A COMPARATIVE STUDY OF PEDAGOGICAL AND ASSESSMENT PRACTICES OF ALLAMA IQBAL OPEN UNIVERSITY AND VIRTUAL UNIVERSITY OF PAKISTAN

AYSHA UROOJ

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By

Aysha Urooj

20-SS/PHD/EDU/03

A thesis submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in

Education

SUPERVISOR

DR. SHAZIA NAUREEN

Department of Education

Faculty of Social Sciences

International Islamic University

Islamabad

2013

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ

IN THE NAME OF ALLAH THE MOST BENEFICENT MOST MERCIFUL

APPROVAL SHEET

A COMPARATIVE STUDY OF PEDAGOGICAL AND ASSESSMENT PRACTICES OF ALLAMA IQBAL OPEN UNIVERSITY AND VIRTUAL UNIVERSITY OF PAKISTAN

BY

Aysha Urooj

(20-SS/PHD/EDU/03)

Accepted by the Department of Education, Faculty of Social Sciences, International Islamic University, Islamabad, in partial fulfillment of the requirements for the degree of

"Doctor of Philosophy in Education"

Supervisor: _____

(Dr. Shazia Naureen)

Internal Examiner: _____

(Dr. Nabi Bux Jumani)

i. External Examiner: _____

(Dr. Muhammad Asif Malik)

ii. External Examiner: _____

(Dr. Umar Ali Khan)

Dated: _____

Chairperson
Department of Education,
International Islamic University
Islamabad

Dean
Faculty of Social Sciences,
International Islamic University
Islamabad

CERTIFICATE

The thesis entitled, **"A Comparative Study of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan"**, submitted by **Aysha Urooj** in partial fulfillment of Ph.D Degree in Education has been completed under my guidance and supervision. I am satisfied with the quality of student's research work and allow her to submit this thesis for further process as per IIU rules and regulations.

Supervisor: _____

(Dr. Shzia Naureen)

Dated _____

DEDICATION

I dedicate this study to my beloved Ammi, Abbu, Zafar Uncle, Tahir and Maria as without their cooperation, help, appreciations and prayers it was quite impossible for me to complete this study.

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(A. U.)

ABSTRACT

The study was designed to Compare Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. The objectives of the study were : i) to investigate the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master level; ii) to compare the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master level; iii) to investigate the strengths and weaknesses of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelors and Master level; iv) and to suggest measures for the improvement of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan.

Population of the study was comprised of 3920 students of Allama Iqbal Open University,1700 students of Virtual University of Pakistan,159 Tutors of Allama Iqbal Open University and 36 Tutors of Virtual University of Pakistan. Convenience sampling technique was used to collect the data from the respondents, 50 students of each program of AIOU and 25 students of each program of VU were included in the sample due to no availability of respondent students. As for as tutors of both universities were concerned, 30 tutors of AIOU and 15 tutors of VU were included in the sample on the basis of convenience sampling technique. Questionnaires and Interviews were used as instruments of the study. Survey study method was used for data collection, mean was used to analyze the data.

Findings of the study indicate that there were various pedagogical and assessment practices used for teaching in both distance universities, such as correspondence or

self learning material, which included textbook, supplementary study material, study guide, Compact Discs and Digital Video Discs of the lesson. Lecture through media, television, radio network and multimedia approach were also used in both the universities, Face to face teaching in tutorial classes were used only in Allama Iqbal Open University. Group training workshop and group assignments were not arranged in Virtual University of Pakistan. Online teaching was used only in Virtual University of Pakistan. Virtual learning environmental systems which included; client server architecture, software package, learning management system and Graded Discussion Boards were used only in Virtual University of Pakistan.

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LIST OF ABBREVIATIONS

Allama Iqbal Open University	AIOU
Virtual University of Pakistan	VU
Non-formal Education	NFE
Compact Disc	CD
Digital Video Disc	DVD
Moderated Graded Discussion Board	MGDB
Graded Discussion Board	GDB
Discussion Board	DB
Hong Kong Virtual University	HKVU
Athabasca University	AU
Open University UK	OU
Indira Gandhi Open University	IGOU
Learning Management System	LMS

CHAPTER 1

INTRODUCTION

Education is a social process and an agent of change in the society. Therefore, education is pre-requisite for socio-economic development of the society. Sustainable development of the country depends on education, as human capital formation can only be produced by providing quality education to the masses. Education is considered a continuous and lifelong process. According to Aristotle, cited by Hussain (2006) "Education is a process necessary for the creation of a sound mind in a sound body". It is argued that education is an organized and sustained instruction, designed to communicate a combination of knowledge, skill and understanding valuable for all the activities of life. Human capital development theories have stressed that education, is the best investment for the national development. Its desired output is the production of human capital, which ought to be the most appropriate ever, occurring changes in the society.

Recognizing the importance of education, all the successive governments since the inception of Pakistan, have designed several National Education Policies for quantitative expansion, as well as qualitative improvement, of the education system in the country. Hence, with the passage of time, demand for education has also increased day by day. Consequently, the formal system could not meet the increasing demands of the masses. Keeping in view all these circumstances, there was a need to supplement the formal system, by establishing non-formal education in Pakistan, which should be parallel in objectives, potent in curriculum, and different in modes. The National Education Policy 1972 emphasized for the establishment of People

University. Education Policy 1972 states that Open Universities are being used in different countries, to provide education and training to people who cannot leave their homes and jobs for studies. Therefore a People's Open University will be established, to deliver part-time educational facilities through tutorials, correspondence courses, workshops, seminars, laboratories, television, radio and other mass communication media.

