

A Literary Review on Distance Education in Pakistan and Future Possibilities

Muhammad Umar Shahzad *

Abstract

This article is a literary review regarding emerging trends of distance education in the world with a particular focus on Pakistan. Many countries of the developed world have already started distance and online education. This micro level meta-analysis of distance education has found that for higher education, students somehow like the use of internet technology for getting in touch with peers and teachers. Role of Allama Iqbal Open University and Virtual University of Pakistan has been discussed in particular which are using complete mode of distance education. Virtual University of Pakistan has fully adopted the Information and Communication Technology (ICT) and Online Distance Education (ODL) through the use of state of the art software like Learning Management System (LMS). Few other universities have also started private and distance education. Higher Education Commission of Pakistan (HEC) has an active collaboration with The International Council for Open and Distance Education (ICDE) for promoting new trends in distance education. Quality assurance and development of Massive Open Online Courses (MOOCs) can uplift their standards. All this has facilitated the adult learning, job holders, people of remote areas etc. with relatively lesser cost of education. Possibilities for future have been discussed as well.

Keyword: ICT, ODL, MOOCs, ICDE, HEC

* Lecturer, Department of Management Sciences (Virtual University of Pakistan)
muhammad.umar@vu.edu.pk

Introduction

World is moving fast towards the innovative modes of education and distance learning is getting greater popularity especially in developing countries like Pakistan. It is mainly because it is cheaper and convenient mode of learning which facilitates adult learning and working professionals as well. Higher education is a key to the success and development of nations. It is mainly because of the reason that research and development is primarily done in higher education institutions which often helps in policy formulation for institutions and for nations as well. Many developed and developing countries have started distance learning through the use of traditional methods like occasional workshops and assignments. Along with that, use of ICT is also emerging quickly in distance education by different means. Jumani and Khan (2009) conducted a study on M Phil and PhD level scholars in Pakistan about their views regarding distance education. Most of the scholars were of the view that distance learning is more of a challenging task as most of the scholars in distance learning also happened to be working professionals. But those respondents were also of the view that distance learning is equally compatible as compared to traditional institutions' learning provided the workshops are attended whenever required which greatly helps in the final assessment. Study revealed that the respondents were well aware of the equivalence of distance education with formal education in Pakistan. As two main distance education universities are well recognized by Higher Education Commission (HEC) and Government of Pakistan. So the prospects of higher education are bright in Pakistan.

According to Wedemeyer (1983, p.140), distance education is a mean of teaching in which teacher and learners are at the distance and means of communication are through indirect channels like correspondence through different sources as internet, letters etc.. Isani (2005) while quoting a World Bank Report, titled 'Higher Education: The lesson of experiences (1994)' stated that higher education is of paramount importance for social and economic development of a country and it is the responsibility of higher education institutions to equip the citizens of the nations with the latest and up to date knowledge which should be useful in individual and collective framework. Jumani and Khan (2009) stated that with large population sizes in many developing countries like Pakistan, it is difficult to educate whole population with formal system of educations. That is the reason why many countries like Pakistan have adopted distance education and Open Distance Learning

(ODL) systems along with formal education. But still, in Pakistan formal education of face to face learning dominates and constitutes about ninety percent of the university education enrollment. Distance learning is cheap that's why it is more attractive for population with financial constraints and working class of the society which does not have the time to attend regular class in traditional universities. Economic growth and higher education of a country are interlinked. Trend of higher education through distance learning is increasing in Pakistan. Currently there are two main government owned and HEC recognized universities in Pakistan. These are 1. Allama Iqbal Open University, Islamabad and 2. Virtual University of Pakistan.

Siddiqi (2015) argued that a major chunk of Pakistani students are enrolled in higher education institutions of formal universities where face to face mode of education is implemented. But due to lower cost and governmental recognition for distance learning institutions, more and more people are getting attracted to distance education universities in Pakistan. Author is of the view that it is the high time to bring in distance education universities of foreign and developed countries in Pakistan. But their curriculum and degree should be recognizable by government and should be internationally acceptable as well. This will not only create jobs for educated class of people but will also give students the opportunity to avail better options of distance education that would be internationally recognized as well. Gone are the days when universities only offered face to face learning. Now millions of learners are getting their education through distance learning and Open Distance Learning (ODL) universities across globe. Sabe (2005) named this new introduction of distance education as historical evolution. In Pakistan, Virtual University of Pakistan and Allama Iqbal Open University are fully involved in online distance learning (ODL) and distance learning respectively. Other than these two universities, Comsats Institutes of Information Technology has partially started offering distance learning. There are many scholars working for distance learning in the world. However, very little research work has been done in the area of distance learning in Pakistan. There has been a record boom in distance education in the last one decade in Pakistan mainly because of the governmental support. Distance learning jumped from 0.75 million in 1998 to 1.5 million (According to U.S. Department of Education 2003).

