ROLE OF DIGITAL TECHNOLOGY IN TEACHER EDUCATION

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Abstract:

Now a day's computers and educational software have been introduced at all levels of education. We should feel happy to see the 21st century schools are built in with the latest development of technology. This paper reveals that teachers must know about that teachers must develop new teaching strategies that are radically different from those employed in the traditional classrooms. In recent years teachers have had to adapt to comprehensive schools, to large schools, to new methods of teaching, to new mathematics, to Nuffield science, to team teaching and to education technology. Teacher plays a key role in determining not only how but how well technologies are used in classrooms and thus the extent to which technologies improve student's performance. Given the central importance of teacher education in the application of technologies for teaching and learning.

Introduction:

In developed world schools are provided with computer hardware and software and allowed to connect to the internet and supported by technology – focused professional opportunities for teachers. The developments in the application and dissemination of knowledge and information technology have been changing the demands in education.

- ✓ The development of a common core curriculum for both primary and secondary education teachers.
- ✓ The formation of regional centres for co-operation in teacher training.
- ✓ The enhancement of human resource management.
- ✓ The establishment of innovation centres for information and communication technology**.**

Teaching and Learning Process:

Teaching and learning are actions necessary to accomplish a goal in Education. Teaching is a process that facilitates learning. Teaching is the specialized application of knowledge, skills and attributes designed to provide unique service to meet the educational needs of the individual and of society. The choice of learning activities whereby the goals of education are realized in the school is the responsibility of the teaching profession. Teaching well is an art rooted in practical, applied, behavioural sciences. Teaching is perceived as stimulating, directing, guiding the learner and evaluating the learning outcomes of teaching. Good teaching is a well-planned and activities are interrelated. It provides learning experiences or situations that will ensure understanding, application and critical thinking based on the theories of learning. Effective teaching is one that will bring about the intended learning outcomes, creating a situation or selecting life – like situation to enhance learning and imparting knowledge and skills requires mastering a subject matter. Learning is the act of acquiring new, or modifying and reinforcing, existing knowledge, behaviours, skills, values, or preferences and may involve synthesizing different types of information.

Role of Technology in Teacher Education:

During the past years many technological applications have been developed for educational purpose. Most of these applications reinforce the existing teacher oriented instructional practice and some refer to new instructional methods.

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The training of teachers can be enhanced by making use of technology. This refers to the use of technology as a medium in the teacher training institutes. It has often been found that the new teachers tend to teach in the same way as they were taught , both when they were a child and when they were students in pre –service training. Teacher Educators have used computers and other information technologies as tools to increase student learning. Some of the methods discussed briefly.

E-Learning:

E-learning is the use of electronic educational in learning and teaching. information and communication technology in education, learning technology, multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, virtual education, virtual learning environments (VLE), m-learning, and digital education. In usage, all of these terms appear in articles and reviews; the term "e-learning" is used frequently, but is variously and imprecisely defined and applied. These alternative terms are all linguistically more restrictive than "educational technology" in that they refer to the use of modern tools, such as computers, digital technology, electronic media, networked digital devices and associated software and courseware with learning scenarios, worksheets and interactive exercises that facilitate learning.

Mobile Learning:

Mobile learning or M-learning is defined as "learning across multiple contexts, through social and content interactions, using personal electronic devices."A form of e-learning distance education, m-learners can use mobile device, educational technology in many locations at their time convenience. Mobile learning is the delivery of learning, education or learning support on mobile phones, tablets etc., M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials becomes an important part of informal learning.

Mobile Classroom Practices:

Mobile devices (such as a Pocket PC) in the classroom can be used to enhance group collaboration among students through communication applications, interactive displays, and video features.

- ✓ Existing mobile technology can replace cumbersome resources such as textbooks, visual aids, and presentation technology.
- ✓ Interactive and multi-mode technology allows students to engage and manipulate information.
- ✓ Mobile Device features with WIFI capabilities allow for on-demand access to information.
- ✓ Access to classroom activities and information on mobile devices provides a continuum for learning inside and outside the classroom.

The mobile phone (through text SMS notices) can be used especially for distance education or with students whose courses require them to be highly mobile and in particular to communicate information regarding availability of assignment results, venue changes and cancellations, etc.

ICT in Education:

Knowledge is built by the learner, not supplied by the teacher. Creating such learning environment seems intrinsically problematic in the traditional setting. ICT

assist in creating such an environment. In today's world, ICT is an essential component of our life. Most of the things we use incorporate ICT. It can define as anything which allows us to get information, to communicate with each other or to have an effect on the environment using electronic or digital equipment. The use of ICT in education is a relatively new phenomenon. Educators, Researchers and thinkers have taken up the challenges of using ICT.

ICT —Information communication Technology is the technology which uses the information to meet human needs or purposes including processing and exchanging. It is the umbrella term for all the above terms like. Information Technology - IT, Education Technology - ET & Communication Technology - CT. It focuses mainly on computer technology. It helps to improve the efficiency and effectiveness at all levels and in both formal & non formal setting. According to Toomey, "ICT generally relates to those Technologies that are used for accessing, gathering, manipulating and presenting or communicating Information". It means ICT applied to the creation, storage, selection, transformation, processing and dissemination of information of many kinds. So ICT is a comprehensive term that includes different types of Hardware and Software: Computers including desktop, laptop and handheld computers; digital cameras and digital video cameras; creative and communication software tools; the internet; telephones, fax machines, mobile telephones, tape recorders; interactive stories, simulated environments and computer games; programmable toys and control technologies; video conferencing technologies and closed – circuit television (CCTV); data projectors, electronic white boards and more.

Video Conferencing:

Videoconferencing (VC) is the conduct of a videoconference (also known as a video conference or video teleconference) by a set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions. It has also been called 'visual collaboration' and is a type of groupware.

✓ Video conferencing can be used in teacher training by linking various powerful, purposeful effective training institutes with our institutions so that the effectiveness may be transformed from the above to ours.

✓ Globalization is the remarkable trend today. The successful practice of teacher training anywhere in the world can be transformed to our institutions through video conferencing.

Conclusion:

Teacher educators have been working very hard to expand the technology infrastructure to make it possible for teachers and learners to gain access to the wealth of information resources and instructional materials now available through the World Wide Web and other technology devices.

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