PREPARING E-EXCELLENT TEACHERS FOR THE WORLD OF E-EDUCATION: POTENTIAL STRATEGIES

By

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ABSTRACT

The world we live in is constantly changing. Learning is changing as well, especially the technologies mediated learning. The technologies have contributed significantly for evolution of the world of E-education where learners can access higher education in new ways, anywhere and at anytime. The world of E-education demands that teachers must become informed users and ensure effective utilization of technologies to satisfy the digital native generation of learners. These types of teachers may be termed as E-excellent teachers. Here a pertinent question arises that what strategies should be adopted to prepare E-excellent teachers? The present paper critically and systematically answers this question. In preliminary phase, it talks about the World of E- education and key challenges before teachers and desired competencies for becoming E- excellent teacher. Afterwards, it presents six innovative strategies to prepare 'E-excellent teachers' for the world of E-education. The proposed strategies are: learning e-based operations and concepts; creating e-supported learning environments; practicing e-mediated teaching; making e-enabled assessment and evaluation; supporting e-enhanced professional development; and offering e-empowered learner support.

Keywords: E-excellent Teachers, E-education, E-teaching, E-learning, E-promotion among Teachers, E-training.

INTRODUCTION

The term technology comprises the entire system of people and organizations, knowledge, processes, and devices that go into creating and operating technological artifacts, as well as the artifacts themselves (NAE, 2002). Moyle (2010, p.04) observes, "Technologies offer educators and students alike opportunities for creating meaningful learning environments. Technologies enable different types of social interaction, provide ready access to information and can overcome some of the difficulties presented by time and space. Students can create new materials, artifacts and new knowledge with the media tools now available to them." The technologies in education got different names like old technologies, new technologies, digital technologies, e-technologies, emerging technologies, etc.

Prensky (2005) noted that in the past five to ten years, we have seen the appearance of scores of new technologies that have strong potential uses in education. They include email, search, texting and instant messaging, blogs, wikis, podcasting, polling devices, peer-to peer (P2P), complex computer and video games, networking, augmented reality, social and community building tools, digital cameras/videocams, phone-based cameras/ videocams, GPS, speed enhancers, interactive whiteboards, DVDs, wireless technologies, mobile learning, wireless technologies, skype, moodle and instant Messaging (IM). These technologies have contributed significantly for evolution of the world of E-education (also known as e-learning and online education) where learners can access higher education in new ways, anywhere and at anytime.

In the world of E-education, computers are used at each possible step of the educational process: enrollment, instruction design, content delivery, evaluation, assessment and support. This means that students and teachers do not have to sit in the classroom but instead they learn from anywhere in the world and in any time (Education Hill online, n.d.). Preparing teachers for the world of E-education is a key challenge that needs to be addressed effectively and efficiently, as suggested by Daanen and Facer (2007, p. 04), "If educators are to shape the future of education (and not have it shaped for them by external technical

developments) it is crucial that we engage with developments in digital technologies at the earliest stages. We need to understand what may be emerging, explore its implications for education, and understand how best we might harness these changes".

The World of E- Education and Teachers: Key Challenges

The changing teaching learning scenario demands that teachers must prepare themselves for the world of E-education, as observed by Niles (2007, pp.27), "Readiness for new technologies is a challenge associated with change. Teachers who resist change may impede and/or limit their students' learning and skills. Teachers, therefore, must prepare students by teaching knowledge and skills necessary for students to be successful in the technology-rich 21st Century." But it is not easy for teachers to use technologies straightaway for the benefit of teaching learning process as they have to overcome various challenges. Johnson, Levine, Smith and Stone (2010, p.05) suggests, "Digital media literacy continues its rise in importance as a key skill in every discipline and profession. The challenge is due to the fact that despite the widespread agreement on its importance, training in digital literacy skills and techniques is rare in any discipline, and especially rare in teacher education programs".

Bauer and Kenton (2005) stated in their study that although teachers were having sufficient skills, were innovative and easily overcome obstacles, they did not integrate technology consistently both as a teaching and learning tool. Reynolds, Treharne and Tripp (2003) also underlined continuing problems in the adoption of ICT by teachers. These problems include adaptability, creativity, communication and social skills, problem solving, organization, time management, being able to work independently, metacognition (ability to reflect on and improve one's own learning processes) and the use of information technology (The E-learner, 2003). The other challenge for teachers aiming to build students' innovation and creative capabilities with and through technologies is to move students from being users and consumers of technologies to being creators and producers with technologies (Moyle, 2010). In sum, the world of E-education poses three key challenges before teachers.