According to Rashid, (1998) Allama Iqbal Open University was established at Islamabad in June 1974, after passing of the People's Open University Act by the National Assembly of Pakistan. In 1974, its name was changed as Allama Iqbal Open University by the then President of Pakistan, after the name of the national poet Allama Muhammad Iqbal. The university was basically modeled on the line of the United Kingdom Open University. The university had to face a lot of bottlenecks, regarding its non-formal system of education. This system was almost unknown for the people of Pakistan. The Distance Education system was a new thought at that time, but with the arrival of advancing science and information technology, new vistas of knowledge were discovered with the changing scenario of the world.

Virtual University of Pakistan is a second distance learning university in Pakistan. It is established on the basis of modern information and communication technologies. It is a government institution. Virtual University of Pakistan provides particularly affordable education to students of its own country and overseas as well. Satellite television broadcasts and the Internet are used in its instruction system. The students of Virtual University of Pakistan get benefits from its precise programs, regardless of physical and social location. It is the main objective of the university, to provide the best courses to its own students, as well as to the students of all other universities of Pakistan.

Virtual University of Pakistan delivers education through television broadcast and the Internet. The university has developed a variety of courses. The lectures are recorded in a professional studio and televised. The university provides education to the students in a flexible manner, as the lectures are available to the students in multi-forms such as: streaming media from the Virtual University's servers, televisions, radio, Compact Discs, Digital Video Discs, text books and handouts. These multiple formats, allow the students to view the lectures at a time of their choice within a 24-hour period. Students can also view the lectures, to review the whole course before their examinations. This facility is simply not available in the face-to-face environment. In adding to the approved texts, wide-ranging reading material or lecture notes in the form of web-enabled content are provided through a Learning Management System (LMS) that is hosted on the Virtual University of Pakistan's Web Servers. It is also accessible over the Internet. The E-mail facility, as well as discussion boards for interaction within the Virtual University community is also available for the students.

According to Hill (1997) Pedagogical practices are related to teaching learning process and Assessment Practices are the ways of evaluation of teaching learning process.

In fact both the universities, Allama Iqbal Open and Virtual University of Pakistan, are providing educational facilities to the students at their door step, through distance mode of learning. Distance education means to provide education to all those who wish to get education at their door step, while explaining the concept of distance education Rashid, (2002) states that the term distance education is used to explain a variety of forms of study at all levels. One of the main uniqueness is not a continuous and direct supervision by the tutors. But, there is planning, supervision and instruction

of the tutorial association. It is an educational process in which a major part of teaching is conducted by someone detached in space, from the pupil. This means that a medium is always used in the contact between tutor and student. Distance education use one or more media, correspondence lessons, and audio cassette or tape recorder lessons through radio or television. The function of distance education material is to motivate the student to such activities which permit him to learn, so that he would be able to improve his educational qualification.

Khawaja and Barenan (1990) state that term distance education has grown from the term correspondence or non-school education. This change has come due to the number of techniques used in the program delivery. This has broadened from the real method that was the printed word, and correspondence. Islam and Kamal (1998) highlighted the concept and importance of distance education, by describing that in the distance education system, the prepared course materials are the main root of learning for a student. The student is expected to learn by himself. This prearranged material are called self-teaching material. Since neither tutors nor other class mates may be around the learner to provide him help, support and guidance to what he is trying to learn. The self-teaching materials are not only to teach him, but also to tell him what he is learning.

The distinction between the usual formal system of education and open distance system of education lies basically not only in the teaching methodology, but also for reaching out to the people at their doorstep. The latest growth in the communication and information technology, specially, the satellite and Internet, has revolutionized the system of distance education. Satellite and Internet are being broadly used as a medium of instruction and a source of information. As we connect

this technology with distance education, the traditional correspondence and tutorial method may be replaced by distance teaching through the satellite and Internet.

It can be said that distance education is based on self-learning material. The learners are supposed to learn the material and do the assignment. Tutors in this system have their crucial role in providing direction, and evaluating the written assignments of the learners. Distance education system is flexible, and there is no restriction on the learners to attend classes. They can improve their knowledge at their own convenience. Considering the importance of distance education of these universities in the country, and having keen interest of the researcher to find out the similarities and differences of pedagogical and assessment practices of both distance education universities, the researcher decided to conduct A Comparative Study of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan.

1.1 STATEMENT OF THE PROBLEM

Universities of Distance Education are playing a vital role in the quantitative expansion, and qualitative improvement, in the non-formal system of education in the country. The delivery system and assessment of distance education have definitely some important features. Allama Iqbal Open University (AIOU) has spent more than four decades serving the nation. It is playing a crucial role to increase the literacy rate, especially in rural areas of the country, as well as the urban students who are job holders are benefiting from AIOU. Virtual University of Pakistan (VU) is the only online learning university of the country that is also playing a vital role to increase the literacy rate of the country for almost a decade. The major objective of both the distance universities is same; to provide quality education to the masses through

distance learning at their doorstep but the way of imparting education is somehow different.

It was the deep interest of the researcher to find out the similarities, and differences in, Pedagogical and Assessment Practices of both the distance universities.

1.2 IDENTIFICATION OF THE PROBLEM

The reason to identify the problem was to clarify the difference of Pedagogical and Assessment Practices of Open and Virtual University. The students of bachelor programs (BSCS and BBA) and Masters Programs (MSCS and MBA) in AIOU were taking face to face classes in distance education system, while the students in VU were getting these same programs through Virtual Learning Management System, so it was a problem to investigate that what is the difference in pedagogical and assessment practices for same degree programs of both distance universities.

