Emerging Trends of E- Learning in Pakistan: Past, Present and Future

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Abstract: *E-learning is increasingly becoming a powerful and leading avenue of education in developed countries. The need for substituting traditional pedagogy with emerging models of e-learning is now becoming more pronounced in developing countries such as Pakistan. The conceptual realization amongst stakeholders is in the process of becoming a practical reality as various initiatives are in process but there are various hurdles and challenges that need to be addressed. The paper discusses the developments in e-learning education sector of Pakistan and identifies the obstacles in its future course. The research endorses adaptation to e-learning as a paradigm shift that involves restructuring on both technical and human frontiers. The human aspect involves the existing psychological orientation of teachers and students, who, due to various socio-economic, socio-political and socio-cultural factors, are prone to resisting the paradigm shift. The technical aspect includes institutional barriers and limitations in curriculum intervention. The research proposes e-learning as a potential revolution in the education sector of Pakistan as it is cost effective and performance maximizer.*

1. INTRODUCTION

We live in a world, which is increasingly becoming more connected because of the usage of information and communication technologies (ICT). Although there is a growing interaction between individuals and societies, the social development has been uneven in different countries. This difference is more visible between developing and developed countries. It can be seen that the inability to effectively use technology is one of the factors that are slowing down the social and economic development in developing countries (Morgan, 2001). Better learning from the experiences of developed world and improved coordination among peers can greatly enhance the pace of development. In the developed world, the idea of electronic/e-learning was introduced to educate the masses about advances in knowledge and opportunities available globally. In developing countries, this idea was not adopted with same intent but it proved very useful in bridging the gap between developing and developed extremes. Improved access to education and extended outreach of information helped in evolution of developing societies. Today we observe that e-learning, being lesser resource intensive compared to conventional means of information dissemination, is becoming a preferred choice for learning across the globe (Lowenthal, 2010).

E-learning encompasses many aspects of pre-digital era distance learning approach. It is a blend of learner and tutor centric models. The more recent delivery models incorporate both synchronous and a-synchronous learning modes. Modern e-learning is not restricted to teacher and learner alone; it covers many different users, content, procedures, moderators and service providers (Morgan, 2001).Widespread penetration of e-learning in education and

industry, with continuous evolution, informs the way we educate ourselves and suggests a bright future. E-learning is gaining popularity in working adults who are in search of higher qualification without losing their earning power and leaving their jobs (Lau, 2002). This trend seems developing as computer technology and internet are a part of almost every franchise. These days' mobile computing devices (smart phones, tablets, etc.) are becoming common. The access to broadband internet is improving not only in educational and corporate environments of the urban areas but also in rural areas. It has been revealed through researches that teenagers i.e. 16 to 18 years are eager for electronic learning or on-line learning (Lau, 2002).

1.1 Definition of E-Learning

With the evolution of learning technology and its respective fields, practitioners and researchers have yet to go too far to agree on common definitions and terminologies (Lowenthal, 2010; Volery, 2000).

In this paper, e-learning is discussed largely in line with the definition put forward by the Higher Education Funding Council for England (HEFCE) (2005) in which "e-learning is any learning experience supported by information and communication technologies (ICTs.)." In addition, there are multiple definitions that support and guide the use of the term of e-learning in this paper. According to the E-Learning Policy (2007-2010) of University of Liverpool, "E-learning is learning which is enhanced, supported or assessed by the use of electronic media. E-learning may involve the use of new or established technology and/or the creation of new learning material; it may be deployed both locally and at a distance". Fry (2000) precisely defines e-learning as "delivery of training and education via networked interactivity and a range of other knowledge collection and distribution technologies". Bleimann (2004), states that "E-learning is a self-directed learning that is based on technology, especially web-based technology". Horton (2001) defines e-learning as "the use of Internet and digital technologies to create experience that educates fellow human beings". According to Evans and Lahn (2004) viewpoint, "E-learning is a web-based technology that involves multimedia courseware".