(a) Teaching Digital Native Learners

A constant exposure to digital technologies, gadgets, games, and mobile devices has arguably evolved a new breed of student, the 'natives': those learners who think and process information fundamentally differently from their predecessors, the 'immigrants', whose interaction with these tools is not innate (Cobcroft, Towers, Smith and Bruns, 2010). In general, students are learning, adopting, and using technology at a much more rapid pace than their teachers, and many teachers are highly fearful of the technologies that the students take for granted. The fact is that today's students know more – and will always know more – than their teachers about technology and how to manipulate it (Prensky, 2007). These 'digital native learners' are on the rise in educational institutions, and the first key challenge before teachers is to understand the psyche of these digital native learners and teach them in an appropriate way by using technologies.

(b) Using Emerging Technologies

An emerging technology is one that, as it's maturing, is redesigning the educational process. Emerging technologies such as skype, podcasting with digital audio recording, moodle (a course management system), wikis (collaborative encyclopedias), and blogs are redefining the way teachers teach and students learn. These technologies are changing the traditional school environment into one of excitement and cooperative learning. With these emerging technologies, the teacher is no longer the sole dispenser of knowledge. The teacher instead takes the role of guide and coach (Schuemann, 2008). These emerging technologies are quite helpful for teachers to foster a learning environment of excitement and interactivity. But using these technologies to keep students motivated and interested in contributing to the class is not an easy task.

Teachers need to have different competencies for keeping fear away and taking benefits of emerging technologies. Hence making himself/herself competent for using emerging technologies in appropriate way is another key challenge for teachers. Johnson, Levine, Smith and Stone (2010, p.05) observes, "As faculty and instructors begin to realize that they are limiting their students by not helping

them to develop and use digital media literacy skills across the curriculum, the lack of formal training is being offset through professional development or informal learning, but we are far from seeing digital media literacy as a norm. This reality is exacerbated by the fact that as technology continues to evolve, digital literacy must necessarily be less about tools and more about ways of thinking and seeing, and of crafting narrative".

(c) Ensuring E-Dividends

The teachers have a crucial role to harness the benefits of technologies. They need to understand how the technologies work, what they offer, and how to use them for betterment of teaching learning process. Teachers need to apply technologies wisely to real problems, and to reflect and search for the deeper issues that the technologies raise, and to bring up and discuss these issues with the students. The teachers also need to propagate distinct criterions related to emerging technologies mediated teaching learning and create evaluation criteria, as suggested by Meleisea (2008, p.01), "Success in the use of ICT in education depends largely on teachers and their level of skill in integrating ICT into the teaching process and in utilizing ICT to provide learner-centered, interactive education." Therefore, harnessing the benefits of technologies and ensuring e-dividends for education is the other key challenge before teachers.

Becoming E- excellent Teacher: Desired Competencies

Research has shown that success in the use of ICT in education depends largely on teachers and their level of skill in integrating ICT into the teaching process and in utilizing ICT to provide learner-centered, interactive education. Therefore, training teachers to use ICT and to integrate ICT into teaching is crucial for achieving improved educational outcomes with ICT (UNESCO, 2007). Taking this perspective, the teachers are required to adapt and learn technologies for the betterment of teaching learning process. Gülbahar (2008) observes that regardless of the quantity of technology placed in classrooms, the key to how those tools are used is the instructor. The majority of instructors believe technology usage is important for teaching, however, lack confidence and understanding during integration process. Furthermore, instructors should possess the skills and competencies essential for designing, delivering and evaluating instruction.

According to Selvi (2010), ICT competencies are based on using tools and technical equipments for the reaching, distributing and transferring the knowledge. They include any technology that helps to produce, manipulate, store, communicate, and/or disseminate information. The competencies also demand commitment from teachers. In other side Salmon (2004, p. 17) suggests, "Effective blended teaching and learning environments require the commitment to integrating ICTs for more than 'bolt-on' information provision to facilitate engagement, connection and to create a scholarly community of practice in which learners can participate flexibly. Online methods for learning and teaching need to be 'viewed as a new context for learning, not just as a tool'." The teachers are required to understand that acquisition of technology knowledge and skills must be concomitant with the development of a broader array of competencies. Technology should be perceived as a means to an end (improved teaching) rather than as an end in itself (Teacher Education, 2010).

E-excellence demands that teachers must become informed users of technology to satisfy the digital native generation of learners and to ensure effective utilization of technologies. This E-excellence include not just software use but as well some hardware basics and an understanding of networks (local area and Internet).The need of the hour is that teachers should be able to understand and teach where and how new technologies can add value in learning (Geser and Olesch, 2000). Teachers are supposed to have the ability to understand, discuss and deliberate upon three major points for using technology for teaching learning purposes: the need for wider skills for effective use of tools, the need to focus on the power of technology and the need to shift familiar patterns of classroom interaction by introducing technology (Deaney, Ruthven and Hennessy, 2003, p. 161). Besides, the teachers are required to find and adapt efficient measures on continuing basis for learning and using technologies, which are bound to grow well beyond what they may envision today.

