New Models and E-Learning Trends in Teacher Education and Professional Development

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ABSTRACT: *With the advent of the knowledge era, teacher education needs to prepare teachers to face the changing technological contexts and to model pedagogies and tools for better forms of learning. Despite much enthusiasm about the roles of technology in education, its role in transforming teacher learning, in ways aligned with advances in the learning sciences and contemporary socio-cultural perspectives, few changes have occurred. While many teacher educators are turning away from technology after early attempts met with mitigated success, some are pushing the boundaries of teacher education and professional activity systems. This paper identifies and analyzes emerging trends and models in e-learning for teacher education and professional development from the developing research base, both international trends and current developments. As we know that globalization cannot be understood without including information and communication technology (ICT). Educational institutions and teaching staff have many benefits due to emergence of modern technology. Teachers have their own networks through which they connect themselves with other teachers across the globe. Institutions have web-supported classrooms. Similarly, it also enhanced the responsibilities of schools, colleges, universities that should have such teachers who can produce such students who after receiving their education can adjust themselves at any platform.*
KEY WORDS: *Teacher education, technology in education, models in e-learning, and teacher professional development.*

Introduction

With the advent of the knowledge era, teacher education needs to prepare teachers to face the changing technological contexts and to model pedagogies and tools for better forms of learning. Despite much enthusiasm about the roles of technology in education, its role in transforming teacher learning in ways aligned with advances in the learning sciences and contemporary socio-cultural perspectives. Darling-Hammond and Baratz-Snowden acknowledge that while specifying what teachers need to know and be able to do is not a simple task, it is possible to develop a vision of professional teaching that connects teaching with student learning and requires that teachers be able to point to evidence of that learning (cited by Berliner, 1994).

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Meanwhile, globalization and the increasing convergence of digital technologies were the defining characteristics of our world at the turn of the 21st century. As boundaries blurred due to the swiftness of information transfer, knowledge became power. With governments gearing up to prepare their citizens for the knowledge-economy, greater responsibility has been placed on education institutions to meet the challenges brought about by this new landscape. Education is the main enabler for a nation with no natural resources and whose competitive edge lies in arming its people with skills and competencies needed for the 21st century (Papastamatis, Panitsidou & Giavrimis, 2009:88).

The Objectives and Connotation of E-learning

This paper identifies and analyzes emerging trends and models in e-learning for teacher education and professional development from the developing research based, both international trends and current developments. I focus mainly on connotation of e-learning, teacher's professional development, teacher's responsibilities, proposals for effective teaching professionals and staff-development, research in teacher education and teacher practice consists on several aspects, and conclusions and suggestions. I have also highlighted the role of modern techniques in educational field and professional development.

As we know that globalization cannot be understood without including information and communication technology (ICT). Modern technology created easiness in every field of human life. Today, we can receive and send any information from any part of the world within seconds through internet. Educational institutions and teaching staff have many benefits due to emergence of modern technology. Today, distance education is also going through on line. Teachers have their own networks through which they connect themselves with other teachers across the globe. Institutions have web-supported classrooms.

Due to emergence of modern technology, world has changed its domain. Similarly, it also enhanced the responsibilities of schools, colleges, and universities that should have such teachers who can produce such students, who after receiving their education can adjust themselves at any platform. Therefore, as per the modern, trend educational institutions need those teachers and learners who must be professionals in their field and work. They should have the qualities to work for the nation building process and betterment for the entire society.

E-learning is a technology which supports teaching and learning via a computer and the web technology. It bridges the gap between a teacher and a student in two different geographical locations. Advancement in internet and multimedia technology is the basic enabler for e-learning. E-learning applications facilitate online access to learning content and administration. Software applications built for planning, delivering, and managing learning events has become a crucial need for the corporate training departments of large organizations. Our creative and technical abilities allow us to package the most complex material into a comprehensive and

an interactive e-learning application. We work with sophisticated technologies and produce e-learning applications for a variety of situations and deployment methods (NID, 2008/2009).

Educators' Professional Development and Teachers Responsibilities in Modern Scenario

In most cases, adult learners have somewhat different needs and characteristics as compared to children. They are more self-directed, more mature, more experienced, more problem-oriented, and live under different social circumstances and expectations. It is imperative, therefore, that educators should not equate and treat adult learners as children. Reflective adult educators have come to realize that treating adults as though they were children results in ineffective teaching and unsuccessful learning (Berliner, 1994).