It can be safely stated that the E-learning processes are information and communication technology centric. They evolved around Information Technology to enhance the learning performance and efficiency" (Hamid & Lytras, 2002). A plausible E-learning solution depends upon appropriate use of technology, convenient user-device interface and its general acceptability as human experience.

1.2 Growth of E- Learning in Pakistan

The global E-learning market is expected to grow significantly over the years. The worldwide growth rate in 2012-2016 is estimated to be around 7.9% annually with revenues reaching $51.5 billion by 2016. The Asian E-Learning market has the highest compound annual growth rate of any global region, is estimated to grow at a rate of 17.3%. Followed by the Asian market, Eastern Europe market is at number second with 16.9%, Africa at 15.2%, and Latin America at 14.6% (Docebo, 2014).

The education policy of Pakistan sets forth a bunch of innovative plans to boost higher education across the country. For example, moving away from a static, supply-based education system to a demand-driven setup with continuous revision and updating of

curricula to keep pace with changing needs of the job market and for accommodating the new developments. Several innovative programs have been initiated in this regard, such as, The National Education Testing Service (NETS), National Education Management Information System (NEMIS) (EPP, 2008).

On similar lines, the Ministry of Science and Technology (MOST) has determined to revitalize interest in developing the IT industry in Pakistan. The mission statement is to "rapidly develop the infrastructure in synchrony with the creation of excellently trained individuals and teams." Moreover, the core purpose of the Government of Pakistan is to "perform the role of an initiator and facilitator for the private sector so that they can avail the opportunities at its maximum in order to fulfill the thirst of IT in Pakistan (MoST, 2000). It is note taking that in developing countries, education sector as compared to all other development sectors has been the most focused sector to improve the quality, proficiency, and ease of access of the learning process. The purpose of developing a strategic approach is to provide focus and develop coordination for harnessing the potential advantages of ICT for sustainability of better economic and social development (Yousaf, 2001).

1.3 Experimenting with Technology in the Schools

In the 1990s, the high-end private schools started using ICT solutions as they could afford computer labs. These schools had an added advantage of clientele that valued this critical skill. While computer labs were established in schools and computers were made available even in the classrooms, there were very few teachers who had the capability and experience to properly integrate technology within the classroom. As a result, the use of technology could not go beyond writing reports, making presentations and browsing the internet using basic software applications.

Another challenge faced by these early attempts to deploy technology in the schools was lack of content particularly in local languages. The One Laptop per Child (OLPC) program in the 2000s that became popular in Latin America, Africa, and some parts of South and South East Asia skipped Pakistan. The situation began to change in the latter part of the 2000s. With the arrival of smart phones, low-cost computers and internet service providers, a wider section of the school going population started benefiting from technology (HEC, 2011). Furthermore, content developing communities such as Khan Academy and Sabaq Foundation started new trends in e-learning by localizing required content. The trend strengthened with initiatives such as Jugnu TV, Jugnoo Media, Toffee TV, Knowledge Platform and Tele Taleem, which invested in local content development. The Reading Room Project, EDeQUAL, and NUST ITE are becoming prominent in localized models of blended learning that may work within Pakistani settings (HEC, 2011).

In 2004, different projects with universities and industry are initiated by the Ministry of Information Technology and Telecommunications (MoIT) for the promotion of e-learning amongst the youth (HEC, 2008). The Ministry along with National ICT Research and Development Fund is primarily aims to distribute training instrument for English language and mathematics learning at high school. Initially, such training programs will be consisted of a number of competitions on the development of web pages and content which is of utmost importance for young minds and have a valuable addition to the knowledge of their peers.

In 2014, the Punjab government launched "E-Learn.Punjab", which is the government's first e-Learning initiative in Pakistan. The entire educational doctrine of the country has been

revolutionized by this initiative. E-Learn (E-GOV.pk, n.d). Punjab is an official repository that aims to enhance conceptual learning by providing free digitized textbooks, augmented with videos, animations and improve quality of education as well. Teachers can also contribute in this regard by uploading useful content for their students. This platform currently offers content for just a few subjects for 9th and 10th class. The content provided in that website is given below.

