Education through Cyberspace in Pakistan: Retrospect and Prospect

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Abstract

The present study was designed to highlight some positive and impressive contributions of virtual university in Pakistan. For this purpose relevant material was reviewed and on the basis of some facts future needs and demands of education through cyberspace was suggested. Some of the suggestions were: Virtual University may launch proper advertisement series to create awareness about e-learning in Pakistan. Virtual University may improve the physical and human resources to attract better and capable students in the system.

Key Words: Educational Technology, Cyberspace, e-Learning, Higher Education, Virtual University

1. Introduction

Cyberspace is the most influencing component of life in the world. It has brought about revolutionary changes in the lives of people round the globe. The service of internet connection with computers is not only the cyberspace, but also any electronic system or device that is or can be connected either directly to the internet or indirectly through some other device or system, as well as the mechanisms that connect them. These may include such things as automatic teller machines, industrial control systems, even telephone and other telecommunications systems. These connections may be obvious, or they may not. Thus, not only is a Web-enabled cellular telephone part of cyberspace, but so is a desktop phone, not only because it is part of the same worldwide telephone system as the cellular phone, but also because that telephone system increasingly relies on computers and the internet to help manage traffic and for other purposes. Even a computer with no connection to the Internet is part of cyberspace if it has a way of communicating with other computers — such as through floppy disks or other removable media. Cyberspace also includes the software that runs computers and their connections. It includes the data stored on or generated by those computers and other devices and the transmission of those data to other computers and devices. It includes cables, routers, servers, networks, the Internet backbone, and even satellites used in Internet transmissions. It even has its own atlases and sophisticated electronic mapping techniques to help manage networks and internet. In this study, the focus is on educational services through cyberspace and perceptions of students about this new technological development and its role in learning at distance. In Pakistan, students of Allama Iqbal Open University and Virtual University are enjoying the services of cyberspace. Today is the age of cyberspace. We cannot ignore its role in our lives. Basically, it is a type of interactive simulation which is called cybernetic simulation. In cybernetic simulations, human beings are necessary components. You can poke and punch an interactive simulation and get your required information back from it.

2. Cyberspace

The term cyberspace is not an easy word to define in that it describes a virtual world. Due to its virtuality, researchers define cyberspace in a variety of ways. The term cyberspace was crafted for a science fiction novel by (Gibson, 1984). In order to name the virtual world that he created imaginatively in his book, Neuromancer, he defined cyberspace as "a consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts … A graphical representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity, lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding" (1984, p.67, cited in (Bell, 2001).

This long definition describes the real and cultural relationship between people and machines working within the confines of computer-based networks. Gibson considers cyberspace as the sum of the world's data, represented graphically, and accessible through computer consoles (Tomas, 2000). Gibson's definition describes "a computer-generated landscape" (Aikat, 2000, p.23), which gives us a common definition: cyberspace refers to the digital world generated by computer networks. In this light, it can be said that the definition based on Gibson's work tends to focus on a technical perspective of cyberspace. Since many researchers have examined the possibility of cyberspace as culture, its definition has over time been broadened and complicated. Instead of defining it in a single way, (Benedikt, 2000) considers cyberspace as commonality, pointing out a number of different ways. In his definition, cyberspace is "a world in which the global traffic of knowledge, secrets, measurements, indicators, entertainments, and alter-human agency takes on form: sights, sounds, presences never seen on the surface of the earth blossoming in a vast electronic light" (p.29). On the other hand, cyberspace is defined as "a common mental geography, built, in turn, by consensus and revolution, canon, experiment; a territory swarming with data and lies, with mind stuff and memories of nature, with a million voices and two million eyes in a silent, invisible concert to enquiry, deal-making, dream sharing, and simple beholding" (p.29). In comparison with Gibson's, his definition can represent what cyberspace is in a more clear and detailed manner. However, he does not approach a definition of cyberspace as culture.

On the other hand, (Bell, 2001) considers cyberspace as culture that is lived and made from people, machine, and stories in everyday life. Consistent with this aspect, he defines cyberspace by using three means of story-telling. First, he defines cyberspace in terms of hardware that facilitates a form of interaction between remote actors, which is called material stories. As an alternative definition, he defines cyberspace as an imagined space between computers in which people might build new selves and new worlds, which he calls symbolic stories. According to Bell, cyberspace is all this and more. In other words, cyberspace is hardware and software and "image and ideas" (p.7). In this light, these two stories are inseparable. Moreover, Bell argues that the ways we experience cyberspace represent a negotiation of material and symbolic elements, which he calls experiential stories. In Bell's definition, unlike Gibson's and Benedikt's, human interaction, recognition of selves and others, and people's experiences are centered in cyberspace. In this light, he emphasizes that cyberspace is always cyber culture in that any and every thing around us is the product of culture.

In terms of understanding cyberspace as culture, (Turkle, 1995) has a point of view similar to Bell's. She sees cyberspace as the culture of simulation in that even though they might not see others, people have the opportunity to build new kinds of communities in which they participate with others from all over the world, others with whom they have conversations every day, or others with whom they may have deeply intimate relationships. In this regard, like Bell, she focuses on people's interaction and experiences in cyberspace and believes that cyberspace provides people with a new environment for social and cultural interaction. Differing from Bell, however, she emphasizes specific local contexts in cyberspace. In her discussion of constructing identity in cyberspace, she argues that experiences in cyberspace can only be understood in the cultural context.

