Eliminating educational Inequality through e-learning: the case of Virtual University of Pakistan

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Abstract

This study aims at examining the role of e-learning in combating the issues of inequality in terms of access and quality in the field of higher education in Pakistan. The education system in Pakistan is mainly characterized by educational disparity. The standard of education is directly proportional to the investment students make in the form of registration and fees. Another important issue is the non-availability of reputed educational institutes in small towns and villages. Unfortunately, very few people from rural areas have access to quality higher education. Virtual University of Pakistan through its distance e-learning mode has come forward to break this trend in social inequality by providing equal educational opportunities to all social classes through its affordable fee structure yet ensuring high standards of teaching. For the purpose of testing these assumptions with reference to a Virtual education system, the existing patterns of enrollment, income structure of guardian/students, professors' profile, and alumni's profile data were obtained from IT department of Virtual University of Pakistan. Descriptive statistics and independent sample t-test were used for data analysis. It could be ascertained from the conclusion that Virtual University of Pakistan has successfully broken the chain of educational inequality through its e-learning mode. In case of virtual education, discrimination on the basis of gender, social class and location, is no more applicable. The findings of current research have invalidated the existence of inequality in the e-learning system.

Keywords: education; e-learning; inequality; Virtual University of Pakistan (VUP)

Introduction

Access to higher education has always remained a major issue in the developing world due to resource limitation and unavailability of qualified teaching staff (Moll, 2004). Another major factor that has widened the gap of educational disparity in the developing world is the conditioning of quality education due to financial resources, which implies that those who have economic resources have better chances of getting quality education. Poor class is kept devoid of quality education due to the resource limitation and inaccessibility to reputed public institute. This phenomenon is believed to be the product of income inequality that has not only turned education into an industry but has also established an apparatus for the reproduction of the same social thought over the generations (Greaves, Hill & Maisuria, 2007).

Many sociologists (Ball, 2004; Lawler, 2005; Skeggs, 2004) have reached the consensus that acquiring education is mainly a matter of availability of resources, specifically economic resources. In this social class ladder, a specific group grasps all the resources in their hands; ultimately they enjoy all the privileges and opportunities. Basically it is a war between Have's and Have-not's where "have not's" suffer due to resource exploitation and are bound to remain in the same social position throughout their life. Same patterns of social inequality are being observed today as well and social class is considered to be a determinant of the educational opportunities. Education is still a matter of the class and serves the interest of elites (Reay, 2006).

According to UNESCO Meta Survey (2004), the conventional education system in the developing countries has failed to abridge the gap between the two social classes i.e. rich and poor. In this

situation, it is unrealistic to build more infrastructures and to allocate more revenues for the same purpose. Many countries in the developing world are already spending an adequate portion of the Gross Domestic Product (GDP) on education but now they have no more room for steering. In such situations, e-learning can serve as an alternative tool to break the chain of inequality, as Leary and Berge (2006) stated "The challenge is to fully exploit electronic media, maximizing its usefulness and the realm of possible resources" (p. 57). Among purported advantages of e-learning the most significant benefit is the flexibility of learning, cost effectiveness and geographical openness (Liu & Hwang, 2009; Abdon, Ninomiya & Raab, 2007).

On the contrary, few scholars have strong reservation towards the applicability and the effectiveness of e-learning for lower socio-economic status groups. Anderson (2005) stated that "online education does not precede or bring democracy; its effective and universal delivery is conditional on democracy and the political action that occurs within a democracy" (p. 176). Further, Carr-Chellman (2005) explained that e-learning can only be used to promote inequality when inequalities at broader level might be treated properly.

Despite the criticism on the effectiveness of e-learning for the developing world, its worth in the changing world scenario cannot be denied. The world has become a global village and access to information technologies has provided new opportunities to combat the issue of social divide (Kling, 2000). The concept is derived from the McLuhan (1996) studies about Internet and World Wide Web. The world has turned into a village due to technology and this rapid information flood has served the purpose to strengthen political as well as social awareness among people. Further, it was asserted by theorists that this revolution of technology will be a gateway for "extension of consciousness" among the masses. The proposed idea is contrary to Karl Marx's view, who proposed a utopian solution of the capitalists' society in the form of communism.

