A Descriptive Study: Integration of Technology Bring Flexibility to Distance Education in Pakistan

Abdul Moeed Abid (Corresponding Author)
moeedabid@gmail.com
Visiting Faculty Member, DMS, The Islamia University of Bahawalpur
Abdul Jabbar (jabbarwp@yahoo.com)
AVP National Bank of Pakistan, Regional Office Bahawalpur
Kashif Saeed (kashifgsc@yahoo.com)
Instructor --- (Govt. Sadiq College of Commerce, Bahawalpur-Pakistan)
Naveed Akhtar (javedmaaz@yahoo.com)
Instructor --- (Govt. College of Commerce Ahmedpur East, Bahawalpur-Pakistan)
Javed Iqbal (javedmaaz@yahoo.com)
Instructor --- (Govt. Sadiq College of Commerce Bahawalpur-Pakistan)

Abstract
Due to the ability to learn, think and decide, Human is declared as “Better” in whole living creation in the universe. Education is encouraged in all the religions including Islam. As the First word in the Quran is “Iqra” means Read. From the books of Hadith and the example of Battle of Badar, the importance of education can be found.

In the world, normally two types of education sectors are exists, one is regular education with physically existence of classes and second is distance education. In this research, focus of the research team is on Distance Education and Technological Integration in Distance Education along with the flexibility that technology brings to Distance Education in Pakistan.

For this descriptive study the data used is gathered from secondary sources such as web sites of distance education universities in Pakistan, head offices and university magazines. For this research, two major distance education universities are discussed which are Allama Iqbal Open University and Virtual University of Pakistan. The Research describes that Distance Education Starts in 1974 in Pakistan and Pakistan has the honor to be the first country in Asia who introduce Open University concept and distance education and 2nd in the World. Allama Iqbal Open University started its distance education initially by hiring the tutors in the different institutions for its student nationwide. However, with IET development the teaching method converted from traditional tutor system to the tutoring broadcast on television and radio network. But the examination system remains as traditional which was paper based examination system along with the paper based assignments for evaluating the student.

In 2002, First IT Based University “Virtual University of Pakistan” came into being and developed VULMS Virtual University learning management system. Virtual University of Pakistan is the first IT Based and totally equipped with modern information and communication technology. VULMS contains virtual class room which can be accessed by the student by providing unique student ID and password. VULMS contains video lectures of the student having revise listening option which is better than television broadcast. VULMS allow the student to download their assignment through internet from anywhere and also submit them. It also has the complete section of student Fee record, result record and other services like paper rechecking, freeze and unfreeze the semesters, apply for degree and result card etc. In 2008, Virtual University introduced online examination system which replace traditional paper system in distance education and with online system of education the next step of Virtual University was to introduce the facility of making own date sheet option for the students. By realizing that majority of the students in distance education are professional so this service was given to students. While remaining in the announced exam timing students can select dates, timing and exam city on their own for examination as per their availability.

This research describe all the phases of these technological integration one by one phase wise and discuss the impact of these integration in term of brining flexibility for the students of distance education in Pakistan.

Keyword: Education, Distance Education, Technology in Education, Education in Pakistan

1. Introduction
Human is declared as the “Better” in whole living creation in universe due to the ability of learn, think and decide. Importance of Learning and Education can be assessed as all the religions encourage learning and getting education. As in Islam, The First Word of the Holy Quran is “IQRA” means “Read”. In the same way, The Hadith (Books of Teachings of the Holy Prophet Hazrat Muhammad (PBUH)) also the chapter on Learning and
Knowledge. According to a Tradition it is stated “the ink of a scholar’s pen is more precious than the blood of a martyr, the reason being that while a martyr is engaged in the task of defense, an alim (scholar) builds individuals and nations along positive lines. In this way, he bestows upon the world a real life treasure”. Importance of Learning and Education can be assessed from the life of Profit Muhammad (PBUH), when in Battle of Badar, Muslims were victorious in the battle and seventy enemies were taken prison. The Prophet Muhammad (PBUH) announced that which prisoner shall taught ten Muslim children about how to read and write, he will be released from prison, and this occasion is considered as the First school in the Islamic history beside of the point whether the teachers are Muslim or Non-Muslim.