Romero as cited by Jumani and Khan (2009) explained that the field of distance education started in seventies and initially had a lot of criticism. Critics were of the view that how can a degree be awarded to an individual with just the home work and without face to face presence

of class rooms. But things have changed entirely now with the advent of telecommunication and Information and Communication Technology (ICT). According to statistics of Wikipedia (2017), there are approximately 170 distance education higher institutions if we also include two of the above mentioned Pakistani universities. Following is the source;

https://en.wikipedia.org/wiki/Category:Distance_education_institutions

According to Hanover (2011) key international players in the field of distance education having top ranking in distance education sector include following,

1. Open University UK
2. University of Derby
3. University of Maryland
4. Drexel University Online
5. Indonesia Open University - Universitas Terbuka
6. Indira Gandhi National Open University (IGNOU)
7. University of South Africa (UNISA)

It is pertinent to mention here that there is no separate mechanism for ranking of online distance education universities of world. And most of the full time distance learning and ODL universities are ranked alongside with traditional universities which criterion and ranking system tough for distance education universities. Same kind of ranking practice is being done in Pakistan as well. In the most recent data of universities ranking, distance learning universities of Pakistan were not included in the ranking list of universities. According to website of Higher Education Commission in Pakistan, incomplete data was provided by distance learning universities of Pakistan. Higher education Commission in Pakistan ranks universities on the basis of three factors. These include 1. Research output 2. Quality assurance and 3. Standard of teaching practices. Although with respect to quality assurance both Virtual University of Pakistan and Allama Iqbal Open University fall in the highest “W” category of HEC. But perhaps teaching standard and research output of the universities still needs to be improved. Other than this, many universities are offering blended mode of education, some are offering part time / weekend programmes and distance education services at international level as well. But there is quick growing trend towards online distance education in the world along with speedy introduction of massive open online courses “MOOCs” by some of the universities. Even some top ranked universities have made ODL very popular in the world. A list of ODL universities / institutions is given in

the URL given below, which identifies 887 institutions of ODL in the world,

<https://www.thecompleteuniversityguide.co.uk/courses/search?m=Distance%2Fonline>

Importance of distance education is great for the people in remote areas, working class and for those segments of the society who cannot attend regular universities due to their high fee structures. So the distance learning universities in Pakistan are providing equal opportunity of education and then the employment to poor segments of society becomes possible. Distance education is supportive and helpful as an idea of education for all. Therefore universities offering distance education have been established by the government of Pakistan and some other universities have started offering blended mode of education as well. A list of universities can be viewed from following link.

<http://www.pakistaniuniversities.info/2014/06/pakistani-universities-offering-distance-learning.html>

Many of the developed countries of the world are offering distance and online education primarily at tertiary level / university level of education. Therefore, the trend is diverging from developed nations to developing and under developed countries of the world as well. Just for example England, USA and Canada have been discussed here from developed countries list.

Trends of distance education in England

Siddiqi (2015) explained that a team of Oxford University carried out a study to examine the trends of distance education in UK. It was found that most of the universities were offering distance education programmes at post graduate level. Most of the programs were being run on commercial basis in collaboration with private sector for continuous professional development. Most common areas of distance education in UK were business and management, law, education and the field of medicines.

Trends of distance education in USA

As per U.S. Department of Education's National Center for Educational Statistics (NCES) report explained by Hanover (2011) the trend of US distance education institutions is different from the rest of the world. Most of the enrollment in distance learning institutions is in under graduate programs rather than post graduate programs. This is

followed by post graduate programs. More public sector universities are offering distance learning through ODL than private sector universities. With respect to enrollment, larger universities are offering distance education programs as compared to smaller universities.