1.3 OBJECTIVES OF THE STUDY

The objectives of the study were:

- To investigate the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master Level.
- To compare the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master Level.
- To investigate the strengths and weaknesses of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master Level.

- To suggest measures for the improvement of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan.

1.4 HYPOTHESIS OF THE STUDY

There is no significance difference between Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan.

1.5 SIGNIFICANCE OF THE STUDY

The study has great significance for the policy makers of Allama Iqbal Open University and Virtual University of Pakistan, in the policy formulation regarding graduate and post graduate level programs, because the study has collected information about Pedagogical and Assessment Practices of these programs. The comparative analysis of these programs, examined the advantages of these programs in both the universities. Therefore, benefits can be taken for good experience of each others.

The study is useful for planners, and measurement experts, as this research may provide valid and useful data on Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. The study may have great significance for the teaching faculty members of both the universities, to work on the strengths and weaknesses of their Pedagogical and Assessment Practices.

This study may also helpful for the course coordinators and administrators to understand the different aspects of classroom environment in distance education. The study may provide in depth introduction of both the distance universities, their ways of teaching and assessment, their strengths and weaknesses so that the students who

want to get education through distance universities may judge the best university of their choice according to the data provided in the study. The study may also be helpful for the researchers in the area of Pedagogy and Assessment. to understand the phenomena of Pedagogy and Assessment and to find out new dimensions in Pedagogy and Assessment.

1.6 METHODOLOGY

In this study survey method was used for collection of data. Data were collected from the students and Tutors of AIOU and VU for the Fall Semester 2009. The researcher personally visited to the sample students of both the universities to collect data. Interviews were also conducted by the researcher personally. Questionnaires for the Tutors of VU were sent through E-mails.

1.6.1 Population

The population of the study was comprised of 3920 students of AIOU and 1700 students of VU enrolled in the Fall Semester 2009, 159 Tutors of AIOU and 36 Tutors of VU.

1.6.2 Sample

Convenience sampling technique was used for the selection of sample. Both selected universities were distance universities so it was too difficult to approach the sample therefore researcher decided with the consultation of supervisor that at least 50 students of each program of AIOU and 25 students of each program of VU must be included in the sample. As for as tutors of both universities were concerned it was expected that rate of return of questionnaires would not be high due to non availability

of tutors in virtual campuses and in main campus of AIOU. So it was decided that at least 30 tutors of AIOU and 15 tutors of VU would be included in the sample.

1.6.3 Limitations

The data were to be collected from the students and tutors of both universities. The researcher requested the management of AIOU to provide email addresses of tutors and students. They suggested to collect data from study centers, as it was the limitation of the researcher, so researcher decided to visit study centers to collect the data. As for as VU is concerned the management provided very few e-mail addresses of tutors and they did not provide e-mail addresses of students. It was again the limitation of researcher. So researcher personally visited virtual campuses several times to collect the data.

1.6.4 Delimitations of the Study

Keeping in view limited time and resources, the study was delimited to the students and tutors of Rawalpindi and Islamabad for both the selected universities. The study was further delimited to four programs of both universities which were BBA, MBA, BSCS and MSCS.

1.6.5. Data Collection

Survey study method was used for collection of data, the researcher personally collected data from sample students and Tutors, for this purpose two research instruments were developed: Questionnaire for students and Tutors, Interview of Dy. Director Regional AIOU and Campus Manager V.U

1.6.6. Data Analysis

Data were collected, tabulated and analyzed, percentage and mean were used to analyze the data.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter presents review of related literature which include. modes of education (formal, informal and non-formal), Distance education system, Concept of Pedagogical and Assessment Practices, Comparison of Allama Iqbal Open University with Virtual University of Pakistan. Comparison of AIOU with Indira Gandhi Open University, Comparison of AIOU with Open University U.K, Comparison of AIOU with Open University Malaysia, Comparison of V.U with Athabasca University, Comparison of V.U with Hong Kong Virtual University, Comparison of V.U with Global Virtual University. Research Studies related with conducted study and analysis of presented literature is also reviewed in this chapter.

Key Words:

Allama Iqbal Open University (AIOU), Virtual University of Pakistan (V.U),

Non-Formal Education (NFE)

2.1 MODES OF EDUCATION

There are three modes of education:

i. Formal Education

ii. Informal Education

iii. Non formal Education

2.1.1. Formal Education

Shami (2005) defines that, formal education is the intended program of learning offered in a chronological organization such as primary, secondary and university education. It can be said that it is limited to a specific period. It can be provided according to rules and regulations. Shami (2005) highlighted the following characteristics of formal education:

Formal education is planned with an exacting purpose. It is limited to a definite period of time. It has well defined and organized curriculum and imparted by particular qualified Tutors. Activities are organized outside the classroom in formal system and side by side it observes strict rules and regulations.

The process of education is not merely restricted to the four walls of the classroom in modern progressive schools. There are additional activities outside the classroom than inside. The formal education system requires strict discipline. If there is lack of discipline, the students will not follow the rules of the school and the formal system of education will demolished. The Tutors are well aware of this reality and they instruct their students to observe the strict discipline. Shami (2005).

2.1.2. Informal Education

Informal education is incidental and spontaneous. There is no conscientious effort involved in it. According to Shami (2005) informal education is not preplanned as formal education. It is more situational and without a situate system. It takes place outside the formal institution, and has no predetermined learning order. Unlike formal education, informal education is not imparted by any particular organization such as school or college. Informal education is not provided according to any set time table,

or through formal ways of education. There is no set syllabus required. Informal education comprises of experiences, and actual living in the family or community, and it proves that it is an extra extension of one's cognitive development.