For the sake of researches, Education remains a very important topic for the researcher in the past as well as in the present. As the time spent, education sector has becoming more established and eye catching topic for researcher. Education sector are categorized in many ways for research work like Primary education, secondary education, higher education, higher secondary education and many other formats.

This research is dividing the education sector in two very important and emerging sectors that is regular education and distance education. The research is descriptive in nature and describing the phases of technological integration into the distance education in Pakistan which makes the distance education flexible for professional and other students. Distance Education can be defined as:

“Access to learning when the source of information and the learners are separated by time and distance, or both” (Distance education, 2013)

Invention of computer and internet bring the revolution in the education sector in all around the world. Today, the world is borderless and globalization era is on the peak. Globalization also comes in education sector, hundreds of universities and institutions are working on the distance education on the basis of internet technology and computer system.

This research is revolving around the topic “Integration of technology in distance education of Pakistan”. As Pakistan is considered in Developing/Under developed countries, but the Education sector in Pakistan is working in an efficient way. Pakistan has the honor that a University of Pakistan name as “Allama Iqbal Open University” is considered as the First Open University in Asia and second in the world.

The start of distance education in Pakistan was in 1974 when AIOU (Allah Iqbal Open University) was established which was the first in Asia and 2nd in the world. UK open university was the first open university in the world which was established in 60s. AIOU starts the distance education in the Pakistan but it was not the paper-less organization. The delivery of lectures were made possible with the help of radios, lecture recorded cassettes and some nearest physical institutions as well. However, with the maturity of the setup, assignment works, workshops and other activities are also started, to evaluate the student of different disciplines, assignments were send to the students in printed format and they need to solve the assignments and send them through postal services. The examination system was also the physically appearing system of the student in the examination centers.

Purpose of this distance education system of AIOU was to cover the remote areas and providing educational opportunities for the working people who were engaged in employed in their early age and want to learn now. It was also the opportunity for females on their door steps to learn and educate themselves. Due to the factor of Poverty and cultural barriers for female students the idea of distance education remains successful in Pakistan.

In 2002, Pakistan’s second Distance Education University came into being which “Virtual University of Pakistan” was. It was the first Pakistani University which was based on Modern Information and Communication Technology. This was the era of boom in distance education in Pakistan. Virtual University of Pakistan is Federally Charted, not-for-profit institution which adopts Information and Communication Technology structure to reach the students not only within the Pakistan but outside Pakistan too. Integration of Television Networks Broadcasting Services, Learning Management System (LMS) and Internet Technology was the steps which were taken by Virtual University of Pakistan to bring the IT Based distance education system in Pakistan. Virtual University Convert the distance education system from paper organization to paper-less or Paper-Free organization with the time being.
After the above two institutions of distance education, other recognize institutions of Pakistan like Comsats, BZU Multan, The Islamia University of Bahawalpur and many other institutions start IT based distance education in Pakistan but these are the merger of both regular and distance education. However, Virtual University of Pakistan and Allama Iqbal Open University are purely distance education universities operating in Pakistan with full grace.

2. Literature Review

(Importance of Education in Islam) Education makes man a right thinker and a correct decision-maker. It achieves this by bringing him knowledge from the external world, teaching him to reason, and acquainting him with past history, so that he may be a better judge of the present. Without education, man, as it were, is shut up in a windowless room. With education, he finds himself in a room with all its windows open to the outside world. (Galusha) A brief discussion of the underlying principles behind distance learning is necessary to understand the associated problems. In 1973 Moore introduced the theory of independent study. An important foundation of distance education, it suggests that successful teaching can take place even though teacher and learner are physically separated during the learning process, while this separation can occur in several ways depending on the nature of the course content and delivery medium. distance education has been powerfully effective in reaching large audiences who could not meet their educational needs by attending conventional institutions. Third, where open and distance learning offers opportunities for student interaction with tutors, it allows open-ended dialogue, often regarded as the touchstone of legitimate education (cf. Perraton, Creed and Robinson 2002: 12).

