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Users' Training: The Predictor of Successful eLearning in HEIs

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Abstract

Research reveals over and over that the successful development and use of eLearning systems in higher education institutions (HEIs) are squarely anchored on the roles of users in the development and use phases of an eLearning project. At the development level, researchers suggest that all decisions and implementation must be user-centric by constantly scanning the diversity of ever-changing user-needs. While use level requires effective user-training and then sustained technical support that is available 24/7. However, user training is central issue for the project and organizational (university) management in terms of its contents, processes and followup. This paper aims at unfolding the nature and implications of user-training in the background of eLearning practices in HEIs particularly, in developing countries like Pakistan. Extensive literature have been surveyed to bring together diverse ideas, findings and comments of researchers about the nature, problems and solutions of user-training in the background of higher education thereby reducing it into a theoretical model of user-training.

Index terms— eLearning, HEIs, ICTs, eProjects, eUsers, eTraining, eTeachers, eStudents, Net-Genres,

1 I. INTRODUCITON

The development of innovative competencies in eLearning is rapidly surfacing as the key issue for teacher training (Gray et al., 2003). Within universities, the implementation of eLearning is difficult for many reasons including the hesitance of faculty and staff members: decision makers and academics to change (Loing, 2005;Qureshi et al., 2009). Likewise, researchers have documented that many eLearning projects fail due to many reasons but particularly, the lack of adequate training to support the program (Wells, 2007;Nawaz et al., 2007; **??**awaz & Kundi, 2010b).

Furthermore, technology means nothing if it is not used (Mujahid, 2002) but use depends on the users' motivation towards eLearning (Lynch et al., 2005). For example, people need word processing not to 'survive rather to command over the efficient ways of sharing information about livelihoods and employment. Information and Communication Technologies (ICTs) for human development are not about technology, but about people using the technology (Hameed, 2007). Similarly, teachers and students expect better support for lectures, a better access to databases, better support for research, better connectivity with the rest of the world but these high expectations are reported to be in contrast with reality (Vrana, 2007; **??**awaz & Kundi, 2010c).

Depending on the theoretical model used by the developers and users, instrumental (ICTs as a tool) and/or substitutive (ICTs as a change-agent) roles of eLearning are available however; both models emphasize the role of eLearning-users (Young, 2003). Instrumentalists contend that technology is neutral and therefore its impacts and benefits entirely depend on how are they harnessed and used by teacher, student and administrators (Macleod, 2005). The substantive theorists accentuate that instrumental view is an underestimation and they can be used more intellectually and intuitively thereby changing the lifestyle of the society (Ezer, 2006). However, it is notable that no matter whether instrumental or substantive view is upheld, the success of eLearning squarely depends on the quality of "eTraining (Blázquez & Díaz, 2006)" available for teachers, students, and administrators.

Thus, the future of technology in higher education depends on the training of particularly, teachers because it is these teachers who prepare the students as well as administrators to use digital tools (Oh & French, 2004).

The adoption of ICTs is a lifelong learning process however, for immediate uses particularly in organizations like universities, the users are supposed to quickly learn using new technologies. So, training is a narrow term than education that aims at preparing a learner for a particular job, function, or profession. Education refers to a long term learning process with high level objectives of developing moral, cultural, social and intellectual dimensions of an individual and society (Drinkwater et al., 2004;.

2 II. E-LEARNING IN HEIS & E-TRAINING OF E-USERS

Traditionally, transmissive modes of learning were popular, however, now there are shifts from content-centered to competency-based curricula as well as departures from teacher-centered to studentcentered pedagogy in which students drive the learning process (Oliver, 2002). ICTs and particularly the educational technologies (ETS) provide complete support to the innovations of eLearning (Dinevski & Kokol, 2005) for example, its tools are usable in any learning situation including face-to-face, blended or hybrid courses, or virtual learning (Abrami et al., 2006). eLearning can be delivered either through self-managed (asynchronous -offline) and teacher-led (synchronousonline). In asynchronous system, teacher and student are not required to be physically present at the time of communication rather programs are saved on the network, which is accessible at anytime from anywhere. Asynchronous learning is globally accessible, easily maintainable, platform-independent, quickly updatable and entertains a diversity of "learning styles" of the users (Manochehr, 2007)."

The concerns about eLearning practices in HEIs include debates over the best means of integrating technology into teacher-training and preparing them to replicate the same in the classrooms (Oh & French, 2004). A large body of literature supports the idea that technology training is the major factor that could help teachers develop positive attitudes toward technology and its integration into curriculum (Zhao & Bryant, 2006). Recent studies on educational technology confirm the necessity of educating teacher candidates in technology-integration into the curriculum as well as the inadequacy of existing education programs (Willis, 2006). Teachers must be kept fully abreast of the new perspectives on learning theories in general and particularly in their area of specialization **??**Haddad & Jurich, 2006).