Informal education may also take a negative direction. Instances are not exceptional when one learns stealing, or some other form of misbehavior from the experience which the child may experience in the street, in the market or in any place of his right of entry or communication. Khawaja and Barennan (1990) define that informal education is a real lifelong process by which the person acquires attitudes, ethics, skills and knowledge through day-to-day experience, educative influences and the resources of his environment, that is, his family and neighbors, his work and his recreational activities, at the market place, the library and from mass media.

2.1.3. Non-Formal Education (NFE)

"Organized and sustained educational activities that do not correspond exactly to the definition of Formal Education". Non formal education (NFE) may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life skills, work skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may have differing durations, and may or may not confer certification of the learning achieved". (UNESCO 1997.41).

Non-formal education is one of the new concepts getting into use. Involvement in non-formal education has increased as a result of interest in making education a life-long affair, rather than a matter of formal schooling. Non-formal education has the following purposes as indicated by Puri (2006) it involves

understanding the environment and conditions and affecting awareness of the need to make changes in it. Non formal education encourages the persons to adopt their skills. It also creates the ability to learn by working and to increase one's skill.

The concept of lifelong education was developed as a philosophical concept to provide guidance to the developers of educational programs and social planners. Although NFE has not developed for itself its own philosophical stance, the generalized concept of lifelong education does provide a theoretical framework within which NFE can operate. One significant factor that appears to have become a central concern for any philosophical statement about NFE is that education must be considered as instrumental. Education is not an end in itself, a position explored in thinking on NFE. Education must serve particular social and economic purposes.

The scope of NFE, taken overall, is almost limitless. However, taken internationally, NFE has been assigned a wide range of functions and objectives. Considering broadly, the scope of NFE is related to development objectives. It is not the function of this volume to examine in detail the ways in which thinking about development in social and economic terms has changed in the era of information technology. It is only important to note that as approaches to development have changed, so has the role of education. Increasingly, a role for non formal education, as district from formal education, is being accepted as important for development planning.

While development may be one of the general objectives viewed as central within the scope of NFE, the more specific objectives give a clearer picture of the way NFE is perceived and its scope defined. The work of NFE has frequently been viewed

as that of helping the nation catch up or of filling in gaps. The role of NFE in literacy programs or in rural development illustrates this view of the scope of NFE.

These types of programs, though having obvious benefits when successful, view of scope of NFE in a limited way. NFE is viewed as being concerned with putting out the scrub fires, rather than being concerned with creating an environment in which the scrub fires will not be a threat.

2.1.4 Problems of Non-Formal Education

There are manifold problems of non-formal education and the most important problem is lack of proper guidance to the students. The main problem of Open and Distance Learning is students do not have direct approach to tutor due to distance. Iqbal (2006, p. 4). describes "separation of Tutor and learner in space and/or time, absence of appreciative inquiry; the violation control of learning by student rather than distance instructor and/or institution, noncontiguous communication between student and Tutor mediated by print media, mediating distance teaching with local collaboration through face-to-face interaction and sharing of experiences".

Sharma (1998, p. 41) found that main drawback of system is weak student support services. As a result, the distance learners are dissatisfied, frustrated, confused and they are dropping out from the system. Following are the problems of distance mode of education.

i Delivery System

Distance education depends upon postal service which is not reliable consequently there is a problem of delivery system. For example Allama Iqbal Open University is sending material to its students through post. Unfortunately, postal service in Pakistan

is slow and unreliable and there is a chance that correspondence material may be dispatched to a wrong person or received late.

ii. Availability of Trained Staff

Professional staff is required to impart education through distance education system approach which is quite different from formal system. It needs special type of trained staff. Such staff like writers, course designers, coordinators, reviewers, etc. to prepare distance education material including textbooks, study guides, assignments and radio T.V. support in manner, that they are largely self-explaining. According to Rashid (2001, p. 364) "Problems of getting trained staff can be solved by providing in-service training to academicians in major aspects of distance education and development of research cell may solve this problem".

iii. Evaluation

Evaluation highlights the deficiency of the program. Best. (2006. p.155) points out:

"Evaluation adds to the description of status the element of value judgment in term of effectiveness, desirability, or social utility and may suggest a course of action. No generalizations are extended beyond the situation evaluated".

Evaluation is a continuous process. It should be properly planned before execution. It is necessary that evaluation should be done internally and externally. Both internal assessment and final examination exist in distance education system. Internal assessment consists of periodical assignments. It is no wonder that evaluation is not working well in distance education system. Either it is due to failure on the part

of students to submit the assignment or it is due to the lapses on the part of tutors to evaluate and correct them.

In this way there are a lot of problems in external evaluation of distance education. Problems of management are high in this system. It can serve their purpose, if item included in them are carefully formulated. Assignments need special attention and careful preparation.

iv. Access

The main objective of the distance education institutions is to provide education to all at their doorstep, especially to those who could not get access to the formal education system. Easy access and equal opportunities to education for all, there are some factors to be taken into account to increase opportunities for access of all potential students. These are Geographical coverage, ease of access to the media used to deliver the program.

v. Academic Problems

Academic problems of distance education include the quality of instruction, misuse of provided technology and the attitudes of students, tutors and regional staff of the university.

"There are the students and their concerns with distance learning classes. Not all students are suited to this type of learning and not all subjects are best taught via this medium. More mature students are most likely to find success with distance learning. The successful student needs to have a number of characteristics such as tolerance for ambiguity, a need for autonomy, and an ability to be flexible (Threkeld & Brzoska, 1994). They further found that compared to most face to face

learning environments, distance learning requires students to be more focused, better time managers, and to be able to work independently and with group members" (p.43). Many distance learners are different from traditional undergraduates in that they are already in professions. They have well defined goals and are more motivated (Dibiase2000).