Distance education is becoming a good way to acquire knowledge separate from the traditional method of attending the classroom. Examples of the use of a variety of distance delivery methods, such as teleconferencing in Australia, show how useful distance delivery is around the world (Dr. Edie K. Schmidt, 2001)

Distance education can be very effective use of instructional materials with visual, auditory, audiovisual and multimedia content. Visual content can be in the form of text, drawings, pictures, graphics and models, and the like. Auditory facilities are oral presentation or a speech, musical accompaniment, different sounds, etc. Audiovisual content combine visual and auditory content, usually in the form of television shows, films or videos. Multimedia, combining text, images, sound, animation and video, and playing them before they used very different means, although in recent times for playing multimedia files commonly used multimedia computer, a data storage CD-ROM or the Internet. (Bogdanović, 2012)

Distance learning is a broad term that encompasses both distance education (a term commonly used in academia) and distance training (A term commonly used in industry). One can define Distance learning as learning that is media based, remote, or asynchronous and supported by some instructional system (Bourdeau and Bates 1997)

The idea of Distance Education was first mooted in UK in late 60s by the British Prime Minister, Mr. Harold Wilson. He was of the view, that educational opportunities must be provided to those who might have missed better education due to early employment and wish to upgrade, their knowledge and skills, in their spare times in the evenings at home. The UK Open University was, thus established in 1969. Since then it has become a major institution of learning in UK and has opened up opportunities for millions of working people. The gospel of distance and Open Learning has, since then spread throughout the world. More than sixty Open Universities are operating around the world on the basis of Distance Education. Modern information Technology has made the task of Distance Education much more easier and effective. The Allama Iqbal Open University was established in May, 1974, with the main objectives of providing educational opportunities to masses and to those who cannot leave their homes and jobs. In the last 34 years, the University has more than fulfilled this promise. (Brief History)

Distance education can influence the quality of human resources in diverse ways. It enables educational institutions to provide education to a widely dispersed, diverse and unreached people. It has potential to spread
necessary awareness to a large number of women who have no access to higher education, particularly the rural women, and improving the status of the population with regard to health, nutrition and education. In addition, distance education provides education to those women who are housewives and to those women who are in various jobs. (Jung Young Sook, 2010)

The geographical isolation of the small island nations together with the sharp information differential in the region have made distance and flexible learning the logical and most convenient approach right from the beginning. (Salanieta Bakalevu, 2010)

Distance education systems have emerged all over the world to meet the growing demand for education, including professional education, to provide opportunities at a comparatively low cost, and for meeting the continuing education needs of professionals and various other functionaries. The distance education system often involves a mix of multi-media for designing, developing and implementing independent learning programmes through self-instructional materials, both in print as well as electronic format. (Dr. Mamta Srivastava, 2010)

The Virtual University, Pakistan’s first University based completely on modern Information and Communication Technologies, was established by the Government as a public sector, not-for-profit institution with a clear mission: to provide extremely affordable world class education to aspiring students all over the country. Using free-to-air satellite television broadcasts and the Internet, the Virtual University allows students to follow its rigorous programs regardless of their physical locations. It thus aims at alleviating the lack of capacity in the existing universities while simultaneously tackling the acute shortage of qualified professors in the country. By identifying the top Professor of the country, regardless of their institutional affiliations, and requesting them to develop and deliver hand-crafted courses, the Virtual University aims at providing the very best courses to not only its own students but also to students of all other universities in the country. The Virtual University of Pakistan holds a Federal Charter, making its degrees recognized and accepted all over the country as well as overseas. (About VU)

3. Research Methodology

This research is descriptive in nature and covering the topic “Integration of Technology Bring Flexibility to Distance Education in Pakistan”. Different phases of improvement in distance education are revealed in this research with the technology integration in these phases. Impact of technological integration in the distance education and the flexibilities which are blessed by these technological integration are described briefly in the research.

The data for the research are completely base on the secondary data. Specially, the data is collected from the Distance Education University Websites, Prospectus and Head Offices Brushers for compiling the phases of Modernizing the Distance Education with technological integration in Pakistan for being flexible setup for professional and other students.

