Application of E-Learning in Higher Educational Institutes in Kashmir

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Abstract— E-learning is enactment of ICT in Education and Learning. E-Learning has changed the discourse of modern day education. Today via E-Learning not only the contents are delivered but virtual classrooms, web-seminars, examinations, etc. are conducted; also digital repositories and libraries are developed. Mobile Learning is an emerging trend; apps are developed targeted for knowledge seekers using smartphones. While E-Learning is a boomerang around the world and India too is moving forward in this direction, but it is still vague in many parts of India. In Kashmir, a region in India where E-Learning can play a major role considering its geographical, political and financial complications and conditions, E-Learning activities are very limited. This form of modern day learning is less encouraged and people are less aware about its benefits. There is not a proper infrastructure in place as far as E-Learning is concerned. In India, EduSat is a major Satellite based E-Learning initiative started by ISRO in 2004. Although EduSat has been utilized to good effect in many states especially Kerala, Karnataka but in Kashmir it has been near to a failure. The institutes and the government have not been able to take the advantage of EduSat. This paper focuses on scope and applications of E-Learning in the degree colleges of Kashmir and proposes it as a possible solution to adopt to meet the challenges faced by the higher education system.

Key words: Kashmir, Higher Education, E-Learning, EduSat, Colleges

I. INTRODUCTION

E-learning refers to using electronic applications and processes to learn and educate. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration (webopedia, 2016). The delivery of content can be over the intranet, extranet or the Internet, via CDROM, interactive TV, or satellite broadcast (Wagner et al, 2008). With the development of Information and Communication Technology, E-Learning is emerging as a paradigm for modern education. It has changed the outlook of open and distance education. E-Learning and its tools are used in classrooms as well. Both the teaching faculty and the students prefer E-Learning nowadays. Companies use E-Learning to train employees. E-Learning provides solutions to the challenges which are posed to the modern day education. In India, E-Learning has already bordered beyond the academe. The Government of India is certainly focusing on this sector of Learning. NPTEL, E-Gyan, GyanDarshan and EduSat are some of the programs which have been started and are extremely successful. Some IITs and Universities are providing online degrees and free content to learn. Universities and colleges are building the infrastructure needed to support E-Learning practices (Sharma et al, 2014). But in Kashmir- the northern most part of India, the scenario is quite different.

Historically, Kashmir is known to be a region which is famous for its Education apart from the natural beauty of the region. But due to some reasons which we will be discussing in the following section, the education system in Kashmir is worst hit. This paper focuses on the application of E-Learning particularly in Kashmir at the college level.

II. PROBLEM IDENTIFICATION

Kashmir is situated in the northern sub-hemisphere and is surrounded by the greater and middle Himalayas. The region is predominantly cold and winters in particular are harsh. Because of the snowfall some parts like Gurez, kargil, Leh, Drass, Karnah, Tangdar remain isolated for almost half of the year from the Kashmir valley. The educational institutes remain closed for nearly three months every year. Apart from the geographical difficulties the region is also politically instable. Due to the political unrest shutdowns and strikes are frequent. A lot of academic time is lost every year especially since 1990s. During the years 2008, 2010 and now in 2016 almost half of these years the institutes have remained shut. So the education system has been through a very tough time and is faced with lot of challenges. The education system though struggles to catch the pace at par with the national level; the regular class work in schools, colleges and universities is emerging up as a major challenge. It is directly affecting the quality of the academicals talent. In this paper, we focus on E-Learning as a possible solution and discuss its scope in the education at the college level in Kashmir.

III. E-LEARNING APPLICATIONS IN KASHMIR

The scope of E-Learning is much wider in Kashmir. It can be viewed at two levels Training and Education. In the Education system, E-Learning can help both teacher and students in acquiring new skills and knowledge. It has its applications at primary, secondary and tertiary levels. The concept of smart classes is getting highly popular at the elementary level. E-Learning tools like projectors, presentations, interactive boards help in a better demonstration of the concepts. At the higher education level, E-Learning can be realized both synchronously as well asynchronously. Synchronous E-Learning is still vague in the concerned framework. EduSat, a satellite built exclusively for serving the educational sector, was launched by ISRO in 2004. It is mainly intended to meet the demand for an interactive satellite based distance education system for the country (Singh & Padha, 2012). EduSat provides a synchronous type of E-Learning and is an interactive medium. It has been used to greater advantage in states like Kerala, Karnataka, Madhya Pradesh and Gujarat (Gupta & Garg, 2016). Although EduSat is functional in the University of Kashmir but in the degree colleges it is not. EduSat is supposed to link all the degree colleges of the state but the activity has been very limited. In Kashmir, EduSat can be useful to both students and teachers. With Efficient program implementation of EduSat, the loss to academics can be