SUMMARY

Following table is presenting the augmented Videos, Animations, Simulations and Assessments to enhance learning values of textbooks

Books	Videos	Simulations	Animations	Figures	Pages	Assessments
9th Biology	220	43	37	101	233	113
9th Chemistry	87	62	75	40	161	98
9th Math	476		17		268	176
9th Physics	133	57	82	216	222	83
10th Biology	104	59	74	134	190	78
10th Chemistry	69	27	55	44	168	148
10th Math	535		13	74	241	170
10th Physics	120	121	123	188	217	78
Total	1744	369	476	797	1700	944

Table 1: Summary of the content provided in the website

1.4 E-learning and Higher Education

The exercise of ICT in higher education is not new to Pakistan. The informal use of ICT to support learning probably began with the use of radio and television programs aimed primarily at the general population ('adult learning') but also at specific target populations such as farmers and skilled workers. While television was clearly a richer and more effective medium for education, radio had a far wider reach particularly for the far flung rural population. They both have an important role in the first wave of Educational technology in Pakistan. An official effort can be seen with the formation of the Allama Iqbal Open University (AIOU), which was Pakistan's first Distance and Open Learning Institution of higher studies. It was founded in 1974 as a replica of the UK's Open University and became one of the world's largest institutions of its nature with an enrollment of over 1.1 million students in the year 2010 and a course enrollment of 3.3 million in 2011.The AIOU ran hundreds of programs on radio and television rough the 1980s and 1990s (Masood, 2006).

Similarly, some of the prominent national-level initiatives including COMSATS Institute of Information Technology (CIIT), Foundation for Advancement of Science and Technology (FAST) and the National University of Science and Technology (NUST) plays a noteworthy role to develop awareness for the education based on ICTs. While speaking about the present scenario, it is estimated that above fifty public and private sector higher education universities and other institutes are present which are offering certificates, diplomas and degrees in various domains of ICTs. By keeping in view the increased demand for information technology-based education at universities, the government of Pakistan took a step forward towards introducing ICT in the education. With the notion of "education for all", the Virtual University of Pakistan (VUP) and National ICT R&D Fund was established in 2001.VUP introduced a lot of e-learning techniques into the education sector. The purpose was twofold i.e. to increase coverage of higher education and to combine ICT with teaching

pedagogies in the country (Masood, 2006). The delivery of lectures and source of providing education of VUP is through internet and broadcast television.

Sr. No.	University Name	No. of own Campuses	No. of Affiliated Institutes
1	AIOU	36	None
2	VUP	15	168
Total Campuses		51	168
Grand Total		**219**	

Table 2: Shows the number of campuses of both universities in Pakistan (Regional offices of AIOU

Sr. No.	Area	No. of own campuses	No. of affiliated campuses
01	Baluchistan	01	01
02	Capital	01	0
03	KPK	01	20
04	Punjab	08	119
05	Sindh	04	21
06	Azad Kashmir	0	05
07	Northern Areas	0	02
Total		15	168
Grand Total		**183**	

Table 3: Shows the number of campuses of VU area wise in Pakistan

The establishment of the Higher Education Commission (HEC) in 2002 encouraged various universities in Pakistan to facilitate education at higher level. A visible change in the registration of students at main campuses, sub campuses, and constituent colleges has been observed during these years (HEC, 2012).