As described earlier, distance education students need to feel part of a community. Greenburg (1998) describes this as a virtual learning community. He explains:

Students in these communities often feel less pressure to perform individually, and more pressure to collaborate and be part of the team. Being involved in collaborative learning process is an important part of forming the foundation of a learning community. When this is not encouraged, participation is generally low and dialogue is absent.

Students also need the attention of the instructors. This may be truer in a distance situation than in a traditional classroom. In a situation where eye contact and proximity are limited, students cannot be disciplined nor affirmed by eye contact and body language. Students may also have a difficult time reading the reactions of the remote location class members. This lack of interaction can cause problems when there is a dissenting opinion that cannot be picked up on with non-verbal cues, and is misperceived as a verbal attack. This type of miscommunication can cause the community problems as the class progresses. It is fair to say that compressed video can magnify the strengths and weaknesses of the instructor.

Like other developing countries, Pakistan has a large variety of under privileged groups including women in general and those living in rural, far-flung and

remote areas in particular. These groups can only be reached through distance education system and by no other means what so ever. Here the dilemma is that in approaching such groups through distance education makes the system highly costly and ineffective at the initial stage. This cost ineffectiveness creates hurdles in getting education for students of rural and remote areas.

No body can deny the crucial place of face to face contact and the importance of interaction between tutor and students and among the students in teaching learning process. Provision of face to face contact tends to be minimized. This may affect the quality of learning. It is often seen that tutors do not attend the tutorials regularly because there is no check on them. Consequently students' attendance in tutorials is very rare. Number and duration of tutorial meetings is also inadequate. Unfortunately if a tutor attends the tutorial meeting then he/she is in hurry to leave the class and do not provide proper guidance concerning course and assignments.

vi. Quality of the Program

The quality of the programmes can be judged by a number of ways. One way is to assess the quality of material or content. The other way is to check the level of case or likelihood of the material being used successfully by students.

The need is to emphasize the quality of educational experience. Some critics of distance education are of the opinion that distance education hardly provides any education experience. For example Niazi (2000, p. 973) argued that "Much of the value of a university education is captured in its socialization content and it cannot be provided into distance teaching university".

Quality of programmes may also be reflected through the quality of students' achievement and their recognition in society.

vii. Graduate Outcomes

All distance education programmes have an objective to impart standard education to their students' to obtain a degree, diploma or certificate. Regarding the leaner's outcomes it is important to note the output-input ratio which measures the graduates as a proportion of number of students entering a course or programme. Some of the distance education institution accepts students with regular qualification. Some institutions adopted an open admission policy and accepted both qualified and unqualified students. These policies raise a question of quality of output and input.

Judgment of success of distance education is reflected through success of individual's labour market. This may lead other institution to modify and develop educational programmes and launch them on the pattern of distance education.

viii. Socialization of Students

Critics of distance education comment that students of distance education are not provided with enough opportunities of socialization due to deficiency of a face to face contact, which are distinctive characteristics of conventional universities. Although tutorial support and group training workshops cover these problems to some extent but the question of socialization is still open.

ix. Difficulties in Face to Face Contact

Nobody can deny the crucial role of face to face contact and importance of interaction between the Tutor and the students. In distance education system, provision of face to face contact tends to be minimized.

x. **Interactivity**

Successful distance education systems involve interactivity between Tutor and students, between students and the learning environment, and among students themselves, as well as active learning in the classroom. McNabb (1994) noted that, "though students felt that the accessibility of distance learning courses far outweighs the lack of dialogue, there is still a considerable lack of dialogue in tale-courses when compared to face-to-face classes".

2.2 ADVANTAGES OF NON-FORMAL EDUCATION

Non-formal Education (NFE) can be highly beneficial to a large variety of people from young students wanting to expand their horizons to adults looking for more job security. With programs that allow learners of all ages to take courses for fun, personal advancement and degrees, NFE can meet the needs of a diverse population.

One of the most notable advantages of NFE is the flexibility. Majority of programs allow students to learn when and where it's convenient for them. For those who are struggling to balance their distance learning goals with working a full-time job and taking care of a family, this kind of flexibility can allow many people to pursue education who would not otherwise be able to do so. Since there are no on-campus courses to attend, students can learn from their own homes, at work on their lunch breaks and from virtually anywhere with internet access. It can even be a big source of savings on the fuel costs and time required to commute to classes.

Those with professional jobs can also get benefits from NFE. The programs are generally flexible and can be completed during free time, students are able to hold on to their current jobs while working towards their ultimate professional goals.

Those living in small or remote communities can also get a great advantage from NFE. With few local options for education, it can be hard to find schools that offer the programs and degrees one wants with the professional faculty and resources one needs to succeed. Non-Formal Education removes this problem and allows students anywhere in the world to choose a program of their choice. Students who work well independently and who are strongly motivated to succeed in their goals can get benefit from taking a distance learning programs. As students are not in a classroom and not be closely monitored by the instructor, reading, projects and other assignments must be completed in a timely fashion. Those who are able to set deadlines and avoid the temptations of frequent procrastination will benefit the most from these types of settings. These are also No waste of time or other resources i.e. transport, has flexibility to study in any convenient location with an Internet connection. Students can connect to internet from their job places in break time or any other leisure time at home. A computer or laptop can provide classroom environment even at late night when student is free he can view his recorded lectures and solve his assignments.