3 III. USERS OF E-LEARNING

All users of ICT-based tools use computers however, their use varies from one group to another due to diversity of their functions and their personal attributes. Similarly, nature and extent of use is different under traditional computer-based learning, blended learning and virtual learning facilities (Sanyal, 2001; **??**NESCO, 2004). Teachers are pushed to adopt technology by media, government, educational institutions, professional associations, parents and society at large, but it can be counterproductive therefore, there is need to understand the teacher perceptions of ICTs and their integration into pedagogy and thereby develop training programs accordingly (Zhao & Bryant, 2006). Researchers have found that most of the educators prefer informal learning-methods than the formal courses of eTraining (Davey & Tatnall, 2007;.

The new technologies like Internet, web-based applications, and Web 2.0 products -all are reengineering the pedagogic and learning theories and practices. There are shifts from objectivism to constructivism in teaching and learning (Young, 2003), technocratic to reformist and holist paradigms in eLearning development and use (Aviram & Tami, 2004), and from instrumental uses of ETS to the substantive applications in the education (Mehra & Mital, 2007; **??**awaz & Kundi, 2010c).

1) Teachers eLearning systems create challenges for the teachers and demands greater preparedness by possessing a wider repertoire of new teaching styles and techniques (UQA, 2001). An eTeacher has to play the roles of a mentor, coach/facilitator as well as perform the following functions:

1. Managerial: The teacher has to plan the teaching programs including objectives, timetable, rules and procedures, coursecontents and deciding about the interactive activities. 2. Intellectual: This refers to the fact that teacher knows the syllabus and subject behind it. 3. Social: The teacher creates supportive learning environment, interacts with students and examines their feedback. To perform this function, the eTeacher should motivate, facilitate and encourage the students to use new digital tools (Blázquez & Díaz, 2006).

In eLearning, five types of teacher-users have been identified: builders of eLearning tools, tool-users, tool-adapters, tool-abiders and those who are indifferent to the use of computers (Johnson et al., 2006). They further suggest that universities must develop a large body of tool users. Then motivate some creative faculty members to perform as adapters and give them incentives and support from the highest levels of administration. The most important type of teacher users is the 'tool adapters', who are skilled users and can adapt it according to the teaching styles of the faculty. Tool adapters must be those who enjoy teaching and not intimidated by technology.

The research indicates that decisions made by teachers about the use of computers in their classrooms are influenced by multiple factors including the accessibility of hardware and relevant software, the nature of the curriculum, personal capabilities and teachers' beliefs in their capacity to work effectively with technology are a significant factor in determining patterns of classroom computer use (Albion, 1999). Furthermore, teachers' fear of being replaced by technology or losing their authority in the classroom as the learning process becomes more learner-centered. These apprehensions can only be alleviated if teachers n understand and appreciate their changing roles in education (Tinio, 2002).

4 2) Students

Computers are regarded as beneficial to the students not because these machines can create a better form of learning but mainly because the knowledge and skills needed to operate the new tools are essential for working in new dot.com organizations. The ability to work with this new technology is perceived as an asset for the future success of their pupils (Sasseville, 2004). Even according to researchers, student manipulation of technology in achieving the goals of education is preferable to teacher manipulation of technology (Abrami et al., 2006). The challenge of evolving pedagogy to meet the needs of Net-savvy students is daunting, but educators are assisted by the fact that although these students learn in a different way than their predecessors did, but they do want to learn (Barnes et al., 2007).

Contemporary eStudents are denoted by several concepts to express their involvement with ICTs: Computer Geeks/Nerds (Thomas & Allen, 2006); Net-Generation, Net Geners, and Net-Savvy students (Barnes et al., 2007); as well as Millennials & Electronic Natives (Garcia & Qin, 2007). Instead of learning from computers, students can learn with computers in new constructivist environments (Young, 2003). Given that most students can access (almost anytime and from anywhere) various forms of information technology -MP3, cell phones, PDAs (Aaron et al., 2004), it is obvious that the Net Generation is different from the previous generations in terms of their technological abilities, teamwork abilities, and openness to participatory learning (Garcia & Qin, 2007).