It is widely recognized that one of the most enduring issues with staff development programmes for professionals has been the tendency on part of staff developers to treat adult learners as children rather than as adults. Some institutions and educators tend to maintain an authoritarian teaching style, relying upon the educator teaching from the front with very little interaction with the learners. Such practice would seem unsuitable for teaching adults. If adult educators and their adult learners need to share in a positive and meaningful educational experience, it is important to acquire greater understanding of the process involved in adult learning and the methodologies that can enhance this process.

Staff development planners should take this fact into account and adapt their teaching strategies and techniques accordingly. The extent and quality of the professional education and training, received by professionals, influence both the quality and the style of their teaching. The more knowledge and skills, they have in planning and delivering instructions the better their students will learn. Professionals without sufficient teaching knowledge tend to teach by instinct and are doomed to trial-and-error approaches (Fuller, 1969).

The 21st century has been characterized by knowledge driven economies, rapid information exchanges, and fast-moving communication technologies which have created new demands on education systems worldwide. In the 21st century landscape, education must focus on nurturing the whole child – morally, intellectually, physically, socially, and aesthetically. Students need to acquire new knowledge, skills, and dispositions to ensure their survival and success as individuals, as members of the community, and as citizens of our nation (Griffiths & Tann, 1992).

To achieve this, we must develop teachers who are able to undertake in content teaching, knowing how people learn best, and learning to design the best learning environment possible. Teacher identity values refers to having high standards and a strong drive to learn in view of the rapid changes in the education milieu and being responsive to student needs. The values of service to the profession and community focuses on teachers' commitment to their profession through active

collaborations with the fraternity and striving to become better practitioners to benefit the community (Guskey, 2003).

Teacher identity can be acknowledged when he/she must have the following characteristics: (1) Aims for high standards, (2) Enquiring nature, (3) Quest for learning, (4) Strives to improve, (5) Passion, (6) Adaptive and resilient, (7) Ethical, and (8) Professionalism (Berliner, 1994).

Proposals for Effective Staff Development of Teaching Professionals

The foregoing discussion describes a picture of the unique professional growth needs of teaching professionals, who have been characterized as adult learners going through stages of career development. If educational authorities are to use this information wisely, they must translate it into effective reshaping of staff development programmes. It is worth mentioning that the characteristics that influence the effectiveness of professional development are multiple and complex. It may be unreasonable, therefore, to assume that a single list of effective professional characteristics will ever emerge, regardless of the quality of professional development research (Johnson, 1998). With this in mind, we believe that the following suggestions would seem essential for the development of such programmes.

First, **encouragement and experimentation**. Teaching professionals should be encouraged to try out new ideas, and even conduct their own classroom research on how well those ideas work with their learners and under what conditions they work best. They need to take time to reflect about what they are doing. Educational authorities need to provide them with opportunities to do so. To use modern methods effectively, professionals need first to understand the research upon which those methods are based. Considering that they have either not been taught or be experienced in these methods, they also need to practise them. They need to practise newer methods with guidance making necessary modifications so as to develop student learning (Kagan, 1992).

Second, **the teaching professional must be at the center of staff development**. Professionals must undertake the primary responsibility for their own professional growth. They must be given the responsibility for planning staff development in terms of diagnosing their own learning needs, designing, and identifying programmes to meet these needs and deciding when their needs have been adequately met. Placing professionals at the center of the staff development process means that they will both determine the nature of programmes for their own professional growth and will assume a major responsibility for supporting each other in their efforts to grow. Sharing knowledge and experience with their peers can improve teaching practice, progress learning, and foster true conceptual change (Tuomi, 2004).

Third, **staff development programmes must be characterized by mutual professional respect**. Professionals who take part in professional growth need to value and respect the professional skills and abilities of their colleagues. They should

honour learning, participation, and cooperation above prescription, production, and competition. This critical factor enables professionals to teach and learn from each other. In this kind of endeavour emerges the concept of the school as a learning community. All participants, teaching professionals, and learners engage in learning and teaching, and school becomes a place where students and professionals discover (rediscover) the difficulties and satisfaction of learning (Wagner, Hassanein & Head, 2008).

Fourth, **education and training is a lifelong process**. Teaching professionals need to think about education and staff development not merely in terms of initial courses but more fundamentally in terms of rhythms by which communities and individuals continually renew themselves. In this way, education becomes a mutual developmental process between community and individuals, one that goes beyond mere socialization. It is an investment of a community in its own future, not as a reproduction of the past through cultural transmission, but as the formation of new identities that could take its history of learning forward.