Data is mostly based on two purely established distance education Universities in Pakistan which are “Allama Iqbal Open University” the Pioneer of distance education in Pakistan and “Virtual University of Pakistan” which is the pioneer of IT based distance education in Pakistan. Both universities are federally chartered public sector universities of Pakistan.

3.1 Research Objectives

- Explaining the phases of technological integration in distance education in Pakistan
- Explaining the Flexibility bring by technology for the students of distance education in Pakistan

4. Phases of Distance Education

Phase – I (Initiative of Distance Education)

Distance Education in Pakistan started in May-1974 when Allama Iqbal Open University came into being which was the First Open University not only in Pakistan but in Asia as well. This is the honor for Pakistan as Pakistan is pioneer of distance education in Asia. Allama Iqbal Open University was the second open university of the world too. The objective of Allama Iqbal Open University is to provide the opportunity to masses and to those who cannot leave their homes and jobs.

The idea of open university get success in Pakistan a lot because of the factor of poverty level of Pakistan and relative deprivation of women.

Phase-1 (a) Teaching Methodology

As far as curriculum is concern, it was almost the same as in the formal style of teachings. However, the methodology was different. In the start, the instructors were appointed in the all corners of the country in the local schools and college which were easily accessible for the students. However, still the problem of regular education occurs for the students who were not able to attend the classes.

Phase-1 (b) Evaluation Criteria

Student Evaluation and examination system, however, remains the same as it was in the regular
institutions. Students have grading schemes prescribed by the tutors containing some marks for assignments and some for final exams. Student have to send the assignments by postal service to the nominated tutor, however, for appearing in the examination, student have to come to the nearest exam center for paper based examination to compete the evaluation process of AIOU.

Phase – II (Development of IET, Radio and Television Broadcast)

The Traditional Method of Teaching was gradually converted into radio and television based lectures so that the students who were not able to join study centers. Development of IET makes it possible for the university to develop quality audio and video programs for the student to broadcast them on radio and television.

Flexibility Concatenation with education due to Phase-II

The real flexibility starts from this point, the student now just need radio or television to reach the lecture of their tutors while remaining at home. Development of IET makes the student able to remain at home or job and learn, however, for examination and assignments, students were although following the same criteria.

Phase – III (Initiative of IT Based Distance Education University)

In 2002, Virtual University of Pakistan was established which was based completely on Modern Information and Communication Technology. Initially, Virtual University of Pakistan Reaches to sixty city of the country. However, as time spent, virtual university is now working in 172 cities with its own and private virtual campuses. However, university also provides the facility to keep the status “At home” for the student of those areas where campuses are not available.

Phase – III (a) Internet & Computer Based Teaching Methodology

Virtual University of Pakistan brings the internet and Computer based teaching methodology in distance education. For this purpose, Top Level Teaching Faculty from different universities of Pakistan was hired to record their video lecture to telecast on Virtual Television Network as well to deliver on the Internet. Virtual University believes that by listening and watching the video lectures multiple times by repeating the video lecture is much more effective rather than listening on television network statically. For this purpose, Virtual University of Pakistan Record these lectures DVDs and provide to its students in order to keep them save in the computer for revise telecasting. Furthermore, Virtual University make assurance that all the lectures are available on www.youtube.com in order to access these lecture from anywhere in the world. However, the Examination system was paper based yet till 2008.

Flexibility Concatenation with education due to Phase-III

Internet and DVD Recorded method of Teaching methodology bring the flexibility for the students. As a number of student in distance education are professional or business persons, they may be married or working women too. In the past, Television forecasting was not enough efficient system as the student was not able to pause the lecture. If the lectures are missed due to any activity the student was not able to learn again. No revise option was available which makes it tough for the student to learn. DVD Recorded and Online Web Based Videos bring the Flexibility to pause the lecture, to revise the lecture and to learn at any time they are free which is the major flexibility factor bring by Phase-III.