Preparing E-excellent Teachers: Key Strategies

Prensky (2007) observes, "The twenty-first century will be characterized by enormous, exponential technological change. Our so called 'Digital Native' generation (that is, our students) is already embracing these changes, creating in the process an emerging online digital life." To fulfill the educational needs of fast emerging society of digital native learners, the existing pedagogical practices in teacher training programmes are needed to be replaced by E-pedagogical practices. Here the term E-pedagogy denotes the art and science of E-teaching. Commenting on this issue, Geser and Olesch (2000, p.315) suggests, "What we need is a renaissance of the teacher, a teacher who is fit for working in a networked learning environment and ready to be the guide on the side instead of the sage on stage".

In prevailing circumstances, we need teachers having knowledge, ways of thinking and acting, and capabilities to utilize technologies for quality education. This new breed of teachers can be termed as 'E-excellent teachers'. These E-excellent teachers are supposed to have mastery of technologies mediated online and offline learning to survive and excel in the world of E-education, dominated by 'digital native learners'. The proof of this mastery is not only the ability to learn about the online learning materials, but more importantly the know-how to get connected into the minds of students, whether teaching in classrooms or teaching at a distance. E-excellent teachers are expected to provide academic facilitation to learners by using E-pedagogical practices and also required to be skilled for virtual teaching learning using computer simulated environment (both synchronous as well as asynchronous).

The main challenge before policy planners and educational institutions is to devise indigenous strategies to prepare E-excellent teachers? Bearing this objective in mind, six innovative strategies are proposed to prepare 'E-excellent teachers'. These strategies are focused to prepare teachers for technology based operations and concepts, technology supported learning environments, technology mediated teaching and curriculum, technology enabled assessment and evaluation, technology enhanced professional development, and technology empowered learner support. The proposed strategies use a flexible amalgam of formal, informal and non-formal approaches to provide E-support for the diverse pool of teachers by following the principle 'E-education by the teachers, for the teachers, of the teachers'. The proposed strategies are discussed below in detail:

(a) Establish 'E-technologies Labs'

Necessary infrastructure and access to technologies is the first and foremost condtion for preparing E-excellent teachers, as suggested by Sutton (2006), "We can use resources to change teaching and learning. We can help teachers by giving them a different perspective, by involving them in meaningful activities, and by allowing them entry into the knowledge networks that define teaching and learning, giving them the hardware, and some technical training, is the first part of their learning journey." Taking this point in view, the first innovative strategy is to establish 'E-technologies labs' in all the educational institutions. Following are the main features of this strategy:

> The educational institutions will be required to establish 'E-technologies labs' for teachers. The 'E-technologies labs' will be required to have sufficient number of computers and broadband Internet connection. This suggestion is based on the fact that majority of above discussed emerging technologies are almost available for free and one only needs a computer and internet to use them. The other required hardware will be printer, scanner, digital camera, handy cam, audio-video editing software, etc.
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> The main purpose of these 'E-technologies labs' will be to make technologies available to teachers and help them to know, learn and use them for betterment of teaching learning process. Keeping this objective in view, the agencies responsible for granting recognition to educational institutions can put up the establishment of 'E-technology lab' as one of the mandatory condition for providing recognition.
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> The unique nature of technology is that it attracts one to use it. Following this principle, the establishment of 'E-technologies labs' in educational institutions will motivate the teachers to have a look on the emerging

technologies and this will ultimately help them to learn and use technologies for teaching learning purposes and this in turn will help them to attain E-excellence.

Researches conducted world over confirms that material access is one of the most common barrier preventing teachers to use existing and emerging technologies for teaching learning purposes. Establishment of 'E-technologies labs' in educational institutions will be a useful step to overcome this material access barrier. The 'E-technologies labs' will offer in-house opportunities for teachers to learn and use technologies. This exposure and working experience will ultimately help teachers to become E-excellent teachers.