Fifth, **learning must be related to the needs and expectancies of adult learners**. Adequacy provision must be made for teaching professionals to give and receive feedback in relation to the relevance of the staff development programme. The needs identified will help justify decisions by the educator and learners. The needs identified by learners and by others can be distinguished as felt needs and prescribed needs. Felt needs are those desires and wishes of the learner, while prescribed needs are premised upon educators. It is inappropriate to plan a staff development programme for adult learners on a felt needs approach and it is equally unacceptable to plan a programme totally on needs prescribed by others. Combining felt needs and prescribed needs would seem to be a more rational approach. In this way, a mutual collaborative teaching-learning environment can result that ensures greater participation and desire to persist and achieve in teaching and learning situation (Sun, 2003).

Sixth, **the primary focus of staff development programmes should be on sustained long-term growth**. It is commonplace that one-shot quick-fix approaches to staff development have little to offer teaching professionals in terms of real professional growth. The reason, one-shot staff development has not been more growth enhancing for professionals, is the fact that instruction typically is delivered at the lower levels (knowledge and comprehension) of the cognitive domain. Professionals, therefore, are not afforded needed opportunities to apply and practice new skills (application), much less to adapt them to their present teaching repertoires (synthesis) or to take judgments about how well they are working (evaluation) and then determine the reason why they work or do not work (analysis) (Teo & Gay, 2006). This approach to staff development overemphasizes narrowly defined, technical teaching models that minimize the complexities of teaching and encourage teaching professionals to function as technicians rather than professionals. Only when professionals are encouraged to function at the higher levels of the cognitive domain can real growth be expected.

Seventh, **learning to teach requires that professionals come to understand teaching in different ways from what they have learned from their own experience**. Actually, they need not only to understand but also to perform a wide variety of things, many of them simultaneously. To achieve this requires much more than simply memorise facts and procedures, since there is a major difference between "knowing that" and "knowing why and how" (Kinshuk *et al.*, 2003).

Eighth, **teaching professionals work with diverse students and have to achieve multiple educational aims requiring trade-offs from time to time**. Although, some aspects of teaching could be routinised, what professionals do will be influenced by changing student needs and unexpected classrooms events? Many decisions in teaching are contingent upon student responses and the particular objectives sought at a given time. Therefore, these decisions cannot be routinised. Thus, helping professionals think systematically about this complexity is extremely important. They need to develop metacognitive abilities that guide decisions and reflection on practice (Lee, Cheung & Chen, 2005).

Typically, however staff development programmes attempt to cope up with the complexities of teaching as if they could be understood at a single sitting. In doing so, the education profession has effectively devalued teaching and, at the same time, turned off professionals to the potential opportunities that exist for personal and professional growth through continuous staff development. Modern professional development has a variety of purposes beyond skill training, including facilitation of teachers' efficacy, cognitive development, and career development, as well as teacher collegiality and the improvement of school culture. An expanding body of literature has accompanied the broadening of professional development on effective development programmes.

Meanwhile on the research in teacher education and teacher practice, it consists of several aspects such as follows:

First, **Research related to the subject content knowledge** – meaning that teachers should understand how knowledge is generated in their specific academic disciplines and should have the knowledge of most recent research results in research in subjects they teach. They should develop critical scientific literacy and they should be able to teach their students how to critically read and evaluate scientific data.

Second, **Research related to the educational sciences** – meaning that teachers should be able to understand and participate in research related to different variables in educational contexts.

Third, **Interdisciplinary** – meaning that research is connecting between subject content knowledge and pedagogical knowledge (teaching methodologies).

Fourth, **Evaluation research** – meaning that teacher education should prepare teachers in using research methodology to evaluate the effectiveness of their teaching. It also means that teachers should learn how to interpret the obtain data, how to communicate and how to make evidence based decisions.

Fifth, **Research-oriented attitude and value of lifelong learning** – meaning that teacher education should support teachers in development of new aspects

of their professional role. They should perceive themselves as agents of change in changing society being analytical, open to new experiences, innovative and committed to lifelong learning.

Sixth, **Action research is also very important aspect** – meaning that it is about teacher-practitioners studying real classroom or school situations and fostering reflective and inquiring education community committed to formulating actions that work. Action research helps teachers to first reflect on their teaching practice, then systematically collect, and analyze classroom evidence in order to better understand their own practice. Teachers in action research are focused on their students' learning, well-being, and improving the quality of their practice (Hezel, 2005).