From the anthropological aspect of cyberspace, (Escobar, 2000) insists upon the belief that any technology represents a cultural invention, emerges out of particular cultural conditions, and helps to create new social and cultural situations. Based on this belief, he argues that, despite new technology, cyberspace originates in "a well-known social and cultural matrix" (p.57). In this light, he concludes that cyberspace is culture.

3. E-Learning in Pakistan

According to Hoodbhoy, assuming that educational goals can be fundamentally re-oriented away from indoctrination towards the creation of critical, creative, and informed minds, the intelligent use of technology may well be the only way out of Pakistan's educational morass. While technology can never replace a teacher, it can act as a great force multiplier. Both for training teachers, as well as for direct instruction of students, one can imagine that distance-learning through specially developed video and multi-media learning materials could be extremely powerful tools.

E-learning has been getting prime priority to the Government of Pakistan for the socioeconomic development and cultural change at grassroots level in the country. Since some certain reasons were contributing to the dilemma of high illiteracy. By the year 2000 it was becoming evident to the Government of Pakistan that its dream "Education for all" would not come into reality until the introduction of latest technologies and ideas in the education system.

The government's aim was to promote e-learning for the human resource development and capacity building. The need for e-learning recognized because targeted progress was not being achieved by the conventional education system as it had close connection with some obvious deficiencies.

- Severe shortage of high quality faculty from school to university level
- High cost of education especially by conventional means
- Most of the higher education institutes are located in the urban area
- Social factors that don't allow certain people to go other cities

This was a common understanding among the policy makers that this new phenomena of e-learning will produce more synergies with the existing established infrastructure and will impart its contribution to sustainable development. By anticipating the significance of e-learning Ministry of Science and Technology planned to exploit the potential of Information Technology and established a Virtual University and National ICT R&D Fund with the aim "Education for all" and lifelong learning. After observing the magnificent growth and outstanding developments in the physical infrastructure of Pakistan in recent past years, the UNIDO (United Nations Industrial Development Organization) which is mainly responsible and carrying out multidimensional activities throughout the developing world for sustainable economic and industrial development, poverty alleviation, environmental protection and human resources development by promoting the transfer of technology by applying modern technologies such as E-learning built the partnership with Ministry of Science and Technology to establish a Virtual University in Pakistan.

So the Virtual University was established with the collaboration of UNIDO. The Virtual University has been offering many professional degree offering programs on bachelor and masters level in various disciplines like Computer Science, Business Administration, Commerce, Public Administration and Psychology. Beside its degree offering programs the university also offering some diplomas and certificate courses as well. The University has been following a hybrid model of e-learning with many local campuses in many district headquarters of the country along-with T.V channels and LMS. Virtual university has in collaboration with many private institutions in different district headquarters around the country and using those as local campuses, where the student could use the internet and watch the lesson on T.V. [http://www.apnic.net/mailing-lists/s-asia-it/archive/2002/10/msg00039.html]

A study conducted from the 431 Bachelor of Computer Science student of Virtual University Pakistan [http://tojde.anadolu.edu.tr/tojde26/pdf/article_6.pdf] shows that 89% students agreed with the statement that that virtual education provides alternate opportunities to formal system at higher education level. Significant majority of the respondents (94%) were of the opinion that the virtual education is necessary to keep pace with the world of knowledge explosion in the field of information technology, education and training. A majority of the respondents (86%) were of the opinion that virtual education enhances the performance level of the learners. Study indicates that majority of the respondents (88%) were of the opinion that virtual education integrates nation through uniform system of higher education Similarly, 85% agreed with the statement that virtual education acts as an agent of social change promoting cross-cultural values and 94% of the students were of the opinion that cultural values can get collaboration through virtual education 85% of the respondents were of opinion that tutors give positive comments on assignments. [http://tojde.anadolu.edu.tr/tojde26/pdf/article_6.pdf]

4. Conclusions

The practices of cyberspace in Pakistan shows that education as one of the key goal of every nation and fundamental basic right of human can be easily achieved through the use of information and communication technologies. The experience of Virtual University in Pakistan is very successful in the sense that its number of graduates are increasing day by day. Virtual University is offering a variety of courses through its main campuses and study centres in the country. The students who are unable to enroll in formal structure of education due to certain reasons (low achievement in previous class, poverty, unavailability of formal set up in the area, etc.) have chance to enhance their knowledge and skills through e-learning. Due to unawareness about the availability of e-learning opportunities to the masses, the virtual education is not propagating as per capacity of virtual campuses. Probably, proper marketing is not adopted by higher management of virtual university campuses.

5. Suggestions

Following suggestions were made on the basis of conclusions.

1. Virtual University may launched variety of programmes from tertiary level to MS/PhD to attract more students
2. Virtual study centres may be well furnished with physical facilities necessary to carry on education programmes successfully.
3. Communication gap may be strengthened between study centres and main virtual campuses in the country.
4. Fee structure of different programmes is affordable but the e-learning facilities are not up to date and needs improvement.
5. Assessment criteria need to be raised in order to prepare the graduates for market labor.
6. Internship schemes may be launched to help e-learning graduates finding proper job after completion of degrees.

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