Sector	Distance Learning	Federal	AJK	Baluchistan	G.B	KPK	Punjab	Sindh	Total
Public	474510	101433	7778	17297	2506	64322	184174	88794	940814
Private	-	14634	2077	1447		26894	75967	55754	176773
Total	**474510**	**116067**	**9855**	**18744**	**2506**	**91216**	**260141**	**144548**	**1117587**

Table 4: Enrollment at Universities and Constituent Colleges Classified by Sector (Source: HEC)

The mentioned statistics in the above table provides a clear picture of demand of distance education in Pakistan. Currently, area wise enrollment for the period 2001-04 is shown in

Fig. 1a, 1b and 1c. The maximum enrollment of 68,343 students was in the province of Sindh, followed by the Punjab having enrollment of 61582 students during 2001-02. In Punjab there was a rapid increase in the student enrollment at the Universities/DAIs. Student enrollment in the province of Punjab was 102,781 whereas in Sindh province it was 79,790 during the period 2003-04 (see section 2.3 of HEC statistical booklet, pp. 8-11)
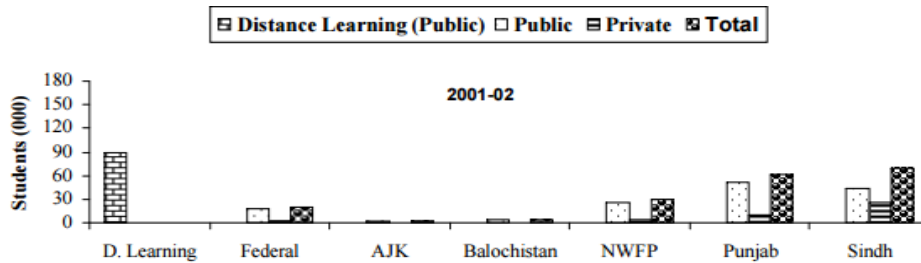

Figure 1a: Area and Sector wise Enrollment at Universities/DAI + Constituent Colleges during 2001-02.
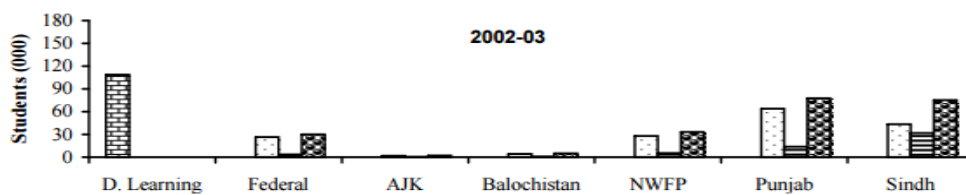

Figure 1b: Area and Sector wise Enrollment at Universities/DAI + Constituent Colleges during 2002-03.
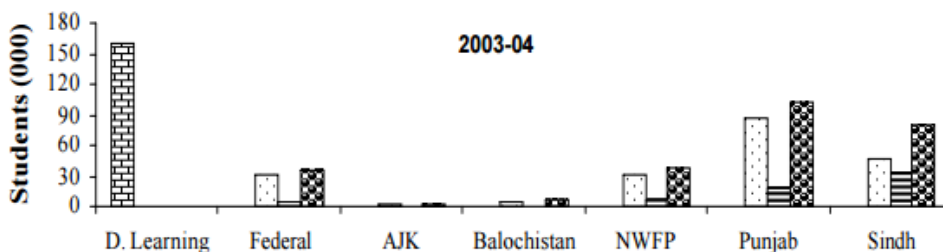

Figure 1c: Area and Sector wise Enrollment at Universities/DAI + Constituent Colleges during 2003-04.

The researchers argue that "in a short-time and limited availability of resources, ICT in Pakistan has revolutionized the traditional way of thinking, and the means they use to access and retrieve information." The government of Pakistan has given the incentive to software and internet sectors which have been expected to reduce from 20 to 50% on the leasing basis (Talib, 2005). HEC has taken a wide range of digital opportunity initiatives (DOI) by introducing a set of E-Reforms. These E- reforms helps to create and boost an E- Learning

environment at both national and HEI level. The aim is to help teachers in adopting ICT tools in their mode of teaching, students to personalize ICT tools in their learning process, and last but not the least it helps administrators both in adopting and personalizing ICT tools in their administrative tasks and assignments. Some of these landmark initiatives (e-Reforms) are E-Learning projects, digital library program, PERN and PRR (HEC, 2008).