Phase – IV Development of Learning Management System (LMS)

Virtual University of Pakistan developed an online Class room for the student called Learning Management System which is attached to the name of VU and called VULMS (Virtual University Learning Management System). VULMS allow the students to remain connected with their course tutors and all the activities of Virtual University regarding their studies. An online Notice board was provided to display the announcement for all the student in this LMS. Students are provided unique Student IDs and password to access their Virtual Class Room which is VULMS.

Phase – IV (a) Conversion of Postal “Paper Based Assignments” to Online Submissions

Virtual University of Pakistan allows the student to access their assignments from Virtual University Learning Management System by providing their unique Student ID and Password anywhere if the internet facility and computer is available. There is no need of postal service now, VULMS contains assignment portion against each subject, student can download the assignment, make the solution by using different software like Microsoft Office or C++ etc as per requirement of tutor and can submit their assignment work by using the same VULMS. This cause quickness and safe method of submitting.

Flexibility Concatenation with education due to Phase-IV (a)

This Technological method contains the flexibility for the students as it decrease the timing issues. As in paper based postal service system, on the last date submission means till the time of postal service is available, but in VULMS last date mean till 11:59pm of the last date student can send their assignment/project work beside of this that postal service is available or not. Further, now no need to go outside the home or office for posting the assignment to the mailing address of the tutor and no additional cost too.
professionals have transferred from one city to another, they have no pain of examination. They can choose their paper on that particular date and other students have their own papers on the same day which bring the transparency due to non-matching of subjects of the student which are appearing in exams.

Phase – IV (b) Online Discussion Board Availability and Email
By keeping this fact in eye that any system always have a gap or error, Virtual University introduce a Discussion Board Called MDB (Moderate Discussion Board) for the student to discuss their issues with the students. In MDB students are allowed to discuss about any lesson, ask the queries about topics and other general discussion with tutors. Furthermore, university also provide a personal email id to each student of virtual university with the help of Gmail in order to keep in touch with instructors and other virtual university staff.

Phase – IV (c) VULMS – Complete Student Service
By keeping all the requirement of the distance education student, VULMS provide complete Account Book of the student in it, Student can check his pending fee balance, paid fees record with date and banks detail, find the print out of his/her upcoming fee vouchers etc.

In the same way, Grading Book also available in VULMS which keeps the student up to date with his/her result and past results in order to make better plans for the future.

A Section called Student Services also provided by Virtual University of Pakistan for the students in VULMS which contains all the services like “Partial Transcript Request” “Apply for Degree” “Apply for Paper Rechecking” “Semester Freeze or Unfreeze” and many others. Now students have no need to write an application and post it to the tutor, they have all the service which are expected to be used by the student in their VULMS.

Flexibility Concatenation with education due to Phase-IV (b) and Phase-IV (c)
By having Moderate Discussion Board (MDB) in VULMS, there is no need to make calls to the tutors or to write a letter about to clear any topic. MDB bring the facility to discuss your issues online in VULMS and also student can read the other discussion made by other students too in order be more clear in some particular topic.

By having complete Student Services like Account Book, Grade Book, Freezing and Unfreezing, Paper Rechecking and many others in VULMS students do not have any need to circulate in the university departments and to meet different people for desired service. All the services are now available in Learning Management System in order to save time and facilitate the distance education students.

Phase – V Development of Online Examination System
In October 2008, Virtual University of Pakistan took another step in integrating the Technology in the Distance education by introducing the Online Examination System. Virtual University Introduced Web Based program for conducting the examination for Virtual University of Pakistan which use the Intranet with local servers available in the Virtual University Exam Centers. Online examination system brings new revolution in distance education in Pakistan. Now distance education has become paperless, online examination system remains very transparent and there is no internet access for the student to have any cheating efforts.

After the successfully launching the online examination system, a number of institute adopt this system as their examination system. One of the leading universities NUST National University of Science and Technology adopt this mode of examination in July-2012.