Non-formal Education has a great advantage for those who have caliber to complete their course within short time at a personal speed and intensity, without having to wait for slower pace of the average classroom. Non-formal Education also provides facility to view conversations in the Discussion Board at any hour, and to review classmates' comments since the previous visit. It also provides flexibility for those with irregular work schedules. They are not bound to study in a specific time

schedule but they can study when they are free. Non-formal Education also facilitates to those who have restricted mobility i.e. handicaps, elders, and women with little kids and single parents with family responsibilities.

Non-formal Education focuses on the needs of those students who have had to end their study due to economic constraints, after completing a certain level of education. NFE also provides education to those students who live in far flung areas, and do not have any access to the formal school system. It is used for those pupils who want to get a degree and are ready to improve their previous educational deficiencies. Non-formal education is used to improve the students basic living skills and to up-grade their standard. Non-formal education is a field of education that focuses on the pedagogy and instructional systems, which are designed to deliver education to those students who are not physically present in the educational institution. Rather than attending courses personally, Tutors and students may communicate at times of their own choice, by exchanging printed material or via the electronic media.

In other words, distance education generally depends upon the tutors because in spite of absence of classroom, the tutors are responsible to organize the study material for proper guidance to the students, who are not present at the educational place.

Keegan (1993) states that Non-formal Education is that type of education, which either does not involve the physical presence of the tutor appointed to bestow it in the place where it is received, or in which the tutor is present only on occasion. Teaster and Blieszner (1999) say that the term Non-formal Education has been

applied to many instructional methods. Its main feature is Tutor and the student are separate in space and time.

Non-formal education is that kind of education which is not led by the Tutor present in classroom, but supported by Tutors and correspondence which instruct students at a distance. Greenberg (1998) defines Non-formal education as a planned teaching and learning experience, which uses a broad range of technologies to reach learners at a distance, and is designed to encourage learner communication and certification of education.

It is obvious from the above discussion that Non-formal education has manifold benefits. People of all over the world are beneficiaries of this type of education.

2.3 NON-FORMAL SYSTEM OF EDUCATION IN PAKISTAN

The formal system of education in Pakistan did not have sufficient capacity to provide access to education to the masses in the country. Several research studies have been conducted in this regard. Shami and Hussain (2005) found that there are many reasons of lack of access to education some of them are as under:

Children (boys and girls) had to provide help at home, schools were not available, schools were at long distance from children's residence, children were not interested in studies, there were no opportunities for further education, tutors' harsh behaviour, no physical facilities, expensive education and children's sickness.

Hussain (2006) states that "broadly ranging conceptualization of Non formal Education (NFE) that can accommodate variations in different nations and cultures, a

wide range of activities (under different titles) provide scope for changes in time dimension".

The rapidly growing needs of the population is cannot be met only by the formal system of education. Thus, those who have no access to formal education, Non-formal education is helpful for them which is very cost effective, as people with low income can easily afford this type of education. They can continue their jobs with non-formal education. Students are free to take regular classes in this type of education. Since four decades AIOU is providing Non-formal Education in Pakistan as well as abroad. In rural and for flung areas, where colleges and universities are not available, people are acquiring education through AIOU. A large population of Pakistan is poor they cannot afford charges of formal education they get benefit from AIOU. Now since a decade one more University of non formal education has become a helping hand of AIOU for increasing the literacy rate in Pakistan which is named as Virtual University of Pakistan (VU). AIOU imparts education through tutorials and correspondence, face to face teaching and virtual learning environmental system while Virtual University of Pakistan imparts education through internet. Being a developing country people of Pakistan are responsible themselves for their income. Government of Pakistan does not provide any help to support its people in this regard. So they have to do jobs for their survivals. Children in very small age start jobs and cannot acquire education. Non formal education is affordable as well as students are free to take classes. They can prepare their lessons in their free time. There is also a trend that women of rural areas cannot attend universities due to co-education they get admission in non formal system and can continue their education. In fact non-formal education is a blessing for people of Pakistan.

2.4 NON- FORMAL EDUCATION; WORLD WIDE PERSPECTIVE

Most of trends in open and distance learning are linked to the general background. Considering the challenges of education and development, both in developing and developed countries, it is not surprising that open and distance learning is often seen as an important new approach and strategy which could make a significant contribution towards resolving problems of access, quality and equity. When conventional systems and approaches cannot meet the needs, it is necessary to look for new strategies. Confidence seems to be growing that open and distance learning is such a strategy. Examples of this growing confidence can be found in many countries. For example, it has been recommended that distance education efforts in the nine high-population countries (Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan, referred to as the E-9 countries), focus on expanding work for school equivalence, for Tutor education, and for non formal education, especially in relation to health. Strategies for all these areas have been developed that could usefully be applied in most if not all of the E-9 countries. Low-tech and broadcasting strategies figure strongly but there are also a growing range of projects which make innovative use of the new information technologies. (UNESCO,1997, p.61).

In developing countries the general lack of resources in the economy often prevents distance education programmes from being sustained, developed and extended. In addition to the general objective of increased productivity, and usually reluctant to take money away from established educational interests, governments want to have an increasing proportion of expenditure for open and distance learning to be paid by the students through fees. At the same time, in increasingly market-oriented educational systems, conventional institutions are to a greater extent using

some form of open and distance learning as a means of extending their markets. Strategic alliances are being formed between educational and private sector institutions of various kinds. It means that traditional distinctions between various types of providers (distance, conventional, public, private) are being blurred, particularly within vocational and continuing education and training.