In September 2006, a project initiated by HEC entitled "Online Lecturing and Net-Meeting using IP-based Video Conferencing System". This project facilitates with installation and supply, testing and integration, maintenance and commissioning for Video Conferencing System which is fully functional along with the cooperative tools. The purpose was twofold; enhance the interaction between teachers and students and to encounter the lack of teaching staff at the university level (HEC, 2011).

Working on the same lines, another project initiated by HEC titled "National Digital Library Program" which ensures the researchers of Pakistan present in public and private sector universities to access the literature of international scholars based on electronic (online) delivery mode. This facilitation is also provided by HEC to research and development organizations working as non-profit organization across the country. This project provides a room for better access to peer-reviewed journals, databases and articles of high quality across a multiple range of domains. In this reference, the access of 30 Databanks of over 20,000 journals offered by the Digital Library from the renowned and best and publishing houses at initial level. The thousands of e-books and millions of items has been accessed through this library. This is possible with the help of British Library Document Delivery Service, which is again open to approximately more than 200 public and private institutions including R&D organizations (Talib, 2005).

Another significant initiative in the reference of emerging trends of E-learning in Pakistan is the development of "Pakistan Education & Research Network (PERN)." The aim is to provide nationwide educational and research organizations with internet facility at high speed. PERN in this regard offers "real-time transfer of audio and video, multimedia-enabled lectures and a wide range of other related applications." (HEC, 2011)

Another determination in the reference of strengthening e-learning in Pakistan is "Pakistan Research Repository (PRR)", which is a step forward towards "promotion of international visibility of ongoing research in various institutes of higher education in Pakistan. PRR is capable to maintain a digital archive of the intellectual output of Pakistani institutions and this information is distributed to others as widely as possible. The service delivers by this website includes access to a collection of digitized MPhil and PhD dissertations. Currently, it holds more than 150 PhD dissertations available in full-text, while hundreds are in the process of digitization (HEC, 2011).

1.5 Why there is a Potential Need for E- Learning in Pakistan?

The current status of e-learning in Pakistan shows a promising future of ICT in higher education sector. The potential need for e-learning in Pakistan is now getting a massive attention. Due to lack of infrastructure and appropriate funding coupled with the threat of terrorism in educational institutions, distance learning is increasingly becoming a preferred

choice. The potential of e-learning in Pakistan cannot be fully translated due to multiple factors such as poor infrastructure, electricity load shedding, lack of awareness among the population, hurdles in curriculum development and divergent traditional pedagogies. The four factors which are directly responsible for successful implementation of E-learning in Pakistan namely:

- the teachers
- the students
- the institutions
- the curriculum

1.6 Factors at Teacher level

At teachers' level, the leading challenges for teachers working in an e-learning environment are the technical skill that they are required in order to encounter with this system. The ultimate requirement of the time is that instructors have to "develop and restructure their courses in a way that suit online requirements."It will no doubt increase the work load on teachers as they are required to put their efforts on acquiring skill and gaining proficiency rather than on not only on course development alone (Ishtaiwa, 2006). Hence, they resist, which hinders the development of E-Learning. There is always a chance of technophobia, which may hinder them to fully utilize E-Learning systems. Such teachers don't appreciate and encourage paradigm shift in pedagogy settings as they are always uncertain regarding the requirement of technology integration into learning (Avgeriou, 2003).

The challenges faced by those teachers mediated by learning management system include lack of communication and interaction with students. They have also encountered many problems particularly in evaluating students, when students are going through their presentations and projects in finals (Ishtaiwa, 2006). It is also required on the part of teachers to consider the method of conducting or marking the papers during exams. The teachers have to face the following challenges in this regard:

- Teachers educational training
- Enhancement of technical capabilities
- Time Management
- To overcome resistance as users of an e-learning system
- Overcoming technology phobia
- Improving communication using e-learning systems

1.7 Factors at Student Level

There are also a number of issues faced by students regarding E-Learning systems. The prior concern in this regard that directly affects the learning outcomes is the motivational level of students for using system. It has been revealed through different researchers that online courses are successful only in a case where the involvement of student must be ensuring as an active participant. Students have a good habit of book reading in traditional learning so it is a matter of concern for them to study while sitting in front of screens. The current power situation in Pakistan also don't allow students to have long sittings and remain connected with the server, therefore they require more reading material for offline reading. Regretfully, there is not a single solution of downloading the course material (Hay, 2008).

