FUTURE OF TEACHER EDUCATION

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Abstract

Advanced Information communication technologies (ICT) at present are influencing every aspect of human life. They are playing salient roles in work places, business, education, and entertainment. Moreover, many people recognize ICTs as catalysts for change; change in working conditions, handling and exchanging information, teaching methods, learning approaches, scientific research, and in accessing information. The Roles of advanced ICT in education becomes more and more dominant in society, there is a growing concern that education might lag behind. The manner in which teachers align technology with curricular goals is largely dependent on the beliefs and experiences established in teacher education programs. If teachers are to be effective navigators for their students, then they must become comfortable and competent in transforming large networks of mere information into significant problem solving experiences. Advanced ICT can be helpful to transform education from teacher to student orientation, to become more constructive and goal-oriented and prepare students for the information age, break down barriers in schools and enhance real life quality in learning. This paper discusses the roles of ICT, the promises, limitations and key challenges of integration to education systems
By answering the following questions:
(1) What are the benefits of Advanced ICT in teacher education?
(2) What are the limitations and key challenges of Advanced ICT integration to education systems?

Introduction:

Advanced Information communication technologies (ICT) at present are influencing every aspect of human life. They are playing salient roles in work places, business, education, and entertainment. Moreover, many people recognize ICT as catalysts for change; change in working conditions, handling and exchanging information, teaching methods, learning approaches, scientific research, and in accessing information. The influences are felt more and more at schools. The Roles of advanced ICT in education becomes more and more dominant in society, there is a growing concern that education might lag behind. Because ICT provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools aptly respond to this technical innovation.For education to reap the full benefits of ICT in learning, it is essential that pre-service and in-service teachers have basic ICT skills and competencies which can be provide by Teacher education institutions and programmes. It can provide leadership in determining how the new technologies can best be used in the context of the culture, needs, and economic conditions within their country. Teacher education institutions also need to develop strategies

andplans to enhance the teaching-learning process within teacher education programmes and to assure that all future teachers are well prepared to use the new tools for learning.

The new knowledge-based global society is one in which:

• The world's knowledge base doubles every 2–3 years;

• 7,000 scientific and technical articles are published each day;

• Data sent from satellites orbiting the earth transmit enough data to fill 19 million volumes every two weeks;

Already teacher education has long struggled both to professionalize and to fully integrate itself into mainstream academia. At the core of this struggle was a perception that there was no body of specialized knowledge for teaching that justified specialized training. Almost all teacher educators acknowledge that the field has deep problems, but their concern has seldom been about the issues raised by external critics such as lack of selectivity, an imbalance between content and pedagogy, or the lack of value delivered. These differences aren't always recognized because the insider critiques often sound a lot like the external critiques.

To meet these challenges, teachers need to update their knowledge and skills as the school curriculum and technologies change. The manner in which teachers align technology with curricular goals is largely dependent on the beliefs and experiences established in teacher education programs. If teachers are to be effective navigators for their students, then they must become comfortable and competent in transforming large networks of mere information into significant problem solving experiences.There should be some changes in syllabus for those who want to update their knowledge.

1. A practising teacher may work with a pre-service teacher education student on an innovative educational project. This not only increases the research potential of the in-service teacher, but the pre-service teacher also experiences role modelling and, as a result, may have an easier transition into teaching.

2. Formation of computer clubs for students interested in computers and education encourages collaboration between the teacher preparation programme and the community.

Such partnerships may be particularly appropriate for professional development related to ICT, with financial and technical support contributed by ICT companies, such as the Intel Teach to the Future Programme, or by local communities. Members of the community also may become teachers, or at least invited experts. ICT provide extensive opportunities for this to occur in ways that can increase the self-esteem, motivation, and engagement of students. Teachers need encouragement to adopt such strategies rather than to feel ashamed to be taught by young learners. Unless teacher educators do effective use of technology in their own classes, it will not be possible to prepare a new generation of teachers who effectively use the new tools for learning.

3. The teacher's role changes to manager and facilitator in many of these situations as the teacher helps the expert communicate with the learners and scaffolds the learning process. The teacher also acquires professional development by learning from the expert. The focus of professional development should also be expanded to those who work with teachers: the classroom assistants, school leaders, and members of regional and national organizations for curriculum and professional development. A common vision for the role of ICT in education is important for its success. Technology brings with it new rights and responsibilities, including equitable access to technology resources, care for individual health, and respect for

intellectual property included within the Social issues aspect of ICT competence. The ICT competencies can be organized into four groups. Pedagogy is focused on teachers instructional practices and knowledge of the curriculum and requires that they develop applications within their disciplines that make effective use of ICT to support and extend teaching and learning. Collaboration and networking acknowledges that the communicative potential of ICT to extend learning beyond the classroom walls and the implications for teachers development of new knowledge and skills.

What are the benefits of Advanced ICT in teacher education?

The benefits of ICT use in education are as follow

Web-based learning is a subset of e learning and refers to learning using an internet browser such as the Model, smart blackboard or internet explorer

 Blended Learning refers to learning models that combines the face-to-face classroom practice with e-learning solutions. For example, a teacher may facilitate student learning in class contact and uses the Model to facilitate out of class learning.

Constructivism is a paradigm of learning that assumes learning as a process individuals construct meaning or new knowledge based on their prior knowledge and experience.

Learner-centered learning environments a learning environment that pays attention to knowledge, skills, attitudes, and beliefs that learners bring with them to the learning process where its impetus is derived from a paradigm of learning called constructivist.