Technological development allows for new paradigms of access and new delivery systems, linked to new types of demand. Continuous miniaturization of equipment, reduced costs, increased user flexibility, portability and integration offer a whole range of new opportunities. These changes can either lead to more effective centralized systems of development, and distribution of educational services and software. They can also support a more open networked society with greater variation and more equitable access to educational resources through a network infrastructure.

The direction of this development will be strongly influenced by the willingness of governments to provide leadership and co-ordination concerning network development and access (network here referring not only to technological networks, but networks of educational providers whose services are delivered via the technology). New technology also means that distance learners are not as highly reliant on the quality of pre-produced packages of course materials or programmes as they were. Technology permits more learner Instructor and learner-learner communication and dialogue and thus a high degree of individualization of learning and learner construction of knowledge. Nevertheless the quality of the learning programme will depend on well designed instructional materials as well as the ability of the instructor to facilitate such knowledge construction. This puts a high premium on Tutors being adequately grounded and trained in distance education methods.

Finally, trend towards internationalization is clear. In addition to the political and economic driving forces, the internationalization of distance education is enhanced by its links to information and communication technologies (ICTs). For instance, educational software is often international, and satellites and electronic networks allow transmission and communication across national borders.(UNESCO,1997).

It is not necessary that non-formal education is the need of developing or under developed countries but it is also an emerging need of developed countries. The students who are job holders, parents with job and children, single parents who have to look after their kids and homes along with their jobs, handicaps, players, actors, and many other busy people who cannot continue their education due to some problems, non-formal education help them. The first Open University was started in UK in 1969. Afterwards AIOU was established in Pakistan. The experiments were successful. So other countries followed it and Athabasca University, Alberta, Indra Gandhi Open University and many other iversities of non-formal education were established. As scenario changes modern technologies of computer and internet replaced the correspondence and a new term "Virtual Education" was introduced. Virtual Universities are now playing a vital role for imparting non-formal education all over the World. Hong Kong Virtual University, Global Virtual University, Tamil Nado Virtual University and Virtual University of Canada, are some of the world famous Virtual Universities.

2.5 DISTANCE AND OPEN EDUCATION

Distance and Open education is a process of Non-formal Education in which all or most of the teaching is conducted by someone removed in space and/or time

from the learner, with the effect that all or most of the communication between Tutors and learners is through an artificial medium, either electronic or print.

By definition, in distance education normal or principal means of communication is through technology. Obviously Tutors in conventional classrooms may use technology as a supplement to teaching, but since it is not their principal means of communication classroom is not considered to be distance education.

Distance and Open Education is usually contrasted with conventional or face-to-face education, which may be described as form of education which takes place in a classroom or an auditorium. The historical evolution of Distance Education has been in four main phases, each with its own organizational form derived from the main form of communication. Correspondence systems originated at the end of the nineteenth century, and are still the most widely used form of Distance Education in less developed countries. Based around a study guide in printed text and often accompanied by audio and video components such as records and slides, interaction in the correspondence method is by letters and other written or printed documents sent through postal systems.

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Educational television and radio systems use various delivery technologies terrestrial, satellite, and cable television and radio to deliver live or recorded lectures to both individual home-based learners and groups of learners in remote classrooms where some face-to-face support might be provided. Some systems offered limited audio or video-conferencing links back to the lecturer or a moderator at a central point. Multimedia systems encompass text, audio, video, and computer-based materials, and usually some face-to-face learner support delivered to both individuals and groups. In this approach, which is used by Open Universities, instruction is no

longer an individuals work, but work of teams of specialists, media specialists, information specialists, instructional design specialists, and learning specialists. Programmes are prepared for distribution over large Numbers of learners, usually located across a whole country.

Internet-based systems in which multimedia (text, audio, video and computer-based) materials in electronic format are delivered to individuals through computers, along with access to databases and electronic libraries, which enable Tutor-student and student-student, one-to-one, one-to many, and many-to-many interactions through e-mail, computer conferences, Discussion Boards, etc. Just as each previous generation of technology, i.e. correspondence, broadcast and narrowcast audio and video, and multimedia systems produced its particular form of distance learning organization, so spread of broadband internet communication is stimulating new types of educational organizations and also stimulating re-thinking about effectiveness of older ones. Thus new technologies are being taken up with equal enthusiasm by Open Universities.

Single mode institutions are those in which distance education is sole mission, to which tutors and administrative staff are exclusively dedicated. Course development, instruction, evaluation and other educational processes are tailored to distant learner. In dual mode institutions there may be an administrative staff whose sole responsibilities are distance education, but usually it is tutors of the parent body who provide teaching. There is some allowance for distance teaching methods in course design, instruction and evaluation and tutors may have some special training. The most common distance learning design process is author-editor model; each course is based on a study guide prepared by a single course writer. Where internet is available, study guide may be accessed online rather than in hard copy. Distance

learning consortia consist of two or more distance learning institutions who share in either design or delivery of programmes, or both. Increasingly in many countries tutors in conventional institutions are required to teach at a distance as a responsibility added to their normal duties. Tutors have little training in distance methods. Such programmes may not have their own administrative or learner support services and there are relatively low levels of tailoring of course design, instruction and evaluation to the distant learner.

Non-traditional providers, including private profit-oriented new companies are entering the global market, selling educational services online, especially to adult learners in labour force. For-profit universities are able to raise money in stock offerings tied to their distance education programmes. Some for-profit online programmes are growing twice as fast as dual mode institutions face-to-face programmes, attracting students from more than a score of different countries. Some traditional education institutions are responding to such competition by establishing their own for-profit affiliates, while corporations have established their own in-house systems to meet their own needs for just-in-time and just-enough education. The perspective on distance education chosen in this paper is an eclectic one where all organizational forms with a significant distance learning element are included. At times it will be helpful to recognize where an issue will apply specifically to one type of organization rather than others. This is not the place to consider different structures of different systems, but it is important to be aware of main components common to majority of all systems.