In distance learning programs, social isolation from instructors and peers is another serious problem faced by e-learners. Social isolation here means lack of interaction and communication with teachers and other fellows of their courses. It has also been revealed by different researchers that student to student and instructor to student interaction, the second one is "the powerful of the two interaction measures in terms of predicting effectiveness of students" (Muilenburg & Berge, 2005). Researchers reported that an increased rate of dropout of students is only due to such feelings of isolation among students.

Another important factor in order to handle the e-learning software for students is the competency and proficiency on technical grounds. Students like teachers are susceptible to technology phobia; therefore they impede the desirable outcomes of learning (Panda & Mishra, 2007).The number of barriers has been identified by the researchers for students learning in e-learning environment, which includes issues of administration, societal communication, educational talents, and expertise in technology, motivational level, time issues, studies support, price and accessibility to Internet (Quershi, 2012). A shift to E-Learning confronts the following challenges on students' level:

- Dealing with social interaction deficit
- Developing technical skills
- Efforts to minimize students' dropout from E- Learning
- Flexibility
- Easy of using E- Learning software applications

1.8 Factors at Institution level

The immediate concern working at the institutional level for the implementation of E-Learning is the cost of software applications. Oracle People Soft Enterprise Campus Solution nominated by HEC in this regards for universities of public sector. All six universities had been allocated Rs. 130 million (approximately 1.2 million USD)for this purpose, but a single installation of worth Rs. 130 million had been given to the Dow University of Health Sciences (DUHS) (Statistical Information Unit (HEC), 2012).

The providing of specialized human resources is another note taking issue along with cost problems. It is demanded by the educational organizations to take steps to resolve these both concerns accordingly. It has been suggested by number of research findings to maintain appropriate infrastructure and to provide ongoing technical support. Engaging technical staff and introducing training courses during on and off the job for users can provide a better support. The complications faced by institutions may include recruiting of specialists and staff with capable skills to develop high quality E- learning materials (Platiša & Balaban, 2009; McKeogh, 2009; Blass & Davis, 2003).

Another task faced by institutions is rapid change of thinking pattern of the academic staff in order to acknowledge this new technology as an agent of change. It is again the need of time on the end of academic staff to inculcate this changing technology with their existing mode of teaching, which is also a considerable challenge (Platiša & Balaban, 2009). The institutions have to encounter number of challenges for implementing an E-Learning program; we may say "business process reengineering." The challenges includes "staff organizational

integration, flexible delivery to students (on/off campus), and new concepts of teaching" (McKeogh, 2009). Above all, the most significant challenge encountered by the institutions of higher education in Pakistan is to provide environment for learning and teaching that is as much flexible as they can.

It should also be required by the higher institutes of Pakistan to focus on quality assurance of E-Learning systems. From "evaluation of Information System performances means evaluation of performances in hardware, software, computer networks, data and human resources which aims upgrading and especially improvement in quality of maintenance" (Blass & Davis, 2003). In E-Learning domain, it is required to assess the entire process of learning and teaching outcomes for which the term evaluation implies. It is essential to have audit in both manners i.e. internally as well as externally. However, the institutions have to face the following challenges in this regards:

- Maintaining E-learning system after assessment
- Shortage of required amount of funds for software acquisition
- Maintain the E-learning quality
- Requirement of fresh training sessions
- Requirement of human resource specialized in particular domain
- Providing users with technical support staff

1.9 Factors at Curriculum Level

An E-learning course consists of three main types:
- Online based courses using LMS (synchronous mode)
- Online based distance learning courses (asynchronous mode)
- Hybrid courses (traditional teaching with the aid of technology)