Phase –VI Unique Exam Date Sheet System (Most Flexible Turn for Students)
After the successfully launching of Online Examination System, Virtual University of Pakistan introduce and unique and appreciating Step of Making Own Date Sheet. By realizing that the majority of the students in Distance Education are professional, they have meetings and transfers, Virtual University introduce own making date sheet option. Now, While keeping in the limit of approximately 12 days, (Starting and Ending Dates are announce by University) Student have to make his/her own dates for appearing in the examination. In the same way, without any additional cost, students are now able to make their date sheet as per their availability of date and time. With this, students are also allowed to select their city of examination as well, in this way, if professionals have transferred from one city to another, they have no pain of examination. They can choose their own city (Or nearest City) for their examination along with available dates and time for appearing in the examination.

The Impact of own making date sheet bring more transparency in the examination system for virtual university. As on the same date there are different student selecting different subject papers, one student having any other paper on that particular date and other student have their own papers on the same date which bring the transparency due to non-matching of subjects of the student which are appearing in exams.

Flexibility Concatenation with education due to Phase-IV-B
Due to own making date sheet option, professionals, working women, business person, house wives and all other student can enjoy their own date sheet. University provides almost 12 days for examination. Student can choose their dates for appearing in exam as per their own availability while remaining in these 12 days which were announced by University. In the same way, student can choose the exam city on their own too along with dates and timing for the paper. As these 12 days contains Saturday-Sunday
Open Facility, the professionals can also appear in exams in the Weekend and on Sunday too which create balance in personal, professional and student life.

5. Conclusion
This research is descriptive in nature which is describing the phases of technological integration in distance education in Pakistan and what flexibility is offering by this technological integration to the student of distance education sector.

Distance Education was started in Pakistan in 1974 when Allama Iqbal Open University came into being. In start, Distance Education adopted the formal education system by providing the tutors at different centers around the country. With the time being, development of IET makes it possible to broadcast the videos and audio lectures through radio and television network. AIOU, however, remains paper based institution as it has the assignment and examination system as formal as it was earlier. Student are needed to solve the given assignment assigned by tutors and post them to the concerning tutor and examination system was also paper based formal examination system.

In 2002, First IT Based distance education university name as Virtual University of Pakistan come into being which was totally equipped with modern information and communication technology. Virtual University hire the top professor of the country and record their lecture in DVD and send the copies of these lecture to students in order to revise listening by the student which may be the reason of better understanding and flexible way. As Virtual University got maturity used Internet technology as well and provide the lecture on the media called youtube.com free for the students that bring more flexibility for the student to access the lecture anywhere from the internet. Virtual University introduced the Learning Management System VULMS which is the online class room for the students containing all the services at one platform. By the use of student ID and password student can access VULMS account for Accounts and Fee Detail, Result Detail, Freeze or Unfreeze the account, paper rechecking application, urgent degree application and all other necessary services along with the submission and downloading his/her assignment. VULMS makes the student able to access their assignment from anywhere the internet is available and submit them as well at any part of the day within the given time. In 2008, Virtual University announced online examination system for the students and became completely Paper-less university in Pakistan. For keeping the fact in eye that majority of the distance education system is of the professional students virtual university provide the facility of own making date sheet within the announced limited time. Now technological integration bring the facility for the professional student that they can make their own date sheet as per their availability along with the city of their own choice in which student’s availability is possible.

From the phases and their impacts, the conclusion is very easy to made and it is clearly shown that by the existence of virtual university of Pakistan distance education is now completely paper-less sector with fully equipped with modern technology that is causing flexibility for the student in each aspect of their student life.

6. Future Research
This Research is discussing the integration of technology in distance education and flexibility factor that is the blessing of technology. However, this research is not putting the lights on the problems caused by technology in distance education. The countries like Pakistan or other undeveloped or developing countries which are facing low literacy rate, high inflation and other issues like electricity, internet and other problem, all these factors are causing problem for the student living in rural areas where services like internet and computer know how is not available. Impact of technology in term of causing problem for distance education student is yet to be explored in the distance education of Pakistan.

References
This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE’s homepage:
http://www.iiste.org

CALL FOR PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There’s no deadline for submission. Prospective authors of IISTE journals can find the submission instruction on the following page: http://www.iiste.org/Journals/

The IISTE editorial team promises to the review and publish all the qualified submissions in a fast manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library , NewJour, Google Scholar