Conclusion and Suggestions

E-learning is a large and growing market with great potential in higher education. In order to maximize this potential, e-learning implementations should endeavor to satisfy the needs and concerns of all groups as much as possible. The analysis undertaken in this paper and culminating step in that direction. As shown in our e-learning that each stakeholder group has an important role to play while working together towards the common goal of enhancing the overall learning experience.

Students and instructors should participate as proactively as possible; provide feedback to improve future experiences, and communicate the learning possibilities that e-learning create. Institutions should provide the technical infrastructure and support needed to enable comprehensive solutions. Content and technology providers should provide high quality, interoperable solutions that consider learning principles. Accreditation bodies should provide and enforce clear guidelines for this new form of learning delivery. Employers need to recognize the validity of this form of education and work with other stakeholders to ensure that graduates meet the needs of the job market. Institutions of higher education could utilize the   responsibility presented in this paper as a starting point when undertaking a new e-learning initiative.

In addition, develop a set of expectations for each. Since the presented framework involves the cooperation of each stakeholder group, its implementation would entail communication between groups to ensure that the responsibilities of each group are clear. To this effect, when institutions undertake a substantial e-learning initiative, they should strive to involve a cross-functional team with representation from each relevant stakeholder group. This will ensure their specific needs are addressed during development and will help to facilitate during implementation.

Successful implementation also requires a project champion, who will communicate the responsibilities and the importance of cooperation to each group. It is suggested that leadership from the highest level of the institution is needed to see the opportunities available and bring them to reality. Through the effective dissemination of information, those involved in e-learning can be made aware of how they fit into the complete picture, and the importance of their specific roles in e-learning implementation success.

The framework presented in this paper is derived from the motivations/needs and concerns of stakeholder groups as noted in the literature. Future research should be conducted to validate this framework across various institution types, educational programs, and cultural settings. Since the application of the framework at an institution requires the coordination of many stakeholder groups, a case study methodology may be the most appropriate to study the application of the framework. This methodology would allow for in depth study of the success of a particular application in light of the levels of cooperation achieved according to the stakeholders.

Returning to the question posed in the title of this paper: "*Who is responsible for e-leaning success in higher education?*". I have shown the answer to be a shared responsibility between the various e-learning stakeholders. When all stakeholders fulfill their responsibilities to create effective and meaningful e-learning experiences, positive outcomes extend beyond success in specific courses and programs to facilitate lifelong learning and discovery. Knowledge grows within those who discipline themselves to think about what is known and what still needs to be known. The design of effective learning opportunities needs to begin with a clear idea of what we want people to know and be able to do.

In this way, we learn from one another and we develop new insights. Teaching professionals are people, and their personal professional growth is as legitimate a concern of education as is the cognitive and affective development of students. Learning to teach is a developmental progress from early concerns with "self" to a gradual focus upon issues related to student learning and eventually to the school climate. If we can help educators understand where they stand, and if they can stand there with dignity, security, satisfaction and competence, then everyone will make improvements.

Taken theories and ideas, I have discussed in this paper that e-learning can have a significant influence on the culture of teaching professionals, since they contribute in unanticipated ways to the development of individual professionals. It is commonplace that leadership for improving staff development is the key to unlocking that potential. Staff development offers many worthwhile benefits to teaching professionals. It can effectively provide the keys to improving professional performance, reducing isolation, providing support system, and generally improving the professional lives of teaching professionals by making them more productive.

In line with the discussion of this paper, I identified a growing consensus of guiding principles as on going professional learning, professional development connected to the teaching practice, school communities that encourage shared e-learning and professional development that is integrated into the school plans. The major function of educational authorities is to build an educational culture that values professional development and involves teaching professionals in planning learning activities, which best support, their practice. The challenge remains in creating schedules that allow time for teaching professionals to participate in continuous development. It is therefore important to encourage professionals, namely

the most critical actors in the educational process, to learn and develop, realising that this goal is apt to be met when they all work together to make it happen.

Moreover, it is imperative for educational authorities to make staff development so worthwhile, so exciting, so effective, and so clearly adjusted to the growth needs of teaching professionals that every single of them will demand to be part of the programme. Nonetheless, it has to be acknowledged that although serious steps have been taken towards this direction in other there is still a long way to go to build effective professional growth strategies for teaching professionals. Until nowadays, professional development programmes have failed to reach professionals' needs while they run randomly and uncoordinatedly, ignoring most rudimentary principles discussed in the present paper.

Thus, further action is required in order to make available to teaching professionals in developed and developing countries, a multitude of quality professional development alternatives are needed to be adapted, that can help to individual needs, meeting both quantitatively and qualitatively to professional growth programmes across the globe.

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