While Karl Marx talked about the class division, McLuhan justified the technology as an alternative to combat this inequality. Technology has initiated a new social structure within the context of the world culture. E-learning, being part of this new culture, also serves to change the world culture (Rosenberg, 2008). Statistics regarding adoption of the e-learning mode around the world show the countries' agreement on switching over to a new mode of education i.e. e-learning keeping in mind its perceived benefits of extended access to quality education. According to Edudemic report (Lepi, 2013) about e-learning around the Globe, eight countries i.e. United States, South Korea, India, South Africa, China, Malaysia, United Kingdom and Australia have made significant development towards e-learning.

Pakistan, being a developing country, is also facing the same dilemma of access and equality in education. Pakistan Social and Living Standard Measurement (PSLM) survey 2011–12 stated that overall literacy rate is 58 percent in Pakistan. As per CIA (2013) world fact book 2011–2012 statistics, 41.78 million of population is in the age group of 15–24 years out of which only 0.803 million are currently enrolled in higher education institutes. Thus, a huge gap of 40 million young people are identified with reference to lack of opportunities to higher education. In order to bridge this gap; e-learning mode was initiated in year 2002 by inaugurating the project of Virtual University of Pakistan by Higher Education Commission of Pakistan. VU was established as first distant learning university based on modern information and communication technologies. In a short span of time, VU has achieved many milestones along with the enrollment of more than one hundred thousand (100,000) students.

Keeping in mind the context of how access and the low literacy rate have become issues due to socio-economic divide, this paper aims at exploring the role of e-learning in eliminating the educational disparity in Pakistan.

Objectives

The main objectives of the study are:

1. To find out whether the e-learning mode has been able to tackle the issue of access and quality in higher education in Pakistan
2. To explore the role of Virtual University of Pakistan in breaking the existing status quo with reference to educational inequality in Pakistan
3. To examine whether Virtual University has ensured the access to education for all irrespective of the social classes

Research Question

Is e-learning system effective in eliminating the societal divide of education sector in Pakistan?

Conceptual Framework

The institutional divide of the education system serves the purpose of drawing the line between two classes by maintaining the status quo of elites in Pakistan (Bari & Sultana, 2011). In this process of class inequality, educational institutions are serving as agents of transforming certain values to specific classes. While applying this thought to educational institutes of Pakistan, a clear segregation of public and private institutes is visible, setting on different standards of pedagogy and affordability. Public educational institutes are perceived to serve the middle and the poor social class and private schools are set for specific groups of the upper class people. Due to this unaffordability, the middle and poor classes are bound to send their children to public institutes that are perceived as economical and of low quality (Bowles & Gintis, 2013).

This educational inequality as mentioned in figure 1 has been persistently visible for many years. In order to shrink this social divide in the education sector, alternative approaches to education have been introduced such as e-learning that works on the basis of access to quality education by
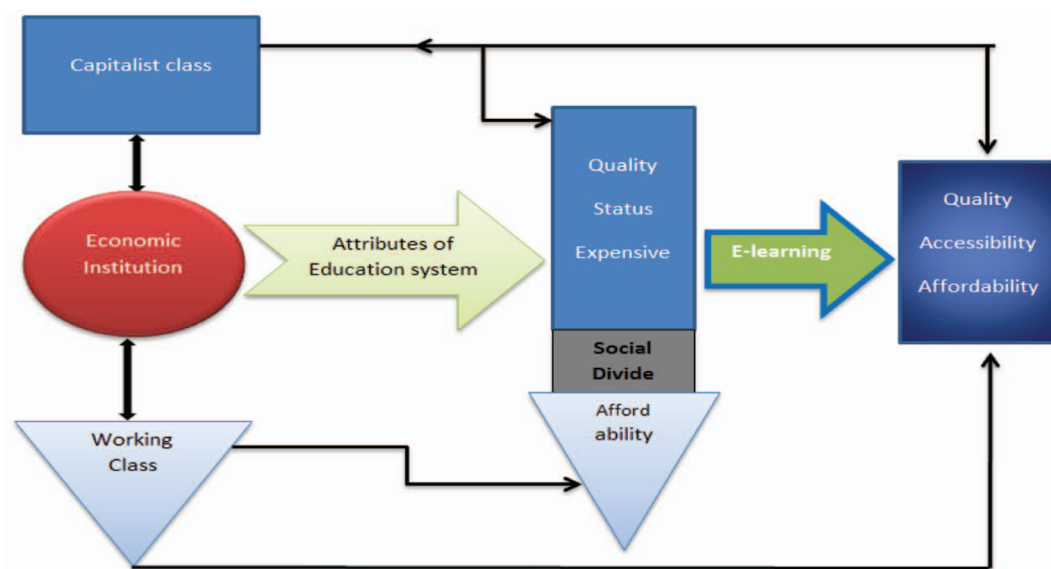

