

# ENHANCING QUALITY AND QUANTITY OF HIGHER EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGIES

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## ABSTRACT

Pakistan the second largest country in South Asia, is sixth most populous country in the world, with a population of 187 million of which about 100 million young men and women are below the age of 30. According to the Report of the Steering Committee on Higher Education (2001) only 2.6% (approximately 475,000) of our students aged between 17-23 were enrolled in higher education institutions. It was worst as compared to 10% of India, 13% in China, 26% in Malaysia, 39% in Thailand and 68% in Korea, even less than Rwanda. Besides inaccessibility of higher education to 95% of this age group, quality education and qualified faculty were another two major concerns to Pakistani higher education. Information and communication technologies (ICTs) have the capacity to address these concerns simultaneously. Therefore, to tackle these problems with technology, Virtual University of Pakistan (VUP) was established in 2002. The model of VUP has been acknowledged as the winner of the role model status which can be replicated by other developing countries. In the holy period of 10 years, the VUP has added feathers in the cap of Pakistani higher education by providing high quality education to thousands of male and female students through state-of-the-art technological infrastructure.

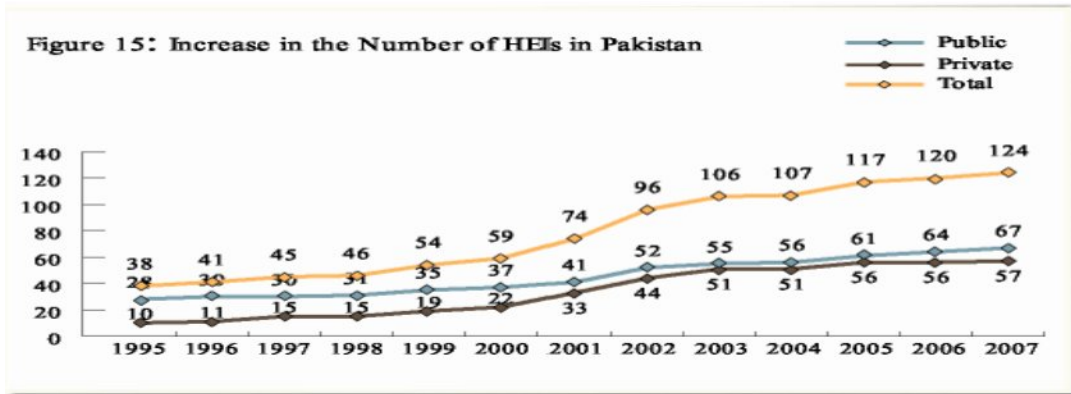
### Key words:

Higher Education, ICTs, Virtual University, Quantity and Quality of Education

## INTRODUCTION

Before the establishment of Higher Education Commission (HEC) of Pakistan, enrollment in higher education was very low (2.6 % for the age group of 17-23). Pakistan was behind India (10 %), China (13 %), Malaysia (26 %), Thailand (39 %) and (68 %) of Korea (GOP, 1998-2010 and HEC MTRDF, 2005-2010). HEC took some revolutionary steps for the promotion of higher education in Pakistan. Enhancement of accessibility and participation opportunity to FA/FSc graduates to attend universities became an important goal of Higher Education Commission (HEC, 2007). The HEC inherited a higher education system which was unable to cope with drastically increased demand for the higher education a population of 170 million people. Before the inception of the HEC,

during the 55 years of its history, the system could manage to set up 59 HEIs in the country. The HEC made judicious plans and policies and through pragmatic implementation, succeeded in increasing more than 100 percent universities in a period of only six years. The number of universities reached to 124 in 2007. The Figure below depicts this success story of transformation of Pakistani higher education into 21<sup>st</sup> century.



Source: HEC Annual Report 2005-06 & HEC Report 2002-08

Besides doubling the number of universities in Pakistan, HEC launched large number of indigenous and foreign scholarships. These initiatives altered worse situation of higher education into a role model higher education system for other developing countries of the world. Interestingly, number of students (63.9%) in Allama Iqbal Open University (AIOU) and Virtual University (VU) is more than the total strength of all other Pakistani universities.