Distance Education in Canada

Like many other developed countries, there are distance education institutions and universities in Canada as well. According to Wikipedia, there are more than thirty distance education institutions in Canada.

https://en.wikipedia.org/wiki/Category:Distance_education_in_Canada

According to website of ICDE, The International Council for Open and Distance Education (ICDE) was founded in 1938 in Canada and now it's has institutional members from more than sixty countries of the world. ICDE's Permanent Secretariat is in Oslo, Norway, and has been hosted by this country on a permanent basis since 1988. It is also supported by Norwegian ministry of education. It is consultative partner with UNESCO and aims at promoting distance, flexible and online learning in the world in an effort to achieve millennium development goals of 2030. ICDE is coordinating platform for distance education institutions and scholars of distance education. Its members regularly receive updated of events, webinars, conferences etc. Subscribers get the regular emails regarding different events, conferences, webinars, success stories; latest updates etc. through the newsletter of ICDE.

National Education Policy in Pakistan

Ever since the inception of Pakistan, different governments came up with different education policies and varying priorities for budget allocation to education sector. According to “*National Education Policy 2009*” document by ministry of education (available online), the policy was formed earlier because the previous national education policy of 1998-2010 had many flaws. Therefore ministry of education in Pakistan decided to review the existing policy in 2005 and ultimately it came up with a new national education policy in 2009. For this, below mentioned link can be checked.

<http://unesco.org.pk/education/teachereducation/files/National%20Education%20Policy.pdf>

Non formal education in national education policy 2009

It has been emphasized in National Education Policy 2009 (page 38) that non-formal education can play an important role in training / skill building and in education for adult population. Similarly it can be beneficial for those living in remote areas and for working professionals of the society who cannot find time to continue their education. There is need to improve infrastructure for improving and spreading non-formal education in the society. The dilemma is that there is not enough budget to support basic education in Pakistan then how can government make investments in non-formal sector of education. Here comes the crucial role of private sector's involvement in the education because education is not only the matter of personal development but also of social development.

According to National Education Policy (2009, page 39) currently there are four main difficulties in literacy and non-formal education that need to be addressed. First of all, quality and teaching standard in distance education is a question mark as it is not normally regulated like the formal educational institutions. Secondly, a certification and accreditation regime is missing. Third, graduates of such institutions find it difficult to enter in the job market. But according to website of Higher Education Commission (HEC), it has started the accreditation of education programmes. Fourth, literacy programs are more effective if there are follow up programs which are currently missing. It was proposed that *“linkages of non-formal education with industry and internship programmes shall be developed to enhance economic benefits of participation. Government schools shall initiate Non-Formal Education (NFE) stream for abolishing child labor. Children involved in various jobs or work shall be brought within the ambit of non-formal education system with need-based schedules and timings”*.

A Review of Distance Education in Pakistan (Past, Present and Future Possibilities

Allama Iqbal Open University, Islamabad

Siddiqi (2015) explained that Allama Iqbal Open University was established by government of Pakistan in May 1974. At that time, it was the only second distance education university of the world and first distance education university of Asia and Africa. There is no age limit

for getting education from this university and it has been cost effective, government recognized and providing education to masses from matriculation (SSC exam) to PhD level study in different fields. At present AIOU has the major chunk of distance education enrolled students in Pakistan. At present students of the university are 1.3 million which is a figure that has surpassed any other university of Pakistan. According to university's website (www.aiou.edu.pk), university is offering wide range of degrees and courses including technical short courses for skill enhancement and self-employment of un-educated class of the society. University has now started active progress in the area of research and conferences etc. which would ultimately help it in getting higher ranking of HEC Pakistan. According to website, university has state of the art facilities including its own campus in Islamabad, labs and experimental equipment, library, access to HEC digital library for students and few of its own HEC recognized journals as well. Along with that AIOU has played a major role in the empowerment and education of women in the society. Most of the students of university are females. *“Currently more than 2000 courses are being offered, the University has 9 regional campuses, 33 regional centers, 41 approved study centers (for face to face sessions) and 138 part time regional coordinating offices. It has the largest publishing house in Pakistan with over 1.8 million books printed annually”*. Students from all over the Pakistan even from the remotest areas are getting education from Allama Iqbal Open University. University follows semester system of education in most of its degrees.