(b) Offer 'Peer supported E-training'

Educational institutions often lack training facilities to train teachers for the world of 'E-education'. The proposed strategy offers a cost-effective and easily adoptable solution of this problem. The proposed strategy is based on the assumption that in every educational institution or nearby educational institutions, there are always few teachers having good command over technologies. The educational institutions can take the services of these technology versed teachers and students to train those teachers who are not so good users of technology. In this context, the second strategy is to offer 'Peer supported E-training' to teachers. The main features of this strategy are as follows:

There is enough possibility that every educational institution have at least few technology versed teachers (means knowing more about technologies usage than others). The institutions must identify these in-house technology versed teachers to provide E-training to peers. Services of these in-house experts can be sought to provide training to those teachers who lack skills and attitude to use E-technologies for teaching learning purposes.

Now-a-days numbers of institutions in every region are running professional and technical courses. These institutions have number of experts skilled in usage of technologies for teaching learning purposes. Inviting experts from these nearby institutions will be a viable option to provide E-training to teachers. These technology experts from nearby institutions can be invited on regular basis to train teachers and providing on-the hand work experience to operate technologies.

The 'industry-institution' linkage can also play very important role to train teachers for technologies mediated teaching learning activities. The experts from industries can be invited to give talks and provide hands-on experience on usage of technologies to teachers. The services of these experts will be mainly helpful to train teachers about new technologies and the ways to operate them.

The most important part of this strategy is that it works on the principle of 'chain reaction'. Those teachers who will get training at first place will act as master trainer for next set of trainees. This chain will provide a continuum of technology training among teachers. The other important aspect of this strategy is that it will help teachers to learn and practice technologies in their respective institutions. After getting this peer-supported training, it will be easier for teachers to become E-excellent users of technologies for benefit of teaching learning process.

(c) Develop 'E-bonding among Teachers'

As discussed earlier, the nature of 21st century learner has changed. In today's world they have multiple opportunities to observe, explore, play with, and learn from digital media-television, DVDs, MP3s, Touch/iPhones, computers, video games, cell phones, smart toys, etc. (Hasebrink, Livingstone, Haddon, and Olafsson, 2009). Knowing these digital native learners and making a bonding is must to ensure the optimum utilization of technologies in education. To achieve this objective, the best strategy is to develop 'E-bonding among teachers'. The main features of this strategy are as follows:

Educational institutions should try to establish 'E-bonding clubs' in their campuses for teachers and students. The main aim of these clubs will be to provide a common place for teachers and students to share their expertise and concerns about 'E-technologies'. The regular meeting of these clubs will help teachers and students to learn from each other and follow the path of co-operative usage of technologies.

These clubs will help teachers to learn the mindset of students. During the meeting of these clubs, the proficient users of technologies will share their expertise and experiences with fellow teachers and students. Their experiences will motivate other teachers and students to use technologies for betterment of teaching learning process. Besides, these club can also publish E-newsletters to showcase the technology related experiences and concerns of teachers.

These clubs will offer opportunities to teachers and students to learn from each other regarding technologies. The club can also invite outside experts and teachers from other institutions to join these clubs and share their experiences. The members of E-bonding clubs can also plan to offer online guidance and counseling services related to educational use of technologies.

The excellent educational institutions of the world thrive over the idea 'Learn from your Learners'. The world of E-education demands that teachers must appreciate and accept this idea and come forward to learn from their students. The reason is that learning from students offers numerous opportunities for teachers to promote technologies usage in education. The establishment of 'E-bonding clubs' will be helpful to provide ample opportunities for teachers and students to sit together and learn from each other about technology usage for betterment of educational world.

(d) Ensure 'E-mediated Teaching'

Studies of the process of educational change show that access to new information, procedures or tools alone rarely leads to change. Education policies often lack focus that encourages the integration of technology content into the learning landscapes of educational institutions, in the standards, curricula, instructional material, and students' assessments. This is a clear indication that we must look for ways to re-orient and re-organize teaching learning process to accommodate technologies usage. This change will motivate and support our teachers to learn and use technologies. Considering this in view, the fourth strategy will be to 'Ensure E-mediated Teaching' activities in educational institutions. The main features of this strategy are as follows:

Re-orientation and re-organization of existing content will be the first step to promote the use of technologies in teaching learning process. The existing curriculums at different levels of education offer fewer opportunities for E-mediated teaching. To correct this trend, all educational boards/ bodies must look for ways to redesign and restructure the existing curricula to provide enough opportunities for technologies mediated teaching learning.

The other hindrance about technologies promotion in teaching learning process is evaluation part. Our evaluation system is still paper pen based. To take benefit of technologies, the other very important requirement will be to look for the possibilities to use technologies in evaluation process. These measures will help teachers to use technologies for assessment purposes and will also bring objectivity, reliability and accuracy in evaluation process.

The technologies are tailor made for giving assignments and projects in different subjects as they work on the principle of on-line submission and on-line feedback. The provision of technology mediated assignments and projects in different subjects will motivate the teachers to learn the process of on-line submission and evaluation. This acquaintance to use technologies for assessment will help teachers to attain E-excellence.