Due to above, the development of curriculum is a complex task for which HEC is trying to put its maximum energy with full determination to achieve the goals, because it is "a continuous process of mounting an educational program over a period of time, which has no terminal point" (Khan & Bhatti, 2012). It is also required to set learning objectives during the process of curriculum development. The factors that should be kept in consideration during this process might include goals of particular institution, characteristics of learners, level for which curriculum is developing i.e. undergraduate or graduates etc. It should also be required to take into account the delivery mode whether it is distance learning, E-learning or traditional mode of learning. Another matter of concern which requires answer is: what type of course can be associated with an E-Learning system particularly in distance learning paradigm. It is required on the part of students to learn the technology at first and curriculum at second.

Another important aspect is that traditional learning environment is most suitable for some courses such as mathematics and physics as it involves sums or formulas or equations that can be better taught and solved in that environment rather than E-learning environment. It has been explored in a research conducted in 1994 that students having courses such as organization theory and comparative health care systems(lower-paradigm development) are more capable for computer conferencing rather than courses such as statistics and accounting/finance (higher-paradigm development) (Keengwe, 2008). The orientation of

courses having both theoretical and practical modules of a subject or course is a complex task within the E-learning instructional mode as far as technical, human and course issues are concerned. As an example, it can be easy for the doctors to learn about anatomy through E-learning rather than learning the surgery and skills to take care of a patient (Snoeyink & Ertmer, (2001).

However, the challenges faced at curriculum level by institutions for E- Learning programs are summarized as follow:

- Curriculum enrichment
- Curriculum Interactivity
- Curriculum alliance with technology and existing methodology
- Curriculum enhancement
- Curriculum assessment based on existing technology

1.10 Challenges Hindering the Implementation of E-Learning in Pakistan

There are both internal and external challenges faced by higher education organizations and institutions in order to develop and practice E-learning. A review of literature revealed that research studies are continuously identifying the problems related to E-learning environment. Common as well as different challenges are faced by teachers, students and administrators. It is widely reported by review of literature and broadly accepted by the researcher in this article that technology is not the problem at all, as a matter of fact in any higher education institutes the problems that create or disrupt the process of utilizing digital opportunities is merely belongs to human force, social context and political pressure (Snoeyink & Ertmer, 2001). An evaluation report of Asian Development Bank (2005) of SAP claimed that "there has been no shortage of well-intentioned policies, strategies, and targets for improving social sector performance in Pakistan, but the level of policy implementation and attainment has been extremely limited". The barriers can be categorized as external (first-order) or internal (second order) (Keengwe, 2008). It has been revealed through review of literature that the first order barriers may include equipment shortage, unreliable nature of instruments, deficiency of support on technological grounds and problems related to resources. Researches also identified the second order barriers which include human problems such as organizational culture and mental orientation of teacher in terms of dogmas associated with teachers teaching and resistance to change (Snoeyink & Ertmer, 2001). How these first and second barriers negatively influence the exercise of ICT in education is enlisted below.

- Inadequate use of ICT
- Infrastructure of E-learning
- Financial issues
- Lack of adequate Internet bandwidth
- Inadequate operational e-learning policies
- Inadequate technical skills
- Inadequate development of E-content by the teaching staff
- Problem of interest and commitment among the teachers to use E-learning
- Insufficient time to develop E-learning content
- Inertia in behavior of people or their resistance to change

- Inadequate systemic approach for the implementation of E-learning
- lack of follow-up
- Inadequate user-training
- Frustration among users for the use of technology
- Presence of mismatch between latest equipment, cultural values and work environment

1.11 Future Work

The government should focus upon implementation instead of mere policies. In this regard, funds should be allocated and procurement at first. The process of allocation should be designed in such a way that funds must be distributed at provincial level. The provinces allocated funds to districts and from districts to higher institutes. Second, it should be necessary to arrange technical workshops for the teachers and technical staff. Third, it should be mandatory to consult teachers during the process of planning, curriculum development and policy making. It is always unfortunate attitude by the Government to depend totally on private sector instead of realizing their own responsibilities. The world is a global village and being the resident of this village we should focus on education as it is the only solution for stability and prosperity of a country.