• Offer the opportunity for more student centered teaching,

• Give greater exposure to vocational and workforce skills for students,

• Provide opportunities for multiple technologies delivered by teachers,

• Create greater enthusiasm for learning amongst students,

• Provide teachers with new sources of information and knowledge,

• Prepare learners for the real world,

Because of teacher education.Program

• Provide distance learners country-wide with online educational materials

• Provide learners with additional resources to assist resource-based learning. With all these facilities teacher education programmed can be helpful for

• Producing ICT literate citizens,

• Producing people capable of working and participating in the new economies and societies arising from ICT and related developments,

• Leveraging ICT to assist and facilitate learning for the benefit of all learners and teachers across the curriculum,

• Improving the efficiency of educational administration and management at every level from the classroom, school library, through the school and on to the sector as a whole,

• Broadening access to quality educational services for learners at all levels of the education system, and

 • Set specific criteria and targets to help classify and categorize the different development levels of using ICT in education.

2) What are the limitations and key challenges of Advanced ICT integration to education systems?

ICT uses also have some limitations which are as follow:

1. Student Teacher resistance and lack of enthusiasm to use ICT in education: may also be limitation.Many teachers do not have the necessary ICT skills and feel uncomfortable, nor do they have the specific training needed to be able to use the new resources in the classroom like handling of smart board, whiteboard, tablets, and clouds.

2. Required IT skills: many student teachers may not have the required ICT skills and feel uncomfortable, nor do they have trainings needed to use the technology in their teaching. If teachers develop some basic skills and willingness to experiment with students in there training period then they can be get confident and use easily in classroom teaching.

4.Network infrastructures and connections: computers, network infrastructures and connections are not compatible to the size of enrolled students and existing demands. In addition, teachers do lack the required skill to match the technology (e.g. Computers and the internet) with innovative pedagogies that benefit students' learning.

5. Student behavior: On the other hand, the limitation of ICT use in education is related to student behavior. Appropriate use of computer and the internet by students have significant positive effects on students' attitude and their achievement

6. Misuse of the technology: Students tend to misuse the technology for leisure time activities and have less time to learn and studyFor ex.online gaming, use of face book, chat rooms, and other communication channels as perceived drawbacks of ICT use in education, because, students easily switch to these sites at the expense of their study. Internet access at home, for instance, may be a distraction because of chat rooms and online games, reducing the time spent in doing assignments and learning. Therefore, the impact of availability of ICT on student learning strongly depends on its specific uses.If ICT is not properly used, the disadvantage will overweight the advantage. For example, while students use the internet, it may confuse them by the multiplicity of information to choose from. As a result, the teacher spends much time to control students from websites unrelated to the learning content. It is imperative that we expose our children, parents, and teachers to ICT to improve the quality of education and technical proficiency of our human resources, thus leading to increased productivity and accelerated development.

7. Social and Health Issues

The power to access information and communication technologies brings increased responsibilities for everyone. Legal and moral codes need to be extended to respect the intellectual property of freely accessible information. Copyright applies to web resources, too, regardless of the ability of the user to purchase the rights. This respect can be modelled in classroom practice with students from an early stage. The challenges faced by society, locally and globally, by adoption of technology should become part of the curriculum in a way that involves learners and helps them to develop an effective voice in the debates. Health issues of ICT also need to be addressed. For example, prolonged engagement with ICT (including screens and keyboards) requires appropriate support for the body, especially the hands and back. Similarly, hazards of electricity and other power sources require care and the modelling of safe practice. All such information if student teacher knows well then only they can teach to their student.

For to create such environment we need some connector:

Connector1. An integrated digital education ecosystem: Parents, teachers, peers, and administrators, as well as individuals outside the formal educational system such as mentors and potential employers, form a collaborative network to deliver instruction to and guide the student at the center of the ecosystem.

The digital education model is rapidly evolving from transaction-based relationships to an integrated value chain with digital education 2.0; the education ecosystem continues to evolve around students, with their passions and interests at the center. Classrooms may extend virtually to encompass relationships with real-world experts in areas aligned with student interests; with the corporate world through internships and business-based projects; and external innovation hubs such as maker movement spaces, research labs, and business incubators and accelerators. The new ecosystem may also include peer-to-peer social learning platforms that promote open learning and enhance collaboration between students. Many educational institutions that benefit most from digital learning solutions are starting to move toward the cloud, upgrading their LMS, investing in network infrastructure and social networks for education support and training—all to improve connections across education

Connector2. An integrated student learning life cycle: To offer a continuous learning experience—right from K-12 to the workplace—educators and trainers should connect in-classroom and real-world learning in a way that is tailored to the needs, learning styles, passion, and potential of each student.

Connector3. Integrated technology solutions: Educational technology solution providers can draw upon their individual technology strengths and competencies to partner and offer integrated solutions in order to capitalize on building and supporting the integrated education ecosystem, executives—including CEOs, solution providers—should choose a strategic position that captures the broadest possible role in the value chain while exploiting internal competencies or easily acquirable assets.

The foundation builder provides core technology infrastructure and services—the building blocks of next-generation education solutions. The role involves developing next-generation LMS and cloud-based services for efficient data storage, information retrieval, accessibility, and security, by integrating discrete elements such as core technology infrastructure, student information, instructional content, and learning technologies. Cloud technologies can be used dually: to create the base infrastructure and to enable connections. Foundation builders can also use virtual learning spaces, which facilitate the shift from a unidirectional education value chain to an integrated education ecosystem.

Conclusion: Thus teacher educational institutions and programmesbecome more competent and have a broad understanding of the technical, curricular, administrative, financial, and social dimensions.

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