*Table 1: Enrollment in Higher Education*

S.No	HEIs	Total Enrolment of Students	
		Number	% of Total
1	General UNI	220,733	25.2
2	Medical UNI	11,924	1.4
3	<b>AIOU &amp; VU</b>	<b>559,289</b>	<b>63.9</b>
4	Agriculture UNI	27,881	3.2
5	Engineering UNI	30,766	3.5
6	DAIs	18,588	2.1
7	Other Institutes	4,107	0.5
<b>8</b>	Centres	2,015	0.2
9	Grand Total	875,303	100

Source: HEC Annual Report 2005-06 & HEC Report 2002-08

The figure below highlights the Pakistan's worst situation of enrolment amongst some other Asian countries, in the previous years and then improved position after given special emphasis on increasing enrolment. Earlier, Pakistan was far behind than its neighbouring countries and then gradually made its way towards success by wellconceived and pragmatic policies.

*Table 2: Enrolment in Higher Education*

S.No	Country	2001	2002	2003	2004	2005	2009
1	Korea	68	83	86	89	90	100
2	Thailand	39	40	41	43	43	46.2
3	Malaysia	26	29	30	32	32	37.5
4	China	13	15	18	19	20	24.3
5	Pakistan	2.6	3	3	3.5	5	5.4

Source: USAID database 2008, Human Development Report 2007, 2008 & 2013 and Global Information Technology Report 2013

## VIRTUAL UNIVERSITY OF PAKISTAN

The Virtual University of Pakistan (VUP) was established in 2002 for addressing the problem of acute shortage of quality faculty in the universities and accessibility to higher education especially in the farflung areas of Pakistan. Majority of the population lives in rural areas smaller towns while universities and institutions of higher education were concentrated in larger cities. Therefore, this university proved a blessing for the masses of Pakistan especially for the people in remote areas. VUP is using CDs, television, Internet and other information technology resources (Naveed 2006, Hussain 2012 & Toor 2005). This university is serving the entire nation in collaboration with private sector through a network of Private Virtual Capmuses and own campuses.

*Table 3: Province/Region wise Campuses of VUP*

S.No	Province/Region	Campuses		Total
		Own	Highered	
1	Punjab	18	128	146
2	Sindh	06	17	23
3	KP	02	19	21
4	Balochistan	02	01	03
5	Gilgit Baltistan	--	02	02
6	ICT	01	--	01
7	AJK	--	05	05
8	<b>Grand Total</b>	<b>29</b>	<b>172</b>	<b>201</b>

Source: [www.vu.edu.pk](http://www.vu.edu.pk)

Legend: KP: Khyber Pakhtoonkha, ICT: Islamabad Capital Territory & AJK: Azad Jammu and Kashmir

Currently, through 201 campuses, the Virtual University of Pakistan is offering certificate courses, formal 4-year BS and MS programmes of international standards in various disciplines. VUP is providing international standards education at an affordable cost throughout the country and abroad as well. Content quality of programmes offered by this university is equivalent or better to the content offered by leading universities in the country (Hussain, 2007). Regardless of race, gender, religion, colour, age, disabilities, gender and geographical locations students are admitted only on the basis of their educational qualifications in this university.

Excellent telecommunication infrastructure is being used for the provision of affordable quality higher education. Surely, this university has great contributions in the socio-economic development of Pakistan. Moreover, this model of the Virtual University of Pakistan has been acknowledged as the winner of the role model status in the Asia-Pacific Quality Network International Conference in Newziland.

#### **OBJECTIVES OF THE STUDY**

Main objective of the study was to assess the role of Virtual University of Pakistan in enhancing quantity and quality of higher education. Students' attitudes towards Virtual Education were ascertained in this study. Problems regarding virtual education faced by the students were also examined in the study.

#### **RESEARCH METHODOLOGY**

The study was conducted in Islamabad and Rawalpindi in 2012. It was a descriptive study hence, survey considered appropriate for the collection of data. A sample of 300 students of BS and MBA was taken conveniently. To elicit the opinion of respondents a questionnaire on five points (Likert Scale) was developed and administered. It was piloted before finalizing and its reliability was .87 (Chronbach's Alpha). Focus of the questionnaire was on importance of virtual education, its instructional design, delivery system and students' problems regarding the system of VUP. Out of 300 respondents, 247 returned the filled in questionnaires and out of 247, 228 properly filled in questionnaires were analyzed. Collected data were analyzed through SPSS XVII by running mean and standard deviation formulas.