reduced to a great extent. Students can take classes and interact with teachers not only from the state but also from outside. It will increase and update knowledge of student as well as teacher community. Virtual Reality- A new paradigm in technology has added a new dimension to E-Learning. A Virtual Learning Environment (VLE) via which a person can attend a class or an interaction remotely but the experiences are like real. So, a student through a specific network can attend lectures from his home.

In Kashmir, Asynchronous E-Learning is mostly popular. The content available over a network such as Internet is browsed by students as well as teaching faculties. Institutions can provide e-content which can conveniently be accessed by the students remotely. The content can be video lectures or documents or web pages. An online Course Management System would help students from those areas which remain cut off in the winters. Mobile Learning i.e. learning using smartphones is emerging as a new trend. Using mobile phones is an advantage because of its portability and ease to use. Nowadays, the range of applications on mobile phones is comparable to computers or laptops. The processing and the storage capacity have increased exponentially. Since India is a big market for smartphone industry and a large number of people use smartphones, Kashmir is not an exception to it. However, there is little awareness among the masses about the possible uses of these phones in learning. Some apps, dedicated for learning have been developed and are being used effectively, apart from the access to web. Apps are also being developed to provide information in some specific areas like computer science, Economics, Business, Law, etc. With such apps, a large number of knowledge seekers can be targeted. Blended Learning combines the features of both synchronous and asynchronous types of E-Learning. Discussion forums, Blogs are very informative and popular.

Inter College Technology-Enabled Education and Development which would work as a nodal point to undertake all types of collaborative activities E-learning, appropriate technology, etc. can prove to be a groundbreaking initiative. This can be linked to the universities in the state and outside, also to some reputed institutions like UGC, AIU, IITs. The Digital Libraries and Repositories is one dimension where colleges collaboratively can work. The relevant content can be made available without any physical or financial barriers. Setting up departmental browsing centers and E-Learning Labs would be a formidable step towards modernizing the Education with ICT in Kashmir. Since a large number of people pursue distance education in Kashmir, E-Learning can play a major role even here.

IV. CHALLENGES

The term 'E-Learning' is relatively new to J&K. Only a limited number of E-Learning resources are being used. Though adoption of E-Learning can bring a positive change in the quality of the academics but a less has been done so far. The barriers to E-Learning can broadly be categorized as Administrative and Management Awareness, Technical and Language Barriers (Suri, 2013).

A. Administrative and Management Awareness Barriers

A well formulated E-Learning policy is not in place in the state. Some work has been done, but it has been very limited.

At the national level, Government is moving in the right direction as far as E-Learning is concerned. The central government has formulated and implemented some programs but at the state level that much of thrust is not visible. Moreover, the college administrations also have not put concrete policies at the college level to encourage E-Learning. In the management, there is a lack of understanding about E-Learning. The management seems to resist E-Learning projects (Suri, 2013). A better understanding and approach towards E-Learning must be developed. Adoption of E-Learning is only possible when E-Learning and its benefits are understood. There is a lack of awareness in the management as well as among the students and teachers.

B. Technical Barriers

The colleges in Kashmir are not well equipped to support E-Learning. There is a lack of proper infrastructure in institutions. The establishment of infrastructure requires financial investment. There is hesitation in the administration to invest in E-Learning. EduSat which is a major E-Learning program in India is not functioning in Kashmir since 2011. EduSat was maintained by ISRO till 2011 and since then the maintenance contract has not been assigned to any firm (greater kashmir, 2014). E-Learning tools like Browsing centers, Internet connectivity, projectors are still a challenge. Classrooms are mostly conventional. Both teachers and students are deficient in computer education. Only those who pursue computers as core subjects are aware about its uses. The Internet connectivity in itself is a challenge. In Kashmir, cellular networks are sometimes banned, even broadband has been banned at times.

