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Virtual Education in Pakistan: A perceived perspective of 'Education-for-All' at higher education level

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ABSTRACT

Virtual education is a mode of education that is an opportunity for learners through synchronous and asynchronous educational technologies. This study aimed to find out the perspective of virtual 'Education-for-All' in higher education in Pakistan. It could not be underestimated as it was a vast job opportunity and a second opportunity for individuals. The population of this study was postgraduate learners of the Virtual University of Pakistan. The sample was drawn by using multi-staged random sampling techniques. At the first stage, 15 campuses (three from the university's own and twelve from affiliated campuses) were selected. At the second stage, 30 postgraduate students from each selected campus were selected randomly to make a total of 450 for the sample. The data was collected through a questionnaire developed on a five-pointed Likert scale. The research findings showed that the virtual education mode ensures 'Education-for-All' facilities for learners beyond gender biasness, geographical boundaries, cultural barriers, and in-service individuals. It was recommended that virtual education should expand at a large scale to provide the opportunity to the majority of the population.

Keywords: *Virtual education; Education-for-All; Learner-centered education; Online education; Higher education; Synchronous and asynchronous educational technologies*

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INTRODUCTION

The field of education has made advancements as Information and Communication Technologies (ICT) are being richly used for the promotion of rapid communication. They have revolutionized instructional techniques in the field of education (Hussain, 2012). With ease and frequent use, the virtual education model provides cost-effective, 'Education-for-All' and quality education by utilizing synchronous and asynchronous information and communication technologies (Hussain, 2016). Using these technologies, a vast range of learners become able to contribute to learning activities while staying at their workplace or living at their homes. The virtual education model stretches chances to people for continuous learning with no cultural, gender, or geographical limitations. It also promotes the slogan 'Education-for-All' by providing educational opportunities beyond geographical boundaries, cultural barriers, and study time conditions (Kirschner, 2005). Peppler, (2007) opined virtual education system facilitates its learners in many aspects. One of the big advantages of this model is wide-ranging education educational opportunities. A virtual education system facilitates an unlimited number of learners to improve their education and skills by using online information and communication technologies for the provision of education.

The other most popular advantage of virtual education is that it removes geographical and cultural boundaries and provides access to new knowledge for learners (Given, 2008). It makes access to the current store of knowledge easy and fast. By utilizing modern internet and communication technologies, this innovative system provides the stage for the learners to stake their thoughts, creativities, surveys, and new happenings in the world in updated form. Virtual learners have the facility to increase mutual interaction with people from various communities, providing a chance to learn from one another (Mayer and Pilegard, 2005). There is a facility for people of common interest to work together and support one another for some big national cause. Students and teachers have full-time (24/7 hours) interaction with one another. There is no condition of living in any corner of the world. They just need access to information and communication technologies.

Oblender, (2002) described that with the development and use of the internet and communication technologies, virtual education is sharing much load of formal education. According to Davis and Roblyer (2005), students' trend toward virtual education was 54 percent in 2001, which increased to 87 percent in 2005. From the education perspective, learners-centered educational activities, quick responses from the instructor, online learning, and teamwork activities are major advancements of the virtual education system in this era (Hrastinski, 2008).

Virtual education accepts large numbers of learners for adopting modern and comfortable ways of learning. It welcomes highly motivated and determined individuals by actively engaging in the teaching-learning process according to their available convenient study times. Hence, the virtual education system also suits those individuals who cannot physically join their classes on campus on a regular basis. The plus point of virtual education is the increased educational opportunities for motivated people in a vast range. The supporters of the virtual and online or blended education system are of the opinion that most university education institutions focus on the delivery of quality education, but they face infrastructure costs and students' drop-out, etc. on a yearly basis (Côté et al., 2005). Many expensive issues we face in the traditional education system may be controlled by promoting virtual education worldwide. Many critics think virtual education maintains and delivers fresh and updated knowledge to its learners cost-effectively. The delivery of fresh and regularly updated knowledge is a strong characteristic of ensuring quality education (Simonson et al., 2019). Therefore, it can be rightly said that virtual education is an agent to endorse quality education.

People need to hold virtual education for personal, national and collective comfort (Nejad and Nejad, 2011). Virtual education design offers a chance to learners by emerging their own learning time schedule. It requires learners to prove high regard for knowledge, time management, target oriented, increase their level of attendance and self-management from learners. The tutors and officials in virtual education also confirm a good level of commitment, contribution and support. Their contribution and participation give an opportunity to its learners to advance communication services and understanding. The progressive countries where cultural standards can generate restrictions, the online learning model may be praised as an effective model of education because it ensures an unbiased opportunity for learners, keeping aside gender, class, and creed for admission to higher education (Siddiqui, 2013). Several thoughts like active learning and contribution, feedback, suitable workload, regulating and enabling, efficiency, teamwork, low cost, suppleness, average education, online valuation and assessment are often defined as a plus point for the provision of virtual education as the torch bearer for all. The virtual education system has been introduced worldwide, accepted and recognized (Zandberg, 2008).