*Table 4: Students' Perception about Virtual Education in Pakistan*

S.No.	Statement	SA	A	UNC	DA	SDA	Mean	StD
1	Virtual Education (VE) is an interesting mode of education	74	115	19	17	05	4.02	.97
2	VE is an easy mode of education	89	106	13	11	09	4.11	1.00
3	Virtual University of Pakistan (VUP) provides facility of learning at students' own pace	77	112	18	14	07	4.04	.96
4	VE is a blessing for those who are out of formal system of education	88	104	14	12	10	4.10	1.00
5	VE provides opportunity of learning with earning	84	120	13	08	03	4.13	.90
6	VE is suitable for promoting higher education in rural/farflung areas of Pakistan	100	101	16	10	01	4.20	.85
7	VE is suitable for poverty stricken people of Pakistan	91	107	20	07	03	4.25	.82
8	VE is suitable for enhancing quantity of higher education	83	117	15	09	04	4.17	.82
9	VE is suitable for enhancing quality of higher education	68	99	25	21	15	3.84	1.16
10	VE provides equal opportunity of higher education to male and female students	72	93	30	18	15	3.83	1.15
11	VE promotes sense of nationalization	95	104	13	13	03	4.24	.89
12	VE helps in promoting internationalization	72	111	09	21	15	3.88	1.14
13	VE promotes awareness about international changes	82	107	16	17	06	4.15	.97
14	VE demotes sense of isolation	74	114	18	17	05	4.04	.98
15	VE promotes sense of socialization	90	105	15	10	08	4.11	1.1
16	VE promotes sense of cooperation	79	110	19	13	07	4.06	.96
17	VUP is playing vital role in national development	87	105	15	11	10	4.09	1.00
18	An awareness/media campaign for VUP is need of the time	83	119	15	07	04	4.15	.90
19	Course content is updated	100	102	16	09	01	4.26	.81
20	Course content is easy to understand	93	105	20	05	05	4.21	.84
21	Students can understand lectures easily	84	117	14	08	05	4.17	.83
22	Recorded lectures are very beneficial in terms of listening again and again	70	99	23	22	14	3.9	1.15
23	Students are satisfied with instructional design	72	93	33	15	15	3.88	1.14
24	Delivery system of VUP is efficient	95	105	15	10	03	4.21	.89
25	Tutors/Lecturers are highly qualified and competent as well	75	108	19	16	10	3.96	1.16
26	Tutors give necessary comments on the assignments	84	105	18	15	06	4.06	.98
27	Tutors comments are beneficial for students	73	115	20	17	05	4.13	.95
28	Quizing part of assessment makes students' efficient learners	92	103	15	10	08	4.11	1.00
29	Lack of hardware is a barrier in VE	76	113	19	13	07	4.05	.96
30	Lack of quality hardware is a barrier in VE	87	107	16	10	08	4.19	1.00
31	Power failure is a barrier in VE	84	119	14	07	03	4.14	.89
32	Lack of peer support is a barrier in VE	100	103	15	09	01	4.24	.85
33	Lack of technical support is a barrier in VE	93	105	20	07	03	4.20	.85
34	Connectivity at home is a barrier in VE	88	112	15	08	03	4.15	.87
35	Lack of confidence in a barrier in VE	69	101	28	20	10	3.93	1.15

Scale value for this table is SA (Strongly Agreed) =5, A (Agreed) =4, UNC (Uncertain) =3, DA (Disagreed) =2 and SDA (Strongly Disagreed) =1

## DISCUSSION

Regarding nature of Virtual Education (VE), majority of the respondents opined that VE is an interesting and easy mode of education. This is flexible system of education hence; VUP is providing facility of learning at students' own pace. In Pakistan, approximately only 5.5% of age 17-23 has access to higher education. In this term, VE is a blessing for those who are out of formal system of education and cannot afford to retain themselves in formal system of education. In developing countries like Pakistan, majority of the graduates prefer earning to further learning. VE provides opportunity of learning with earning to those people.

Majority of Pakistani population lives in rural areas while universities and higher education institutions are located in big cities. In this critical situation, VE is suitable for promoting higher education in rural/farflung areas of Pakistan. Similarly, majority of the poors live in rural areas and cannot afford higher education by residing in big cities. VE is suitable for those poverty stricken people of Pakistan because by bearing nominal expences they can interpret their dreams of higher education by residing in their own localities. Through this sytem a large number of people can attain higher education therefore; VE is suitable for enhancing quantity of higher education. This sytem is based on modern technologies hence; VE is suitable for enhancing qualityty of higher education. VUP is offering its educational programmes without any gender discrimination. Due to this merit, VUP is playing vital role in engendering female disparity by providing equal opportunity of higher education to male and female students.