C. Language Barriers

In India, Since E-Learning content is mainly in English language. Therefore Language becomes one another barrier. Some people may not have mastered English Language such as people who master languages like Kashmiri, Urdu, Arabic, and Persian are reluctant to use a system in the language not convenient to them. A translator is to be developed in the system, which could translate the content from one language to another so that people feel convenient to adapt to E-Learning.

V. LITERATURE REVIEW

E-learning is becoming an integrated and critical component of corporate knowledge management and performance enhancement and return on investment is measured in that context. The success of e-learning can be electronically related to business and more businesses will recognize e-learning's ability to build knowledge and develop skills while reducing training-related costs. There is not so much work done in E-Learning related to Kashmir.

Sunil Kumar Sharma et al (2014) in their paper titled "E-learning in India" discuss the scope of E-Learning in India. They discuss the advantages as well as the disadvantages that come with E- Learning. The paper also brings forth the current scenario, work which has been done, and future of E-Learning in India.

Rahul et al (2016) in their paper "Satellite EDUSAT: Changing the State of Education in India" puts forward Information EduSat and its contribution to Education in India. This paper highlights that how technology can

change the entire face of a country. The approximate life of EDUSAT is just a decade but it has bring about a change in the status of the Indian education which otherwise would have taken more than a century by using conventional methods of teaching. The paper also highlights that how a country can improved its literacy with minimum resources.

Samiksha Suri (2013) in her paper titled "E-learning in Higher Educational Institutions in Jammu and Kashmir: Experiences and Challenges" describes experiences and challenges with regard to E-Learning in Higher Educational Institutes in J&K. The paper also proposes an E-Learning model and puts forth some barriers to E-Learning adoption in J&K. She also compares current scenario of E-learning particularly barriers with developed countries. Similarly Ali et al (2008) in paper titled as "Barriers to implementing e-learning: a J&K case study" present a case study related to barriers to this form of learning in J&K.

Namita et al (2012) in their paper titled "Proposed Framework to Initiate Open Source e-Learning in J&K" proposes an open source a skill based framework based on study done on Learning Management System (LMS) to bridge knowledge divide in J&K and enlighten the people of rural areas about the e-age and iron out differences by combining IT services with education of any type. The proposed framework has been designed by incorporating the features of the selected three widely used open source LMS namely, Moodle, Ilias, Atutor. The system proposed is an application with client-scripting facility. It has cross browser compatibility and is fully integrated with different databases.

Namita et al (2012) in the paper "Evaluating Effectiveness of e-Learning Initiatives in Higher Education Institutions: J&K" evaluates the effectiveness of various E-Learning initiatives and programs in the degree colleges of J&K. This paper explores and evaluates the present e-learning initiatives with certain parameters like usability, awareness, availability of resources, technical and maintenance issues, impacts on students(from teachers point of view),viewpoint of teachers towards e-learning and benefits of e-learning over traditional way of teaching.

VI. CONCLUSION

E-Learning is emerging as a solution to lifelong learning (Zhang et al, 2004). It has addressed many problems which were posed to conventional form of learning. In Kashmir, where the education system is under severe stress, E-Learning can be a rescuing factor. With E-Learning, lectures can be attended from remote locations. Thus, the geographical barriers can be contained. Since, Kashmir is politically volatile which affects this sector of human development, therefore the proposed adoption of E-Learning can prove to be an innovative step. But a well thought policy framework has to be established. Barriers to this form of learning which exist should be addressed. A proper infrastructure is to be developed. Without financial and technological investment, E-Learning adoption is not possible. Classrooms are to be well equipped with E-Learning tools. Browsing centers, computer cum E-learning labs can be constructed. A sound direction and coordination mechanism should be in place. But priority should be awareness. An awareness approach should include Managements, administrations, teachers and students. Setting up of inter-college and intra-college E-learning councils would be a step in a right direction.

Resumption, redesigning and re-implementation of EduSat in the colleges shall be a big step towards it. Today, E-Learning is must for successful education especially higher education, which essentially extends to Kashmir also.

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