Figure 1: Graphical representation of Social class inequality and e-learning as an alternative education system

ensuring cost-effective study programs. In Pakistan, Virtual University of Pakistan works with the same vision of providing quality education to all irrespective of geographical location and financial limitations. In this regard, this University has taken the services of the country's best available teachers affiliated to the finest educational institutes for the purpose of delivering course lectures. Thus, students, who due to financial constraints are unable to register in the renowned institutes, can study with these institutes' faculty members through the platform of Virtual University whilst spending quite less money. In this research paper, researchers have tried to find out the role of e-learning in abridging the gap of social class inequality in the higher education in Pakistan.

Method and Procedure

The primary objective of conducting this research was to trace the role of e-learning mode of study of Virtual University of Pakistan in establishing a classless educational setup in Pakistan. There always existed a strong relationship between the economic class of the student and his/her institution of study, but virtual university has abolished this concept by providing equal opportunities of getting quality education for all.

In this study, secondary data was used for analysis purpose. The researchers being part of the Virtual University of Pakistan have obtained data related to the students enrolled in Semester Spring and Fall 2013 in different study programs with the assistance of IT department of the University. In order to find out the socio-economic status of VU students, the information of the guardian income was used whereas data unveiling city/district name to which student belong to, cater the purpose of verifying the University's stance of widening the access to education all over the Pakistan. Lastly, the profiles of former VU students who are doing well in their professional careers were also obtained to explain the diversity of professional space they have in the market. With reference to the teaching standards of Virtual University, the researchers made use of the professors' profiles who have imparted various courses at the Virtual University. For the data analysis purpose, descriptive statistics and Independent Sample t-test were applied.

Results

Table 1 represents the frequency and the percentage of the lower and the upper class enrolled students in Virtual University of Pakistan. In semester spring and fall 2013, about 20,533 students were enrolled in the Virtual University of Pakistan, out of these students 80.6 percent belonged to the lower class i.e. earning[2] 2–10$ per day. About 19.4% students were from the middle and the upper social classes.

Table 1: Income Range of VU Students

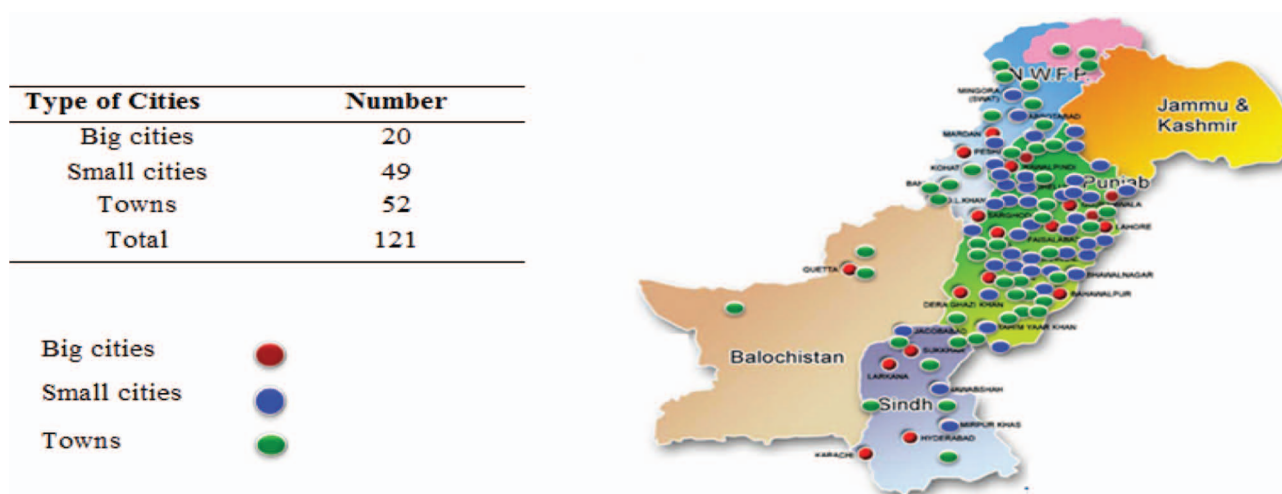| Income groups	Frequency	Percentages
2–10 $ per day (3,000 to 32,000 Pak rupees)	16,547	80.6
10 $ per day and above(>) (32,001 Pak rupees to above)	3,986	19.4
Total	20,533	100