5 3) Administrators/Staff

The actual ICT use fosters logistics and administrative processes, distribution of materials and communication about instructional issues (Valcke, 2004). ICT has had more impact on administrative services (e.g. admissions, registration, fee payment, purchasing) than on the pedagogic fundamentals of the classroom (Dalsgaard, 2006). Likewise, ICTs are also facilitating in organizational learning through improved forms of communication and sharing (Laffey & Musser, 2006). Usually, administration (or management) provides the original momentum to create an IT committee and will be responsible for charging the group with its mission. High-quality IT literacy teaching requires the administration to provide support for faculty by adequately funding the staffing of IT services personnel to levels that can accommodate the demands placed upon them (Ezziane, 2007).

Top management support defines the success or failure of any project. For ICT integration programs to be effective and sustainable, administrators must have a broad understanding of the technical, curricular, administrative, financial, and social dimensions of ICT in education (Tinio, 2002). The 'yes' from senior administrative level ensures the successful implementation of the strategic plan for educational technology (Stockley, 2004) however, university administrators and ICT-departments try to provide the resources for technology integration in isolation from the teachners (Juniu, 2005). Administrators must balance the needs of all stakeholders (Abrami et al., 2006).

6 IV. MODELLING THE E-TRAINING FOR HEIS

The design and development of eLearning is not simply a matter of selecting a technology and a team of content and instructional experts, it also includes choosing educationalists with pedagogical and ICT skills required to handle online learning (McPherson & Nunes, 2004). The technology-integration should not be based on technologically deterministic approach rather founded on broader social, cultural, political and economic factors (Macleod, 2005). In India, for example, most ICT education is ineffective because it is too technical and not at all concerned with local contexts and real world problems (Ezer, 2006). There is also increasing acknowledgement that it is not just technical skills needed by the eLearning developers rather soft skills' are more critical (Jewels & Ford, 2006; **??**awaz & Kundi, 2010b **??** 2010c).

Research tells that the ideal method for developing teachers' self-efficacy is effective training and support to work with computers in the classrooms (Albion, 1999). Educators are need resources, teaching techniques, greater cultural sensitivity, and ability to adjust with new teaching and learning structures (UQA, 2001). Likewise, effective teaching strategies & pedagogy, appropriate curriculum, faculty development and consistent updating are the most important considerations in teacher education (Oh & French, 2004). In the eLearning environments, eTeacher works as a mentor, coach or facilitator and is expected to perform managerial, intellectual and social functions with the help of modern technologies, which definitely demands continuous teacher-training (Blázquez & Díaz, 2006; **??**awaz & Kundi, 2010c).

Similarly, the students with no computerbackground, like those from natural sciences and social sciences need training in those tools which are needed in their own field of learning. This training is mostly conducted by the computer-personnel (Ezer, 2006). However, research shows that such trainers fall short of educating the students in how to use computers in a particular field of study except the general uses of the technology. Researchers have therefore suggested to use non-computer training personnel for the purpose of preparing non-computer students in practical use of computers in the real world (Gray et al., 2003;Blázquez & Díaz, 2006; **??**awaz & Kundi, 2010c).

Thus, both the decision-making and implementation staff has to understand ICTs. Decision makers' knowledge of computers and related technologies definitely help in making real-world decisions (Afghan, 2000). In most of the universities, administrators and administrative staff is given training in the use of computers for performing administrative functions like office automation tools particularly MS-Office (Marcella & Knox 2004) however, in the advanced countries, administrative staff is also trained in using EMIS, EDSS, LMS, CMS, and other eLearning

software (UNESCO, 2006). In developing countries, there is still need to train administrators in the basic and preliminary use of computers in automating the routine administrative functions in an educational institution (Mehra & Mital, 2007). Administrative staff handles data about the university resources, operations, results, projects and correspondence with the external institutions (Wikipedia, 2009).

7 1) Continuous Users' Need/Problems Analysis

Recent research shows that technology properly deployed in the classroom can make the learning process more interactive and enjoyable if curriculum is customized to learners' needs and personal interests (Radosevich & Kahn, 2006). The multiplicity of perceptions about the nature and role of ICTs in HEIs can be grouped into two broader views. Each of these views determines the contents for eTraining.

1. Instrumental View: It is the most popular belief, which views technology as a 'tool' without any inherent value rather its value lies in its use so a single digital model fits every situation (Macleod, 2005;Radosevich & Kahn, 2006). Instrumental education is based on the argument that education serves society therefore emphasis is on relevance and utility of education. The risk of this approach is that students simply meet some identified need, rather than think critically with the purpose of achieving broader intellectual advancement (Ezer, 2006). 2. Substantive Role: This is a determinist or autonomous approach which argues that technology is not neutral rather exerts positive or negative impacts. Technological determinism encourages the idea that: the mere presence of technology leads to familiar and standard applications, which in turn bring about social change (Macleod, 2005;Radosevich & Kahn, 2006). The substantive theory matches with the 'liberal theory' of education (Ezer, 2006), which views learning not as a mere recollection of facts rather an interconnected experience.

