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# Technology Skilled Teacher Promotes Quality Education

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## Abstract:

The success of any nation depends on the quality of its higher education system and its quality. There are many blocks that close the path of quality education; one among them is the lack of quality teachers. The introduction of new methods based on their technology usage got great importance. Therefore, training teachers to use technology in their service is of very much importance. This paper explores the importance of technology uses, quality education, the role of teachers in the technological world, the impact of technology in the teaching-learning process, role of technology-skilled teachers in promoting quality education and, Key Competence of Technology Skilled Teachers

## INTRODUCTION

Education has the responsibility to equip the youth real knowledge and skills, by which they will be able to build up their character, attitudes and vision of the future. A nation is built on its educated citizens, educational system and the policies followed to produce good citizens. India has one of the largest higher education systems in the world. For the past sixty nine years it faced a lot of changes and seen a tremendous growth in numbers of institutions, students enrolment in eleventh five year plan period comparing to the past decades.

According to FICCI-E&Y (2012) “ The Eleventh Plan saw nine-fold increases in the public spending on higher education which fuelled significant inclusive expansion in the public higher education sector. However, there has been no significant improvement in terms of the quality of higher education delivery. The issues of skills gaps, skills shortages, and unemployable graduates still persist”. The focus of higher education should be wider so that the entire human in the globe must enjoy the benefit of it. The challenges of quality in Indian higher education include:

1. Inability to attract sufficiently large number of talented young lives of teaching and scholarship:
2. Separation of education from research:
3. Inadequate and political power of such investors:
4. Short0term profit orientation on education in a large part of the business community:
5. Excessive rent-seeking by well-organized groups and dominance of the university as employer perspective; and

6. Administrative weakness and wasteful expenditures (Shyam Sunder,2010).

The UNESCO World Education Report (1998) Teachers and Teaching in a Changing World, the young generation is entering a world that is challenging in all spheres; scientific and technological, political, economic, social and cultural. The emergence of “knowledge based society’ is changing the global economy and the status of education. The knowledge based society is one which:

- The worlds knowledge base doubles every 2-3 years
- 7000 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.
- Graduates of secondary schools in industrialized nations have been exposed to more information than their grandparents were in a lifetime;
- There will be as much as change in the next three decades as there was in the last three centuries (National School Board Association,2002)

Education around the world has gone through a great pressure to teach the 21<sup>st</sup> century digitalized brilliant learners. The challenge before our educational system is how to transform the curriculum, shift a teaching-learning process to enable the students to acquire the 21<sup>st</sup> century skills and function actively in the modern society.

### **Technology**

The technology and systems is the combination of all techniques, methods which helps us to transmit knowledge promote understanding and aware of concept, provide support for growth of complete skills. Technology can be viewed as an activity that forms or changes culture (Borgmann,2006). Additionally, it is the application off maths, science and the arts for the benefit of life as it is known. A modern example is the rise of communication technology, which has lessened barriers to human interaction through the development of the Internet and the computer (Macek,2007). ICT does not only refer to computer and computing application related activities. According to UNESCO (2002) information and communication technology (ICT) may be regarded as the combination of ‘Informatics technology’ with other related technology, specifically communication technology. The various kinds of ICT products available and having relevance to education such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counseling, interactive voice response system, audiocassettes, and CD ROM, etc. have been used in education for different purposes. United Nations Report (1999) reveals ICT cover internet service provision, telecommunications, information services and equipment, media broadcasting libraries, document, centers, commercials information providers, network-based services, and other related information and communication activities.

## **Quality Education**

There's no one definition of quality that applies to every discipline. But in education, we know quality occurs when: students are learning, schools and universities create value for those they serve and those who serve them. Quality is a continuous effort that makes the teaching-learning program successful. According to Dr. Radhakrishnan "Quality education, which gives the children purpose in life and ensures the cognitive, affective, psychomotor domains of child's development". NCF (2005) states quality in education includes a concern for the quality of life in all dimensions. According to the Education for All: Global Monitoring Report 2005- The Quality Imperative (EFA: GMR), two principles characterize most attempts to define quality in education: the first identifies learners' cognitive development as the major explicit objective of all education systems. The second emphasizes education's role in promoting values and attitudes of responsible citizenship and in nurturing creative and emotional development.' Harvey (1995) provides a vision of quality within the individual system by outlining five goals for education: Quality as Exceptional or as Excellence, as Perfection or Consistency, as Fitness -for- Purpose, as Value for Money, and as Transformative Potential. Quality education includes: learners who are healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities, Environments that are healthy, safe, protective, and gender-sensitive and provide adequate resources and facilities, content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy, and skills for life and knowledge in such areas as gender, health, nutrition, prevention, and peace as well as processes through which trained teachers to use child-centred teaching approaches in well-managed classrooms and schools and skilful assessment to facilitate learning and reduce disparities, outcomes that encompass knowledge, skills, and attitudes, are linked to national goals for education and positive participation in society. (Sadig Rsheed,2000).