Noreen, Z. (2013) conducted a research on M Phil and PhD scholars in Allama Iqbal Open University, Islamabad and strongly emphasized the use of technology for higher degree education such as for M Phil and PhD. SMS alert, use of Skype, LMS system etc were recommended for better communication between peer scholars and tutors. It was also recommended that use of face book page dedicated for each class and use of LinkedIn can be of great advantage for the research scholars of the university. In this regard, ODL of Virtual University of Pakistan has certain advantage over Allama Iqbal Open University with respect to its state of the art softwares and total ODL mode of education. Siemens (2005, p 13) emphasized that it is the connectivism that is required for better learning rather than just giving individual tasks to the students. This argument of Siemens supports previous finding.

Virtual University of Pakistan

The second major institution of distance education in Pakistan is Virtual University of Pakistan. It has second major chunk of distance

learning students' enrollment after Allama Iqbal Open University. It follows online distance education system. It was established in 2002 with a federal charter and is recognized by Higher Education Commission. VU used ODL method through the use of internet and television channels. Ever since its inception, VU has shown a massive growth in students' enrollment. According to university's website (www.vu.edu.pk) university uses state of the art softwares including Learning Management System, exam software, virtual information system and many other softwares for students' record and for interaction with students through the softwares particularly through LMS.

According to website of the university, it has presence in all the four provinces including Azad Kashmir and Gilgit Biltistan. University has its own campuses and it also has private affiliated campuses. Currently according to website link (<http://vu.edu.pk/PVCs/Default.aspx>) university has 133 campuses all over the country. Therefore, students from all over the Pakistan are getting education particularly the remote areas' students are great beneficiaries of VU as they can easily interact with the teacher of each subject through emails, LMS and Moderated Discussion Board (MDB, which is an in built feature of Learning Management system). Students can send their queries through LMS and course emails which are promptly replied by dedicated teacher for each subject. All the course record of student is maintained in the LMS. All the assignments and quizzes etc are submitted online. University follows semester system and student just has to appear in the campus for midterm and final term exam. One major advantage of Virtual University is that it allows admission to overseas students as well. This is perhaps the major competitive advantage of Virtual University of Pakistan over other universities. Virtual University is offering wide range of courses including under graduate and post graduate courses ranging from biological sciences, computer sciences, management sciences, education, psychology etc. According to website of VU, of late it has also started PhD in Computer Sciences and Biological Sciences. Remote learners and working professionals are getting great advantage for enhancing their education through Virtual University in Pakistan.

Virtual University has achieved many milestones being the pioneer ODL institution.. According to website of Virtual University of Pakistan (<http://vu.edu.pk/AboutUs/Milestones.aspx>), it has achieved great milestones ever since its inception in 2002.

Important Milestones	Year
Federal charter granted by Government of Pakistan	Sep-02
Virtual University launches 2 free to air Educational Broadcast Television Channels (VUTV 1 & VUTV 2)	Mar-04
University adds 2 more channels to its Television Network (VUTV 3 & VUTV 4)	Aug-06
VU goes global - All video lecture placed on YouTube	Jun-08
Launch of a unique VU e-Examination System	Oct-08
Enrollment exceeds 50,000 students	Sep-09
Launch of VU Open Courseware website	Oct-11
VU Open Courseware website declared best website of the year	Apr-12
Deployment of VU Examination Software to NUST for conduct of Entry Test	Jun-12
Student enrollment crosses 100,000 mark	Oct-12
VU offers its educational resources to other universities free of cost	Nov-12
VU partners with University of the Punjab and Technical University Kaiserslautern, Germany to launch B.Ed. in Technical Education	Sep-14
Deployment of VU Learning Management System (VULMS) to Concordia Colleges	Sep-14
University starts Degree Programs in Life Sciences	Sep-14
Launch of VU Journal	Sep-14
Launch of Global Languages website	Nov-14
Initiation of Ph.D. Programs	Sep-15

Source: <http://vu.edu.pk/AboutUs/Milestones.aspx>

In 2012, total enrollment of students crossed the level of 100,000 for the first time which was a landmark achievement for the university. University has collaborations and MOUs with many other national and international universities. Recorded video lectures of the university are available free of cost at www.youtube.com and open courseware website of OCW. University is now offering studies up to PhD level in few of its disciplines.