Results show that promoters of technology view ICTs as a way of transforming education (substantiveapproach) whereas most of the teachers view it only as a means to an end (instrumental conception). The advocates of technology base their vision on broader social changes; the other group considers only the student-requirements and the practical ways to meet them (Sasseville, 2004) therefore, the developers must balance the needs of all stakeholders (Abrami et al., (2006) by getting academic computing staff, faculty, and administrators together (Kopyc, 2007; **??**awaz & Kundi, 2010c).

8 V. DISCUSSIONS

The research reveals that contemporary teacher training does not match the educational needs partly because administrators and technologists disallow faculty in the decisions about the design and development of technology-integration (Juniu, 2005). For example, there is no prescribed national syllabus for ICTs for teacher training in UK however, Ghana has a standard curriculum for ICTs in initial teacher training (Cawson, 2005). Anyhow, teachers need that kind of eTraining, which can be reproduced in the classrooms and not a training which makes them expert in merely using one or another software application or digital gadget (Willis, 2006).

Besides, emotional and behavioral aspects of attitude, the 'informational component' is on the top in the sense that it creates the belief and perceptions of the person, therefore sets forth the foundation for practical attitude. Given this, attitudes can be changed by providing correct, complete and timely information to the users about ICTs, educational technologies, eLearning development and use practices and benefits for the user **??**Luthans, 2005:124). There is need to change the roles of both teachers and learners. The eTeacher is no more a 'sage on the stage' rather a 'guide on the side' in the new learning environments. Likewise, an eStudent is no more passive receiver of contents rather collaborating partners in the learning process .

There is no denial that in the contemporary eLearning environments, a teacher's role for students has changed from providing well-cooked teacher's knowledge for passive students to self-cooked inputs by the students themselves. For this purpose, the students have to be self-disciplined, self-motivated and at the most mature in the field of ICTs and their applications (Hvorecký et al., 2005). However, it is notable that like teachers, the learners' preferences for their learning path depends on their personal characteristics of age, gender, perceptions about ICTs, and familiarity with the computer applications (Mehra & Mital, 2007; **??**awaz & Kundi, 2010a).

9 VI. CONCLUSIONS

Given the indispensability of computers in the educational environments, there is no option with the teachers, students and administrators except finding some way out for their digital literacy. They all have to understand their changing roles and responsibilities and make efforts to get knowledge and skills for play them effectively. The research tells that eLearning users mostly acquire their knowledge of computers either formally or informally from friends and fellows. However, there is need for a structured formal eTraining of users that is based on a thorough analysis of the requirements for technology, institution, individual users and society at large.

The training contents and the process must be user-centric meaning that eTraining has to be designed in accordance with the teaching styles of teachers and learning styles of the students and administrators. This is possible if a comprehensive research project is first initiated to collect data about different aspects of eLearning environments and then designing the systems, the results can be promising. However, implementation of such an ideal system should not be the immediate rather long term objective. Attitude management takes sometime

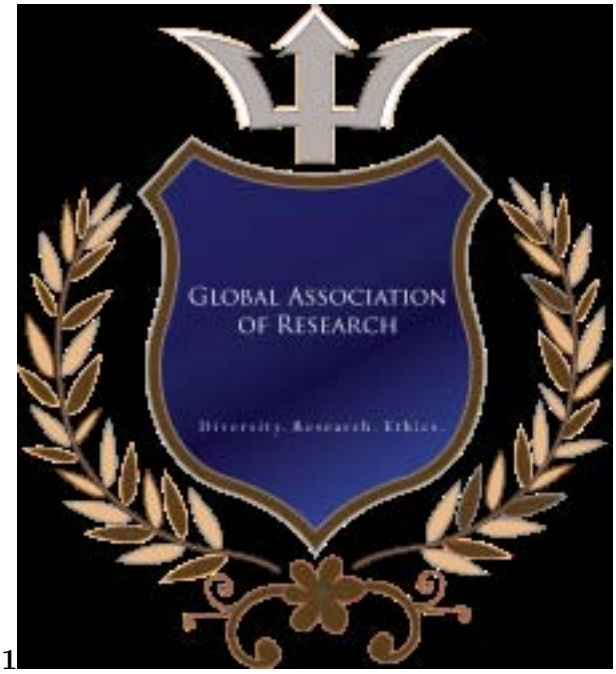

Figure 1: Figure 1

but if consistent efforts are not make for eTraining, most of the institutions continue using ICTs for low level applications. [1] [2] [3] [4] [5] [6]

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