Netsurfing is indispensable part of VE and envisions learners with national amd international scenarios. In this way VE creates promotes sense of nationalization and internationalization. Moreover, VE demotes sense of isolation by envisioning students with international horizens. These sense broden students' vision and they are motivated towards socialization and cooperation. By providing larger and broader access to higher education, VUP is playing important role in national development. Students are not satisfied regarding general awareness about VUP. Regarding course content is students opined that its course is updated and at par with international standards. Course content

is easy to understand and students understand lectures of their tutors easily. Recorded lectures are very beneficial for the students because students can comprehend their courses by listening and seeing the lectures again and again.

Students are satisfied with instructional design and delivery system of VUP and they called it an efficient system of education. Tutors/Lecturers are highly qualified, competent and reputed as well. Tutors give necessary comments on the assignments which are beneficial for students in course comprehension and preparation of exams. Quizing part of assessment makes students' efficient, active and punctual learners because to answer these questions students have to connect daily. Regarding barriers in learning through VE, they agreed that Lack of hardware, lack of quality hardware, power failure, lack of peer support, lack of technical support, connectivity at home and lack of confidence are some barriers in VE.

## **CONCLUSIONS**

VUP is playing vital role in enhancing quantity and quality of higher education in Pakistan. Knowledge and skills are imparted according to the challenging global market environment. Highly qualified, competent, experienced and visionary personnel have been appointed as as tutors and academicians. It exploits its Virtual Television Network supplemented by Internet for online instructional delivery. Model of the Virtual University of Pakistan has been acknowledged as the winner of the role model status in the *Asia-Pacific Quality Network International Conference* in New Zealand. This model could not be deployed on a much larger scale within the OIC, SAARC and other developing scountries (Naveed, 2006). Despite of this elegance, majority of the people are still unaware of this niche facility of higher education at their thresholds especially in the rural and far-flung areas of Pakistan. Therefore, media campaign may be launched so that enrollment may be increased by leaps and bounds. The VU may establish more Private Virtual Campuses (PVCs) to facilitate the remote area students. With the collaboration of Pakistan Telecommunication Company Limited (PTCL) an attractive package/incentive may be given to the culturally restricted female students for Internet surfing. For public awareness, an electronic andd print media compaign may be launched for the advertisement of VUP.

## REFERENCES

- Government of Pakistan (1998) *National education Policy 1998-2010*. Islamabad: Ministry of Education.
- Higher Education Commission (2005) *Medium Term Development Framework 2005-10*, Islamabad.
- Higher Education Commission (2006) *Annual Report 2005-06*, Islamabad.
- Higher Education Commission (2007) *Annual Report 2006-07*, Islamabad.
- Higher Education Commission (2009) *HEC Report 2002-08*, Islamabad.
- Higher Education Commission (2011) *HEC Report 2009-10*, Islamabad.
- Higher Education Commission (2012) *HEC Report 2010-11*, Islamabad.
- Higher Education Commission (2013) *HEC Report 2011-12*, Islamabad.
- Hussain, I. (2007) *A Study of Students' Attitude towards Virtual education in Pakistan*, Turkish Journal of Distance Education (TOJDE), Vol 8, Issue 2, pages 69-79.
- Hussain, I. (2012) *Study on Instructional Paradigms of Virtual education in Pakistan: A learners Perspective*, Turkish Online Journal of Educational Technology (TOJET), Vol 11, Issue 2, pages 179-186.
- Naveed A. M. (2006) *Virtual University of Pakistan: A Role Model for Electronic Distance Learning in the OIC Countries*, Retrieved on March 10, 2013, from [www.PANdora-asia.org](http://www.PANdora-asia.org)
- Toor, S. K. (2005) *Hybrid Model for E-learning at Virtual University of Pakistan*, The Electronic Journal of E-learning: Volume 3, Issue 1, page 68
- UNDP (2009) *Human Development Report 2007-08*, retrieved on March 29, 2008, from [www.undp.org](http://www.undp.org).
- UNDP (2013) *Human Development Report 2013*, retrieved on May 10, 2013, from [www.undp.org](http://www.undp.org).
- USAID (2008) *Global Education Data*, Retrieved on March 29, 2008, from [www.unaid.org](http://www.unaid.org).
- World Economic Forum (2013) *Global Information Technology Report (2013)*, Retrieved on March 29, 2013, from [www.wef.org](http://www.wef.org).