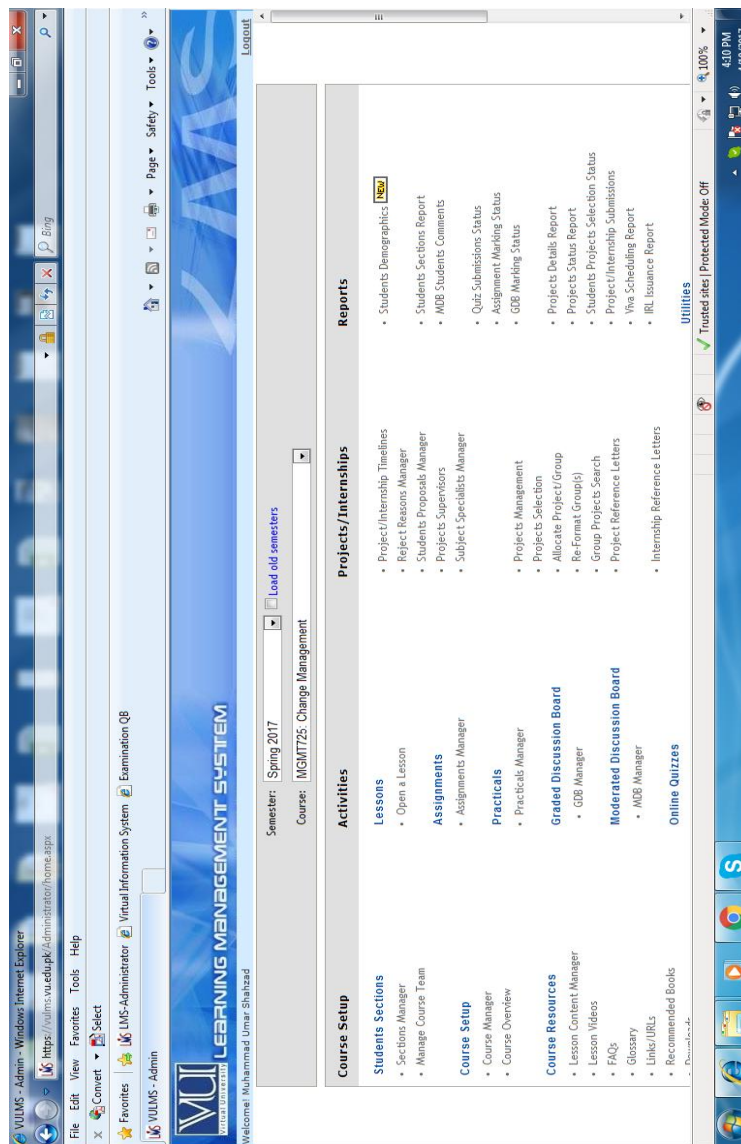


Figure 1: Shows the Learning Management System (LMS) view of Virtual University of Pakistan

Learning Management System (LMS)

LMS is the primary software for online distance education. For VU, it is a source of student teacher interaction, course announcements, section and students' detail, student demographics, student's queries are addressed though it's in built feature of Moderated Discussion Board. Record of entire course is maintained by teachers (semester wise) and students can view all of their record from students' view of Learning Management System.

Traditional Universities of Pakistan That Offer Private/ Distance Learning

1. University of Punjab, Lahore (offers admissions for private candidates too)
2. NUML, Islamabad (offers private admissions to external candidates on language and literature course)
3. University of Sargodha (offers private admissions in some courses)
4. Aga Khan University
5. Allama Iqbal Open University (Fully in distance mode of education)
6. Bahauddin Zakariya University Multan
7. COMSATS IIT, Virtual Campus
8. Gomal University Dera Ismail Khan
9. Government College University Faisalabad
10. Islamia University Bahawalpur
11. Sarhad University of Science and Information Technology
12. University of Engineering and Technology Lahore
13. University of Peshawar
14. University of Sindh
15. Preston University
16. Virtual University of Pakistan (Fully in distance mode of education)

Source:<http://www.pakistaniuniversities.info/2014/06/pakistani-universities-offering-distance-learning.html>

Emerging Trend of Massive Open Online Course (MOOCS)

In the developed countries the trend of MOOCs is increasing. MOOCs are normally online offered courses through website without restriction on the limit of participants. (Kaplan, 2016). According to

Lewin and Tamar MOOCs were first introduced in 2006 and became a popular mode of learning till 2012. The term MOOC was introduced in 2008 by Dave Cormier of the [University of Prince Edward Island](#). Now many universities in the advanced countries are offering massive open online courses (MOOCs) independently and also in joint collaboration with facilitators for MOOCs like Coursera and edX etc.

