher-educators' attitudes toward using ICT, as well as their knowledge and levels of ICT tool and device usage, and to see if there was a lack of technical assistance and anxiety during teaching and learning in teacher training institutions. It was discovered that teacher-educators have a good attitude toward the use of ICT and its tools and gadgets in the teacher education process to some level, but that they are not integrating ICT in the teacher education process owing to several obstacles. According to the current findings, teacher-educators lack training and technical assistance from both the government and the management of teacher training institutes. The results of this study also show that teacher-educators are wary about employing ICT tools and gadgets during the teaching-learning process. Teacher-educators, however, are lacking in motivation and excitement for using ICT tools and gadgets in the teacher-education process. If teacher-educators are familiar with ICT-training, technical assistance, ICT resources, motivation, management support, and the benefits of ICT in the education process, they will be able to successfully include ICT in the teacher education process. The current study is intended to be used to better understand teacher-educators' attitudes about ICT in teacher education, as well as their knowledge and levels of ICT tools and gadgets used by them during the educational process. The current study will also be used to identify teacher-educators' fear, lack of technological

assistance, and training in the teacher education process, as well as to make adjustments and enable them to become techno-pedagogues.

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