This strategy mainly talks to promote E-mediated teaching learning activities. The implementation of this strategy will pave the way for regular usage of technologies for betterment of teaching learning in educational institutions. As resultant, the teachers will be destined to use technologies for different teaching learning tasks. Once they start using technologies, they will ultimately look for ways to become masters of E-pedagogy.

(e) Promote 'E-sharing among Teachers'

The new technologies thrive on the idea of sharing. The main benefit of sharing about technologies is that more you share more you learn. To ensure the maximum benefit of these technologies, teachers need to know about the ways of sharing them. Therefore, technology sharing is a

vital component for preparing E-excellent teachers. To achieve this objective, the fifth strategy will be to promote 'E-sharing among Teachers'. The following are main features of this strategy:

This is a well known principle that 'no one is 100% perfect in technologies usage and no one is 100% imperfect in technologies usage'. This is also true in case of teachers as some of them are more competent in technologies usage than others. The educational institutions must look for ways to establish 'E-sharing Forum' to overcome this technological divide among teachers. These E-forums will help teachers to share technologies related issues with peers.

These 'E-sharing forums' will act as a good source for dissemination and distribution of relevant information regarding technologies usage among teachers. These forums will help teachers to share information via using technologies and also support them to learn from the experiences of fellow teachers. The sharing of ideas and experiences to use technologies will empower our teachers to excel in the world of E-education.

E-sharing forums' will also be helpful to ensure technologies supported professional development of teachers. The participation in 'E-sharing forums' will make teachers more aware about latest educational trends and issues by sharing their ideas on regular basis. This will make them good users of technology and ultimately help them to develop as an E-excellent teacher.

There is a good principle about technology usage, 'if you want to make one as informed user of technologies, share technologies with him/her'. Following this principle, the above discussed strategy mainly advocates about 'E-sharing among teachers'. The E-sharing measure will particularly motivate those teachers who are not so good in technologies to come out from E-exile. E-sharing with peers will ultimately help these teachers to learn technologies for learning and join the world of E-education.

Reward 'E-activities of Teachers'

Everyone needs motivation to continue any task or activity. Teachers also need incentives and encouragement to continue with their technologies mediated activities in classrooms. Therefore, it will be worthy to have some provisions to reward the technologies related activities of teachers. The provision of award and appreciation will motivate teachers to use technologies for betterment of teaching learning process. Taking this point in view, the sixth strategy is to reward 'E-activities of Teachers'. The main features of this strategy are as follows:

The educational institutions must evolve a policy to offer awards and incentives to those teachers who are engaged in different types of technologies promotion activities. This measure will be helpful to promote technologies usage among teachers in two ways, in one side, it will motivate those teachers who have already learned and using technologies and in other side this initiative will strike those teachers who are reluctant about use of technologies for teaching learning purposes.

Technologies offer numerous ways to people to put their ideas, activities, and publications before the world. The teachers possess number of wonderful ideas but lack opportunities to show case them to educational world. The educational institutions must motivate and reward teachers to use technologies like blogs and websites to publish their ideas on different educational issues.

Educational institutions must motivate and support teachers to publish 'E-journals' or 'E-newsletters' in their respective subjects. This measure will help the teachers to put their ideas and research interests before the world. The educational institutions must also adopt a policy to provide incentive to those teachers engaged in E-publications or developing online and offline educational software.

Recognition is a vital component for technology promotion among teachers. Recognition and reward to those teachers, who are role models in technology usage for teaching learning purposes will create a competitive atmosphere among teaching community. This competitive atmosphere will generate a feeling among teachers to learn technologies for their recognition. We

know that recognition can do wonders for a person, and can hope that recognition of technology versed teachers will certainly help them to do wonders in the world of E-education.

Conclusion

Teachers may be forgiven if they cling to old models of teaching that have served them well in the past. All of their formal instruction and role models were driven in the past by traditional teaching practices. Breaking away from traditional approaches to instruction means taking risks and venturing into the unknown. But this is precisely what is needed at the present time (NCATE, 1997). Making teachers' competent for using technologies for education is a task that requires efforts at different levels as suggested by Joens (2003), "Teachers are still the portals through which students are given opportunities to incorporate appropriate forms of computer enhanced learning. No matter what educational systems mandate and expect, in the end effective learning is very dependent on the competence and will of the teacher." Researcher hopes that implementation of above proposed innovative strategies will help to prepare E-excellent teachers having skills and capabilities to use technologies innovatively and efficiently to meet the needs of the learners.

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