The much better result can be produced in E-learning by decreasing cost and improving performance. The decision of managing courses through the use of resources is the major hindrance in the journey of successful E-learning process. This digital age would make educational process more transformative if we will become successful in providing E-learners a complete freedom to control and navigating their courses.

The new avenues of E-learning are opening with the introduction of e-libraries and its association with syllabus. The efficient implementation of E-learning requires to link it with e-libraries, which may be of any shape whether it is based on video clipping, audio based, written content, Simulations, graphic or static Illustrations, theoretical models, all should be organized for development of curriculum and this will translate the potential of E-learning into an exciting reality.

Understanding E-learning mode of teaching helps one to choose the appropriate time and adequate way to use E-learning. The advantages of E-learning have been explicitly over traditional classroom training. Flexibility and cost effectiveness are the most obvious advantages of E-learning. Course content based on text of boring nature, phobia of technology and isolation are the major disadvantages that frightened the researchers but it will be reduced with the help of appropriately and accurately developed curriculum along with associations to e-libraries.

Furthermore, it is necessary for the teachers to compel precise training if they want to gain excellence in teaching. It should be compulsory for the teachers to maintain their personality equally attractive and competent for the attraction of better candidates in the profession of teaching. It is also important to redefine the given salaries and promotion packages of teachers in order to meet set of skills available. Certainly, to provide the efficient and proficient, noble and committed teachers to the nation is the one and the only way forward for the foundation of a nation to match the changing trends of the world.

It is necessary for the teachers to follow technological solutions of information dissemination with the emergence of E-learning. In near future, these will not their matter of concern to plan lectures, conduct exams and prepare results because these tasks will become automated.

2. CONCLUSION

The challenges of E-learning are much greater than its benefits. Hence, it is essential for both HEC and institutions to work together in order to resolve the challenges discussed above by the author. E-learning has not yet reached at its best in Pakistan, as challenges faced by E-learning must be encountered in order to make ICT in education a success of nation. These challenges include infrastructure, E-Learning software, quality assurance, training, and faculty development program, issues of finance, development of curriculum, research periodically or in-depth analyses.

It must be considered by HEC as a social change rather than deployment of information system not only in terms of technology but pedagogy as well with the ultimate goal to sharpen the minds of e-learners. In the developed countries E-learning can be regarded as "evolving learning" rather than simply learning through electronic resources. Long term goals should be required in order to develop and nurture the successful E-learning program along with evolution from preexisting pedagogy to demands of latest trends.

It may also be recommended that the E-Learning projects should also be established by taking into consideration the cultural, social, political and economic context rather than based only on technical considerations. Teachers should be trained in such a way that permits them to integrate curriculum with technology. It should be required by the emerging trends to design contextualized training model which able to consider individual differences as both 'corporate training model' and the prevailing traditional models of training cannot incorporate technology.

It is important to note that the sustainability of E-learning projects must depends in terms of economic, social, technical and political grounds. The term sustainability here refers to the users' own the system or attitude of acceptance towards system of the user. The policy maker and political heads of our country are responsible for political sustainability and this sustainability is the leading threat for the projects of ICT in Pakistan as resistance to change. The significant use of ICT is not applicable if teachers, for instance, refuse the idea of using technology in their learning environment. The ability of funding the ongoing project is termed as economical sustainability which is closely tied with social and political sustainability whereas the process of selection and application of those technological instruments that proved to be beneficial in coming future is called as technological stability.

Last but not the least it is a growing need of developing a precise and comprehensive policy at national level for the growth of projects based on electronic learning in Pakistan. An E-learning task force must be established to meet all the hidden challenges. It will enable ICT to initiate, cultivate and evaluate in education. In this regard E-learning competitiveness program between the institutions would be beneficial. It must be considered as a conclusion of this article that "consider education not as an option; it is and it will be a prescription for economic survival".

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