But it is notable that most of the MOOCs are being introduced by the universities of the developed countries. Distance learning and online distance education universities from developing countries like in Asia are lacking behind in this regard. Development of MOOCs is an approach that can facilitate the lifelong learning. This can be especially helpful developing countries like Pakistan where skill oriented education is the need of the era for self-employment. That is where Virtual University of Pakistan and Allama Iqbal Open University need to step up (as both are distance universities).

Synchronous learning is a synonym for online distance learning. In this mode of learning, participants are dispersed in different locations but they get connected to the source through different means like online radio, Skype, Adobe softwares, internet radio, live streaming telephone etc. It is an effective way of learning in the distance education mode (Lever Duffy et al, 2007). Past research has proved that synchronous learning is helpful for students of distance education mode.

Possibilities for Remote Learners in Pakistan

Distance learning provides a lot of opportunities for remote learners living in remote areas of Pakistan such as Baluchistan, South Punjab etc., for whom access to regular universities with live classroom learning is not possible. Allama Iqbal Open University is perhaps the biggest university of Pakistan with respect to its enrollment of students. Its enrollment as has been already mentioned is more than one million. And most of the enrolled students are from remote areas. Similarly, Virtual University of Pakistan is totally based on online distance education mode of learning. Its enrollment is touching almost 150,000 and most of the students are from remote areas. Just with the facility of internet at home, the students of Virtual University of Pakistan can get in touch with the university. On same mode, other universities are evolving ODL programmes such COMSATS IIT. Some of the traditional universities have started enrolling the students as private candidates and some have started weekend programmes. All these steps Pakistani universities

would prove to be a great help for the remote learners, job holders, poor and remote segment of society and females who are house wives.

Some Future Possibilities for Pakistani Universities

Few of the possibilities for Pakistani universities in the new arena of evolving distance education around the world are following.

1. Introduction of free Massive Open Online Courses (MOOCs) is of pivotal importance for Pakistani universities in general and for distance education universities of Pakistan in particular. This will not only help the universities in forming a reputation at national and international level but will also give an opportunity to less privileged people of society to gain tacit knowledge at their doorsteps.
2. Quality assurance and standard of education should not be compromised in distance education institutions of Pakistan. Just as HEC has emphasized greater need of teaching quality and research for traditional universities, same standard should be applied for distance education universities so that, their graduates may have worth in the market.
3. There is need for governmental facilities regarding ICT infrastructure in remote areas of Pakistan, so that, distance education trends may be increased in the country.
4. Allama Iqbal Open University needs to establish more centers at district and tehsil level.
5. Virtual University of Pakistan and AIOU should arrange regular conferences and seminars for other universities to train their manpower for enhancing the distance education trends and opportunities for other universities in future.

Conclusion

With a population size as big as 200 million, Pakistan needs more distance education institutions and ODL universities to educate the masses and to educate its adult and professional population including that of remote areas. According to latest figures, only 9 % of population in Pakistan has access to tertiary level education. As 70 % population of the country is residing in the remote areas, therefore they can have easy access to ODL and distance education such as provided by Virtual University of Pakistan and Allama Iqbal Open University. These distance

learning universities are cheaper as lesser fee is charged in these institutions. They have their private sub campuses in many remote as well which helps the students during their exams. So there is the requirement of more fully distance education based government owned universities in Pakistan for raising the literacy level in the country at tertiary education level. Similarly, these universities need to promote their own developed MOOCs for skills enhancement of masses because technical and skilled education is a major gap in Pakistan. MOOCs such as those of technical education and entrepreneurial skills can help the youth in self employment as well. Along with that, current distance education universities need to enhance the faculty development programmes so that teaching standards of these distance education universities should be at par with other traditional universities of the country. Inculcation of research culture in faculty and students of distance education and ODL institutions is also required at higher education level of MS and PhD. Currently these two distance education universities in Pakistan are not included in the HEC ranking mainly due to low research output or because of incomplete data provided by these universities to Higher Education Commission of Pakistan. Following ranking link can be checked in this regard.