Virtual learners are practically skilled in working actively and as energetic professionals in their careers. The preliminary opinions of the managers indicate that virtual learners owe great talent and potential that is visible in their performance and efficiency. Therefore, the virtual education model is considered a favorable optimistic response from employers who have borrowed virtual graduates (Wu et al., 2010).

Statement of the Problem

This study was a gentle effort to gauge the slogan of virtual education, 'Education-for-All' in Pakistan.

Research Objective

The single research objective of the study was to assess virtual education's suitability for 'Education-for-All' in Pakistan.

DELIMITATIONS OF THE STUDY

Various educational agencies in Pakistan are carrying out blended learning programs. The Virtual University of Pakistan is the major educational source providing education virtually access in Pakistan. Therefore, this study was delimited to its vastness for the provision of virtual education facilities to Pakistani citizens.

RESEARCH PROCEDURE

This study was a descriptive type of research in nature; thus, multistage sampling and survey method was adopted for the data collection. The population and sample size are described in Table 1. The Virtual University has 27 own campuses along with 137 affiliated campuses. There were one hundred thousand students at the postgraduate level in its all institutes.

Table 1: Population and sample size

Sr. No	No of Campuses		Post Graduate Virtual Learners	
	Own Campuses	Affiliated Campuses	Own Campuses	Other Campuses
Population	27	137	10000	90000
Sampling	3	12	10	20
Grand Sample Size: (3+12) (10 + 20) = 450				

There were 164 virtual campuses and more than 100,000 virtual learners. Using a multistage random sampling technique, 450 virtual learners were randomly selected from fifteen virtual campuses. The sample size was considered suitable by consulting the simple random sample table of Gay (2005). Virtual learners were the primary beneficiaries of the system. Therefore, one questionnaire (on a five-pointed Likert scale) was developed for data collection. The research tool was validated by applying Cronbach Alpha (0.932). The virtual learners could only be accessed online, so the research tool was converted into google.doc and sent to the virtual learners through their

official emails given to the Virtual University. The response rate was hundred percent with the official cooperation of the Virtual University.

RESEARCH FINDINGS

Table 2: Admission Schedule advertisement

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Through internet	1	5	2	27	65	4.48	.868		
Through banners	5	24	9	31	31	3.55	1.295	3.79	1.198
Through newspaper	4	18	15	29	34	3.72	1.218		
Through broadcast	10	23	15	18	34	3.41	1.411		

Table 2 depicts that the Virtual University advertises admissions schedules using multi-channels so that a maximum number of individuals acknowledge it. A vast majority of respondents, i.e. 92%, agree that the Virtual University advertises its admission schedule through internet services, while only 6% disagree. The mean score is 4.48, and the standard deviation is 0.868, which is highly significant. The majority of respondents, i.e. 62%, agree with the research question that the Virtual University advertises its admission schedule through banners, while 29% disagreed. The mean score is 3.55. The majority of respondents, 63%, agree with the research question that the Virtual University advertises its admission schedule through newspapers, while 22% disagree. The mean score is 3.72. 52% of respondents agree that the Virtual University advertises its admission schedule through broadcast media, while 33 % disagree. The mean score is 3.41. The cumulative mean score of 3.79 and standard deviation of 1.198 represent that the Virtual University of Pakistan advertises its admission schedule through multi-sources, whereas the major source of advertisement is the internet.

Table 3: Application process for admission

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Through online	1.1	0.3	3.1	25.5	70	4.66	.665		
Through virtual campus	00	2.3	1.1	26.8	69.8	4.64	.625	4.40	.863
Through affiliated campus	9.4	8.3	8.5	30.8	43	3.90	1.299		

Table 3 depicts that the Virtual University facilitates learners to apply for admission in various ways to make the admission process easy. A vast majority (95.5%) of respondents agreed that the Virtual University facilitated the learners to apply for their admissions through the online process. Only 1.4% of respondents were not agreed. A mean score of 4.66 was found highly significant. A vast majority (96.6%) of respondents agreed that the Virtual University facilitates learners to apply for admission through the Virtual University's own platform, whereas 2.3% of respondents did not agree with the research question. The mean score of 4.64 showed highly significant. The majority of 73.8% of respondents agreed that the Virtual University facilitates learners to apply for admission through their affiliated campuses, whereas 17.7% of respondents were found not to agree with the research question. The mean score of 3.90 showed that the results were significant. The overall mean score of 4.40 and standard deviation of 0.863 showed that the Virtual University offered various facilities for the learners to apply for admission.