Source: Virtual University of Pakistan Information Management System

H1: There is a significant mean difference between the enrollment of the upper and the lower class in the e-learning system on the basis of the guardian income

Table 2: Independent Sample T-Test for Class Enrollment in the E-Learning System

Variable	Upper class		Lower class		t(20533)	p	95 % CI	
	M	SD	M	SD			LL	UL
Income	74318.41	52876.312	14060.60	7290.718	71.784	.000	58612.068	61903.566

The independent sample t-test was carried out to see the significant mean difference between two different social classes on the basis of their guardian income, i.e. the upper and the lower class while enrolling in the e-learning education system (table 2). Results showed that there is a significant difference between both groups which was clearly visible in the mean scores as well. Levine's test is significant which reflects that both groups do not vary equally. Cohen's d was calculated and the value is 1.6 which is quite high and reflects greater difference between the two income groups (Ellis, 2009).

Table 3: Table and Scatter Plot Showing Student Representation as Per Cities

Type of Cities	Number
Big cities	20
Small cities	49
Towns	52
Total	121

Big cities ● (red)
Small cities ● (blue)
Towns ● (green)

Source: Virtual University of Pakistan Information Management System

Tables 3 and scatter plotted map show access to the Virtual University all over Pakistan ranging from the big cities like Lahore, Karachi, Faisalabad to the small towns such as Pishin, Thatha, Hangu, Kotli, Tunsa Sharif etc. Data represents the fact that the Virtual University e-learning system has successfully catered the issues of accessibility to higher education in Pakistan. Besides having access in the major 20 cities of the country, it has equally expanded its campuses to the small cities (49) and the towns (52). Only one exception was found with reference to access, i.e. Baluchistan region owing to socio-cultural and security hazards.

Table 4: Professor's Qualification and Degree Institutes

Subject	Qualification		Institutions	
	Ph. Ds	MS	National	International
Computer Sciences	20	12	7	25
Accounting, Banking & finance	2	4	4	2
Human Resource Management	4	2	4	2

Table 4: *Continued*

Subject	Qualification		Institutions	
	Ph. Ds	**MS**	**National**	**International**
Management Sciences	10	10	5	15
Marketing	4	2	0	6
Mass Communication	5	4	7	2
Psychology	4	6	3	7
Mathematics	8	0	0	8
Statistics and Research	2	0	0	2
Sociology	1	1	0	2
Pakistan Studies	2	0	1	1
Physics	2	0	0	2
English	1	1	1	1
Total	**65** **61%**	**42** **39%**	**32** **30%**	**75** **70%**

Source: Virtual University of Pakistan Information Management System

Data in table 4 explains the educational profile of VU hired faculty showing a strong tendency towards highly qualified faculty. Out of total faculty (who have so far recorded video lectures for VU) 61% were Ph.D degree holders and 39% were having MS degrees. About 70% of the faculty members were found to be foreign qualified.