## **Changing Role of teacher in the Technological World**

" We no longer can view learners as an empty vessel waiting to be filled, but rather as active organism seeking meaning"- Driscoll (1994)

The Indian education system was criticized as memorizing, mugging, and pressurized system. Earlier teachers were considered as a source of information, teacher conveys the information through traditional methods. But at present students master new knowledge domains using the collection of large amounts of gathered information from the technology they adopt. Today's technological world has created lots of changes in students' information gathering process, thinking, and reflecting. They expect their teaching and learning environment should encourage social interaction and collaboration with space for them to discuss a deeper level of understanding in a learning situation.

In the present scenario, teachers are expected to be facilitators, guides, co-learner as well as friends rather than knowledge transmitters. To face the technologically equipped students every teacher has to be efficient with 21<sup>st</sup>-century skills like learning and innovation skills, information, media and technology skills, life and career skills.

### **Impact of Technology in Teaching-Learning Process**

The teacher-oriented content delivering approach gave more emphasis on acquiring information or knowledge but the modern competitive world needs to promote competency, capabilities, and performance among learners to construct knowledge to overcome the challengeable situation. Daniel (2002) remarks ICT as one of the basic building blocks of modern society; undoubtedly it affected the teaching and learning process as well as research. According to Oliver (2000) contemporary, ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world-class settings for competency and performance-based curricula that make sound use of the affordances of these technologies. As cited by Yusuf (2005) in his article ICTs have the potential to accelerate, enrich and deepen skills, motivate and engage students, help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthen teaching and help schools change. Integrating technology in education can develop the quality of education by providing support to understand the difficult areas of study and act as a catalyst for change of attitude for adopting innovative practices in education. When ICT is employed in the teaching-learning process more students can experience meaningful joyful learning and engage them in independent inquiry. This will lead to achieving a desired new scenario learning outcome. The correct selection and adaptation of technology can foster the students to be innovators and constructive learners. These attitudes make them equipped with the most important 21<sup>st</sup>-century skills that they will need to face the world, ICT helps to find creative solutions to the challenges faced in daily life. It provides high-quality education to reach a broader audience at a lower cost. It also increases the productivity of teachers and helps to use differentiated teaching competencies as potential solutions and deploy the required skills among the learners. These types of persons adopt different personalized instruction, open educational resources, communication, collaboration, interactive stimulus, and games for designing and delivery in the classroom. Through the different combinations of technology, teachers not only perform multiple tasks at the time they also create innovativeness and interest among their learners which make them learn multiple skills at the same time. In addition, learners are engaged to use different learning facilities and use collaborative and digital tools. Many of the teachers after entering into the profession feels there should be some training courses to improve their skills and update knowledge to share their views, introduce new methods and technology. There are many blocks that close the path of teachers' self-development few among them are lack of opportunity, space for technically skilled quality teachers. Online courses are the one that helps the professionals who are interested to learn and update.

## **Role of Technology Skilled Teachers in promoting Quality Education**

Arne Duncan (2009), U.S. Secretary of Education remarks on the challenges before teachers and the importance of talented teachers in his words as “To make the dream of equal educational opportunity a reality, we need to recruit, reward, train, learn from, and honour a new generation of talented teachers. But the bar must be raised for successful teacher preparation programs because we ask much more of teachers today even a decade ago. Today teachers are asked to achieve significant academic growth for all students at the same time that they instruct students with even more diverse needs. Teaching has never been more difficult, it has never been more important, and the desperate need for more student success has never been so urgent. Are we adequately preparing future teachers to win this critical battle?” This challenges our higher education system to ensure quality in all dimensions. Quality in education is highly influenced by the teaching-learning process and experience gained by the students and the outcomes from them. Teaching in higher education is not merely knowledge transformation: it requires higher-order cognition skills.