Table 4: Admissions are offered

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Diploma level	15.4	21.7	10.5	16.2	36.2	3.36	1.522		
Graduate level	.2	.6	2.6	29.6	67	4.62	.596	4.18	.967
Postgraduate level	1.1	2.6	4	22.5	69.8	4.57	.785		

Table 4 depicts that the Virtual University offers admission to various program levels. 52.4% of respondents agreed with the research question that the Virtual University offered diploma-level admissions, whereas 37.1% disagreed. The mean score was 3.36, and the standard deviation was 1.522. A vast majority (96.6%) of respondents were found agreed with the research question that the Virtual University offered admissions at the graduate level, whereas only .8% of respondents were found disagreed. The mean score of 4.62 and standard deviation of 0.596 were highly significant. A vast majority (92.3%) of respondents agreed with the research question that the Virtual University offered postgraduate-level admissions, whereas 3.7% disagreed. The mean score of 4.57 and standard deviation of 0.785 were highly significant. The overall mean score of 4.18 and standard deviation of 0.967 showed that the Virtual University offered admissions at various levels to promote higher education opportunities to the maximum number of individuals.

Table 5 depicts that the Virtual University of Pakistan made admissions in several disciplines to provide higher education opportunities to the vast majority of individuals. Less than half (46.7%) of respondents agreed with the research question that virtual education offered admissions in the field of humanities, whereas 37.7% of respondents were found disagreed with the research question. The mean score was 3.15, and the standard deviation was 1.404. Less than half (48.2%) of respondents agreed with the research question that the Virtual University offered

admissions in the field of engineering, whereas 39.8% disagreed. The mean score was 3.17, and the standard deviation was 1.448. The majority of respondents (76.6%) agreed with the research question that the Virtual University offered admissions in the field of social sciences, whereas 12.6% disagreed with the research question. The mean score was 3.92, and the standard deviation was 1.093. Less than half (47.3%) of respondents agreed with the research question that the Virtual University offered admissions in the fields of applied sciences, whereas 39.6% disagreed with the research question. The mean score was 4.82, and the standard deviation was 0.389. A huge majority (93.2%) of respondents were found agreed with the research question that the Virtual University offered admissions in the field of business administration, whereas only 0.6% of respondents were found disagreed with the research question. The mean score was 4.74, and the standard deviation was 0.498. A huge majority (99.7%) of respondents agreed with the research question that the Virtual University offered admissions in the field of information and communication technologies, whereas 00% disagreed with the research question. The mean score was 4.82, and the standard deviation was .389. The cumulative mean score of 3.81 and the standard deviation of 1.037 showed that virtual education opens the doors of higher education in various fields so that the vast majority of individuals may be advantaged.

Table 5: Academic disciplines

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Humanities	16	21.7	15.6	24.5	22.2	3.15	1.404	3.81	1.037
Engineering	16.2	23.6	12	23.1	25.1	3.17	1.448		
Social sciences	4.6	8	10.8	43.3	33.3	3.92	1.093		
Applied science	16.2	23.4	13.1	28.2	19.1	3.11	1.387		
Business administration	.3	.3	.2	23.1	76.1	4.74	.498		
ICT	00	00	.3	17.1	82.6	4.82	.389		

Table 6: Instructional paradigms

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Online lectures	00	00	00	19.4	80.6	4.82	.389	4.43	0.801
Hard copies of learning material	1.2	2.3	.3	20.1	76.1	4.74	.498		
Assignments	.3	3.4	1.4	17.7	77.2	4.68	.697		
Quizzes	7.4	5.4	1.1	34.2	51.9	4.28	1.18		
Research projects	9.5	16.2	12.5	37	24.8	3.52	1.28		
Effective examinations	1.1	2.3	2.8	29.1	64.7	4.54	.762		

Table 6 depicts that the Virtual University organizes various instructional techniques to impart knowledge and skills to its learners. The data analysis showed that 100% of respondents were found agreed with the research question that online lectures were available for the learners, whereas none of the respondents was found to disagree with the research question. A vast majority (94.9%) of respondents agreed with the research question that the assignments were allotted to them for further study and clarification, whereas 3.7% disagreed with the research question. A vast majority (96.2%) of respondents agreed with the research question that learning material is also available in hard form, whereas 3.5% disagreed. The mean score was 4.74, and the standard deviation was 0.498. The majority of respondents (61.8%) agreed with the research question that learners were engaged in research work, whereas 25.7% disagreed with the research question. The majority of respondents (86.1%) agreed with the research question that virtual learners were given quizzes for their assessment, whereas 12.8% disagreed with the research question. The mean score was 4.28, and the standard deviation was 1.18. A vast majority (93.8%) of respondents agreed with the research question that the Virtual University conducted effective examinations for learners' evaluation, whereas 3.4% disagreed. The cumulative mean score of 4.43 and standard deviation of 0.801 showed that the Virtual University focused on multi-instructional paradigms to facilitate a majority of the virtual learners.