Table 5: VU Graduates Professional Profile

Professions	Socio-economic ranking			
	Higher	Middle	Lower	**Total**
Education	5	115	60	**180** **6%**
CS & IT	21	350	191	**562** **18.5%**
Administration & Management	63	1954	224	**2241** **73.5%**
Others	0	29	27	**56** **2%**
Total	**89**	**2448**	**502**	**3039**
	3%	**80.5%**	**16.5%**	**100**

Source: Virtual University of Pakistan Information Management System

Data in table 5 shows the professional profile of Virtual University graduates. For the purpose of the analysis, data was segmented into four sections on the basis of the professional fields. In the first category all the graduates who are serving in the Education sector are mentioned. The second row refers to those who have jobs in the computer or IT related fields, while the data related to graduates working in the management or administration sector is shown in the third place. Former students (graduates), who have opted for professions other than the three mentioned categories are put in "Others" section. Against each section, professional ranking was done into "Higher" "middle" and "Lower" on the basis of students' socio-economic status. The data shows that 6% of students are working in the education sector while 18.5% are doing the Computers or IT related jobs. Most graduates, i.e. 73.5%, are working in the management or administration sector due to the reason that enrollment in management sciences programs is higher as compared to other study programs. Two percent of graduates fall in the category of "Others". Overall results show that a huge percentage of 80.5% is serving at middle level while 16.5% are doing lower level jobs. Three percent of the graduates are holding top ranks in different professional fields.

Conclusion

The conventional institutes, to a great extent are maintaining a class difference in our country with reference to educational opportunities while quality education is generally conditioned by the cost. A strong evidence of the phenomenon is visible in the existing vast differences between the fee structures of the private and the public educational institutes. Moreover, this educational divide can also be observed on the basis of the urban and rural areas. Almost all the well reputed institutes have their campuses in the big cities only, thus reserving the opportunity of acquiring the quality education only for the people of urban areas. Very few people from the rural areas can actually manage to migrate from their home towns for the sake of their studies and bear the expenditures of their education and accommodation. Thus, the educational system encourages those who are already enjoying a good status and promises good future to only those people who can afford high profile institutes and thus have more chances to get the higher education degrees and highly paid jobs. Whereas, the e-learning system with its novel features of accessibility and affordability has broken that myth. It has widened the prospects of quality education for all, irrespective of the socio-economic status of any person. It has been made possible by incorporating the feature of affordability in the e-learning mode, thus negating the assumption that working class has limited opportunities due to the social divide in the education sector.

Virtual University of Pakistan is devoted to improve the ratio of highly qualified people in the country by enhancing the accessibility to education to all across the country without any discrimination. Students enrolled in VU do not belong to a certain income group; in fact we can see clear representation of all the classes from the income group information of VU students. Thus, the notion of the restricted educational opportunities to the poor class and the marginalized people is strongly negated through research findings. Students' representation has also been monitored on the basis of the cities they belong to and it was found that VU students are scattered all across the country whether it is a big city like Lahore or a small town like Hangu or Kotli, the geographical distance is no more an obstacle in achieving the higher education. Further, Virtual University of Pakistan has also ensured the accessibility of Internet services at all campuses in order to facilitate those students who don't have Internet service available at home.

Another important point that confirms the status quo in the education sector is linking quality education with cost, i.e. the more you pay the better you get. But this is not the case with Virtual University's e-learning system. Here the quality has been ensured along with the added feature of

affordability. The majority of the professors who have recorded the courses for VU are foreign degree holders, highly qualified and all of them have gone through an audition process before actually being approved for teaching a certain course.

Here it is also pertinent to discuss the market value of the degree obtained through VU platform. As graduates, they are a VU "product" and their professional record can be taken as a strong evidence of the worth of their degree and learned skills. The majority of students who have completed their degree program from VU are serving at good designations in reputable organizations.

Hence, on the basis of the above narrated facts, it can be very well acclaimed that Virtual University has abolished the social divide in the education sector of Pakistan by extending access to quality education to all corners of the country without any discrimination.

Acknowledgement

Notes

[1]   Both authors have equal contribution in the paper.
[2]   Income distribution of lower and upper class is done as per ADB-Asian Development Bank (2010) social class division in Pakistan. In this case, lower middle class is added in lower class and upper middle class is merged in Upper class group in order to present two classes.

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