For teaching the new generation as well as future generations integrating technology with the teaching-learning process is of very much importance. Every teacher has to adopt technology to deal with students as maximum teachers are not acquainted with handling the classroom according to the needs of 21<sup>st</sup> Century learners.

## **Key Competence of Technology Skilled Teachers**

Technology Skilled teachers are the one who is able to use the collection of techniques, processes, skills, methods, and application of mental and physical effort to achieve the target as well as goals set for themselves as well as the environment in control. Technology Skilled teachers are the ones who achieve the goals set for themselves as well as production capabilities to solve the problem of others. They are the ones having all-round personalities and intellectual depth, sense of humour, confidence and ease when teaching, good relation with the pupils, manage the class well, plan the lesson well, make lessons interesting, explain points clearly and pay attention to revision and examination reforms. They can teach using different methods of teaching, employing a variety of audio-visual aids, and conveying high expectations for the work of the pupils. They stimulate and motivate pupils to think independently, are creative, constructive, innovative, and helpful criticism of pupils, resourceful in providing varied experiences to the students, flexible, alert, and democratic in nature (Krishnan & Nightigale, 1994).

Technology Skilled teachers continuously upgrade their knowledge as well as acquire skills in the pedagogy, innovative teaching methods, curriculum development and its integration, staff development and effective learning, communicative skills, development or encouragement to use creative techniques and innovative ideas, basic competencies in science and technology, digital competence, learning to learn, sense of initiative and entrepreneurship, cultural awareness and expression. These key competencies are all interdependent and the emphasis in, each is on critical thinking, creativity, initiative,

problem-solving, risk assessment, decision taking and constructive management of feelings (ramani, [et.al.](#), 2011),

In addition to that Technology Skilled teachers upgrade information and media literacy skills, critical thinking and systems thinking, creativity and intellectual curiosity, interpersonal and collaborative skills, self-direction, accountability and adaptability, problem identification, formulation, solution, decision making skills, social responsibility, understand computational modelling, manage and priorities tasks, analyse and interpret data skill, engage in problem solving, ensure security and safety to face the future generations.

In the education world every teacher has to understand the curriculum, based on that they have to formulate learning objectives, plan and select instructional delivery mode, strategies to be adopted, appropriate intervention according to the needs of the students and the expected outcome. All these process has to link together, if it seen as separate process human resource and their energy will get waste. Technology skilled teachers linked the all the process to get the future conceptions and uses of computer in the classrooms. But teacher trainees have phobia nowadays to use technology in their classrooms. Changing this mentality and their attitude will lead to have the beneficial young generations, for this infusing technology resource in the training program is the correct stage. So that teachers of future should possess a greater knowledge. Standards developed by the International Society for Technology in Education (ISTE) divide technology teacher should use into five broad practices: Facilitate and inspire student learning and creativity, Design and develop digital-age learning experiences and assessments, Model digital age work and learning. Promote and model digital citizenship and responsibility and Engage in professional growth and leadership. Technology skilled teachers make a major difference in the attitude of others to adopt technology in their leaning process. They can enhance the use of technology in the learning environment which facilitates the active, collaborative, creative, critical thinking integrative and productive reflecting. These ways of adaptation of new skills and familiarizing with innovative environment enhance the minds of learners to act as self-paced, assessed, directed and independent thinkers improve overall standard of education leads to remove the skill gaps, shortages, and achieve the goals of producing quality outcome or product.

## **CONCLUSION**

Twenty-first-century learners are more highly intellectuals than earlier. Due to globalization and privatization, technology revolution student's expectation from teachers is light and teacher cannot simply remain what he learned is enough and also thinks he or she is not the only source. Ivan Illiach, the prophet of De Schooling Society said that most of the education takes place before the school, outside the school and since

the schools are not only the place of learning and children at present are allowed to learn freely and widely. The teaching profession is becoming more and more complex day by day. Teaching in higher education is not merely knowledge transformation, it requires higher-order cognition skills. Effective Quality teachers need to be strong in the content to be taught as well as their way of presenting the content should be skilfully based on the needs of students. With the support of technology skilled teachers, the use of technology in promoting constructivism pedagogy makes the learner acquire the 21<sup>st</sup>-century competent skills, effective learning environment, and improve lifelong learning skills and habits to produce ICT literate citizens. Training teacher to adopt innovative technology in their classroom becomes a need of the present Society, but if it is done in the beginning or preparation stage of the teacher program it will help there to reach the understanding levels of the students and helps to provide quality education as well as solve the demands of students and society.

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