[http://www.hec.gov.pk/english/universities/Documents/Ranking_Doc%20\(2015\).pdf](http://www.hec.gov.pk/english/universities/Documents/Ranking_Doc%20(2015).pdf)

It is important that these universities should compete with traditional universities for ranking so that teaching standard could not be compromised in these distance education universities. Infrastructure, faculty development, teaching standards, research output and quality assurance etc can help the distance education universities in getting higher ranking in ranking scheme of Higher Education Commission.

References

- Distance education institutions, Retrieved on, April 9, 2017, from, http://https://en.wikipedia.org/wiki/Category:Distance_education_institutions
- Hanover Research (2011). *Trends in Global Distance Learning*. Hanover Research – Academy Administration Practice
- HEC ranking in 2015. Retrieved on April 15, 2017 from [http://www.hec.gov.pk/english/universities/Documents/Ranking_Doc%20\(2015\).pdf](http://www.hec.gov.pk/english/universities/Documents/Ranking_Doc%20(2015).pdf)
https://en.wikipedia.org/wiki/Category:Distance_education_in_Canada Retrieved online on 10 August 2017
- Isani, U. & Virk, L (2005). *Higher Education in Pakistan; A Historical and Futuristic Perspective*. Islamabad: National Book Foundation.
- Jumani, B. N., & Khan, B. S. (2009). Higher education through distance learning in Pakistan. *Asian Journal of Distance Education*, 7(1), 5-13.
- Kaplan, Andreas M. Haenlein, Michael (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster. *Business Horizons*. 59 (4):441–50.doi:10.1016/j.bushor.2016.03.008
- Lever-Duffy, Judy; McDonald, Jean B. (2007). *Teaching and Learning with Technology*. Ana A. Ciereszko, Al P. Mizell (3rd ed.). Allyn & Bacon. 377.
- Lewin, Tamar (20 February 2013). "Universities Abroad Join Partnerships on the Web". *New York Times*. Retrieved 23 March 2017.
- Milestones, Retrieved April 8, 2017, from website, <http://vu.edu.pk/AboutUs/Milestones.aspx>
- National Center for Education Statistic (1999). *Distance education at postsecondary education institutions: 1997-98*. Washington, DC: U.S. Department of Education.

National Education Policy (2009, August 2009), Retrieved April 8, 2017, from website, <http://unesco.org.pk/education/teachereducation/files/National%20Education%20Policy.pdf>

Noreen, Z. (2013), *A study on adopting emerging methodological trends by distance learners*, Proceedings of 3rd International Conference on Business Management (ISBN: 978-969-9368-07-3), Retrieved April 1, 2017 from website, <http://cgr.umt.edu.pk/icobm2013/index.html>

Notable providers of MOOCs, Retrieved April 5, 2017: https://en.wikipedia.org/wiki/Massive_open_online_course
Pakistani universities offering distance education, Retrieved April 8, 2017, from website, <http://www.pakistaniuniversities.info/2014/06/pakistani-universities-offering-distance-learning.html>

Saba, F (2005). *The Future of Distance Education: Research, Conceptual Development and Practice*. The Board of Regents of the University of Wisconsin System.

Siddiqi, H. K. (2015). The need and prospects of distance education in higher education sector of Pakistan. *International Journal of English Language, Literature and Humanities*, 2 (10), 579 - 594

Siemens, G. (2005, January). *Connectivism: A learning theory for the digital age*.

The Complete University Guide – Independent Trusted (n.d), Retrieved April 8, 2017, 887 courses found website, <https://www.thecompleteuniversityguide.co.uk/courses/search?m=Distance%2Fonline>

United States Distance Learning Association. (1998). *Distance Learning Definition* [online], 13 July. Available: www.usdla.org/Pages/define.html <http://www.vu.edu.pk>

Virtual Campuses, Retrieved April 8, 2017, from website, <http://vu.edu.pk/PVCs/Default.aspx>

Wedemeyer, C.A. (1983) *Backdoor Learning in the Learning Society*.
In Sewart D. Keegan D. and Holmberg, B. (Eds) *Distance Education
International Perspective*. London: Croom Helm.

Who we are (n.d), Retrieved April 1, 2017 from website,
<http://www.icde.org/what-is-icde>

Citation of this Article:

Shahzad, M. U. (2017). A literary review on distance education in Pakistan and future possibilities. *Pakistan Journal of Distance and Online Learning*, 3(2), 85-102.