Table 7: Educational technologies timings

Statement	Responses in Percentage					Mean	SD	Cumulative Mean	Cumulative SD
	SDA	DA	UD	A	SA				
Online lectures	00	0.6	3.7	17.4	78.3	4.74	.551	4.126	0.9104
Broadcast timings	2.3	9.7	17.7	37.3	33	3.89	1.045		
MDB timings	1.1	7.4	15.1	35.9	40.5	4.07	.976		
Video conference	2	9.7	15.1	37.6	35.6	3.95	1.03		
Quiz timings	3.7	4	11.7	51.6	29	3.98	.950		

Table 7 depicts that the Virtual University care for the suitability of timings of various educational technologies. A vast majority (95.7%) of respondents agreed with the research question that the Virtual University takes care for the suitable timings of online lectures, whereas only 0.6 percent disagreed. Most respondents (70.3%) agreed with the research question that the Virtual University takes care for the suitability of broadcast timings, whereas only 12% disagreed with the research question. The mean core was 3.89, and the standard deviation was 1.045. Most respondents (76.4%) agreed with the research question that the Virtual University takes care for the timings of moderated discussion boards, whereas 8.5% of respondents disagreed with the research question. Most of the

respondents (73.2%) agreed with the research question that the Virtual University takes care for video conference timings, whereas 11.7% disagreed with the research question. The mean score was 3.95, and the standard deviation was 1.03. The majority of respondents (80.6%) agreed with the research question that the Virtual University takes care for quiz timing, whereas 7.7% disagreed with the research question. The mean score was 3.98, and the standard deviation was 0.950. The cumulative mean score is 4.126.

DISCUSSIONS

The findings of this study explored that the Virtual University of Pakistan works through its own campuses as well as with the collaboration of affiliated campuses. Virtual education occupies a very significant place in the higher education system in Pakistan. It plays a vital role in promoting higher education opportunities to a vast range of individuals. The use of information and communication technologies in education paved the way for the convenient and cost-effective education model. Virtual education facilitates the learners to get education through instructional technologies by sitting at their own pace. It suits the learners at a large scale because they plan their own study, examination timings and location. The in-service individuals and people bound to live within boundaries can continue their education with ease and comfort, and their routine responsibilities may not be disturbed. On the other hand, Iqbal et al. (2022) revealed that the formal education system in Pakistan and most other countries in the world went into online education during the COVID-19 pandemic. The online learners in Pakistan felt quite unsatisfied with the online education system. The reason they explored was the lack of institutional support and quality of online instruction. However, being a relatively new education system in Pakistan, virtual education also needs improvements in the system to work at a larger scale in the country and overseas.

CONCLUSION

The virtual education system aimed to provide 'Education-for-All' and cost-effective education at the higher education level in Pakistan. Synchronous and asynchronous instructional technologies facilitate virtual learners to participate in learning activities 24/7 hours. Virtual education works efficiently by providing higher education facilities at learners' doorstep. It has become very easy to apply for admission to the required program, even though Pakistan has a large space for improvement. Especially the study fields having practical work like medicine and agriculture. Virtual education needs to enlarge its scope.

RECOMMENDATIONS

This study proved the Virtual Education Model to be an effective mode of education for the provision of higher education access all over Pakistan and beyond. However, keeping in view the findings of the study, it is recommended some applicable actions to improve the present setup of virtual education in Pakistan;

1. The characteristics of the virtual education system may be socially accepted, appreciated and acknowledged by the managers in a matter of captivating graduates as it would help to embellish the system.
2. The maximum private education sector may be affiliated to facilitate the learners of all cities and towns, and supported with proper physical and information technology provisions and skilled instructors.
3. Capacity-building refresher courses may be organized for the tutors and instructors dealing with virtual learners having individual differences.
4. Tutor and learner interaction sessions may be reorganized according to the need of the programs in order to assist virtual learners in managing their study problems and ultimately to increase the value of higher education in Pakistan.
5. Virtual Education Model may be used for promoting educational slogans, i.e., 'Education-for-All', low cost and sustainable higher education opportunities in the country.
6. The government should ensure high-tech provisions so that people living in far-flung areas may be facilitated with virtual education opportunities.

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