

# Information and Communication Technology in Teacher Education

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## Abstract

The last few times we seeing that Information and Communication Technology (ICT) presented new ways of working in education. ICT has been both a field of study and an important dimension in teacher education. ICT improves teaching and learning and its importance for teachers in performing their role of creators of pedagogical environments. One of most critical challenges of the knowledge society is to promote the creation and widespread use of modern information and communication technologies for learning, education, and training. According to NCTE (1998) teacher is the most important element in any educational program. He plays a central role in implementation of educational process at any stage. The level of achievement of learner is determined by teacher competence. So the quality of education basically depends on the quality of teachers. ICT helps of a teacher to present his teaching attractively and able to learn for the learners at any level of educational programmes. Today in India teaching training programmes making useful and attractive by the term of ICT. Information and Communication Technologies (ICTs) exemplified by the internet and interactive multimedia are obviously an important focus for future education and need to be effectively integrated into formal teaching and learning – especially in a teacher education institution.

## Keywords

ICT, Teacher Education

## I. Introduction

ICT stands for “Information and communication technology”. It refers to technologies that provide access to information through telecommunication. It is similar to Information Technology (IT) but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones and other communication mediums. It means we have more opportunities to use ICT in teacher training programmes now days and improve quality of teacher for teach effectively. According to UNESCO “ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters”.

Teacher is the main part of the educational field in our society. He more works for the improvement level of our society in the every field. Skilled teachers can make the creative students in form of the good social worker, politician, poet, philosopher etc. for the society. Teachers can play a friendly role with the learner. Duty of the every teacher that, the learners could learn with individually and without any unnecessary outer pressure and fear.

The rapid development in technology has made creatively changes in the way we live, as well as the demands of the society. Recognizing the impact of new technologies on the workplace and everyday life, today’s teacher education institutions try to restructure their education programs and classroom facilities, in order to minimize the teaching and learning technology gap between today and the future. Teachers and instructors are in favor of using technology in and out-of-class activities. This positive

attitude is an important indicator of willingness and first step in effective integration. Almost all of the academic staff was willing and ready to participate in any course, seminar, and workshop about technology usage, which reveals the need for professional development [8].

Andoh found that courses such as computer supported learning, ICTs and designing instructional materials should be introduced in initial teacher training programs to improve teachers’ level of confidence and perceptions towards the use of ICT [1]. The Internet is a part of the ICT that has been widely accepted as an important tool in life and education in recent decades. Active diffusion of information technology through investments in national information infrastructures and education has become a world trend [19]. Teachers in a PBL (project based learning) environment are not only leaders in the classroom but also do a more complex and important job. They are not only course designers or assistants in learning activities but also judges to evaluate learning effects [6]. Kanthawongs and Kanthawongs studied that primary school students, parents and teachers have positive perceptions toward the use of computers, the Internet and social networking sites [11]. If used appropriately and supported properly within the school by a technician, ICT can dramatically improve achievement levels, inspire creative thinking and encourage the development of skills that will prove invaluable in the real world [9].

Information communication technologies (ICTs) are information handling tools that are used to produce, store, and process, distribute and exchange information. These different tools are now able to work together, and combine to form networked world- which reaches into every corner of the globe. The total competence of teachers and instructors consists of a number of components where professional competence, the ability to teach the subject, the ability to structure the learning activities and knowledge of Assessment and guidance are central elements. Teachers and instructors must also have multicultural competence and knowledge on the different points of departure and learning strategies their pupils have [12]. Shah and Ampungan examined that The teachers possessed an acceptable positive attitudes towards the use of ICT tools in Literature lessons and several challenges that might hamper the possibility of using ICT in Literature lessons [16].

In education ICT is an assisting tool. ICT is used as a tool for example while making assignments, collecting data and documentation, communication and conducting research. ICT is a medium of teaching and learning [4]. Information and communications technology (ICT) holds promise in providing not only anywhere and anytime access to knowledge, but also equal opportunities for networking and communications that allow knowledge sharing, participation, and lifelong learning. This is not only for teachers how to use computers but also general pedagogical knowledge related to ICT [7]. Crischner and Davis resulted that top priorities for both pre-service and in-service programmes for teacher training are that teachers become sufficiently competent to make personal use of ICT, competent to make use of ICT as a mind tool [13].

## II. Conclusion and Implications

The use of information communication tools such as e-mail, fax, computer and video conferencing have made it possible to overcome barriers of space and time, and opens new possibilities for learning. The use of such technology in teaching training programmes the quality of teaching will increase effectively. There is now an increasing awareness regarding the potentials of ICTs in learning. Many private and public secondary schools in the country are now infusing ICT into their teaching activities. So if use of ICT in teaching training programmes by the institute of conducting teaching training programmes, our teaching learning process will be too smooth and able to understand for every type of students of our country.

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