In distance education system term tutor is used for a person who imparts knowledge and skills, and gets in touch with distance pupil, by using a variety of media. He performs several duties as a tutor i.e. correspondence with students,

providing counseling and guidance; evaluating their assignments etc. Such functions are included in tutoring. Tutor's remarks are the solution of difficulties faced by a student, and source of help in preparation of final exams. According to Rashid (1998), a tutor's remarks play a vital role in tutorial system of distance education. Face to face contact of distance students with their tutors being comparatively the smallest. Teaching will have to be carried out largely by means of remarks on assignments. Unlike a student at a formal educational institution, usually it is difficult for a distance student to meet the tutor just when he wants to. Hence, tutor remarks are one kind of contact between tutor and student.

It is the mission of a distance learning system that defines its role within context of national policy. The mission statement of a public institution will be part of a national policy, while mission of private organizations may fulfill subsidiary functions in relation to public institutions. On the other hand, private organizations must respond to needs of particular market segments, especially of labour market, both quickly and efficiently.

Courses and curricula define profile of a system or institution. They should be related to the mission and to defined needs or markets. Many distance education systems provide courses in preparation for examinations and degrees which are equivalent or similar to those offered by conventional institutions, and subject to similar regulations as regards content, admission and assessment.

Teaching strategies and techniques depend partly on the type of programme and needs they are designed to meet, but they also depend on educational philosophy, values of particular system, educational characteristics and potential of technologies

used. There may be a connection between teaching strategies, economy and choice of technology.

Learning materials and resources are essential components in all distance learning systems. Comprehensive, well designed materials may stimulate self-directed learning and thus influence quality of system as a whole. Design, development and production of materials are often considered as a sub-system in distance teaching organizations. Previously produced, existing materials, text-books, software etc. may be used but in most cases each programme benefits from having specifically designed learning materials. Communication between Tutors and learners is a necessary component in distance education, as in all other forms of education. Communication technologies distribute messages in text, still and moving images, and sound.

Knowledge-generating messages may be communicated to large numbers of learners, either synchronously or asynchronously, pushed by broadcasting or accessed on demand through audio/video players or Internet. As these devices change, so the quality and nature of messages will change. Thus, new internet devices will make it possible on one hand for larger numbers of people to share a common learning experience, in real time, or on the other, to enable an individual learner to have a unique personal interaction with a Tutor or with another learner, no matter where located. They will increasingly be available on a common platform, as bandwidth limitations become less significant than at present. Communication serves two purposes. One is the distribution of information. This delivery system may comprise both distribution of pre-packaged material and transmission of synchronous or broadcast programmes, lectures etc. Second role of communication is crucial component of all education which is interaction between tutors and learners, and where possible, between learners also. In some forms of distance education this

learner interaction is practically non-existent, but in most cases it is considered important and may be provided in different ways. Often students meet together physically in groups, some times connected with other forms of local support.

New technologies allow the organization of virtual groups, and in countries where access to internet is common, this is the fastest growing approach to distance teaching. Support delivered locally is a common component in most single mode institutions. A letter, a telephone call or an e-mail message is of course delivered locally and is more likely to be the means of learner support in dual mode institutions. What is meant here is, however, support in a form that allows some kind of direct (face-to-face) interaction between learner and a Tutor or a mentor/facilitator. This component may be organized completely as face-to-face events, or in combination with communication at a distance (teleconferences etc.). Local support is usually given in a study centre or resource centre. The centre may also offer access to other learning resources, equipment etc.

The student and staff management sub-system is often distinguished from the course materials sub-system. From an administrative perspective student and staff management sub-system comprises admission, allocation to courses and student services, administering the learning and teaching procedures, assignments and assessment, monitoring drop-out and completion, and examinations. Staff may be contracted on a part-time basis or may be in the core faculty in the case of a dual mode institution, but in either case they have to be recruited, trained and monitored. A range of other experts with different qualifications is also needed, either as full-time staff or as external consultants: planners, instructional designers, developers and producers, researchers, media experts, marketing experts and administrative staff. Effective management and administration needs not only competent staff, but also

well designed, efficient administrative systems and routines, planning and monitoring systems, budgetary and accounting systems etc.

Many of these will be quite different from corresponding systems needed in the management of other forms of education. The requirements of housing and equipment may also be very different from conventional education institutions. A single mode distance learning system has no residential students, and thus there is little need for classrooms, lecture theatres etc. at the central location. Such facilities may be needed locally, and are often provided in co-operation with local institutions. At the central location there will be need for production facilities and storage capacity, although some decentralized production is also possible. In a dual mode institution these distance education facilities have to be accommodated alongside the space dedicated to the institution's primary mission. Finally, evaluation should be a component, in order to provide information relevant to the adjustment of the roles and operation of system components, and in order to secure their optimal contribution and development. The success of any distance education institution, dual or single mode, is highly dependent on the efficiency and effectiveness of the monitoring and evaluation system, without which it may be impossible for administrators to be aware of problems in the system until the system itself breaks down. It is not possible to rely upon the kind of informal, unstructured feedback that may be sufficient in the conventional classroom.

2.6 DIFFERENCE BETWEEN NON-FORMAL AND DISTANCE EDUCATION

"Non-formal education is an educational system organized outside the established formal system, and designed to serve identified educational objectives". (Hussain.2011).

"Distance Education" is a process of non-formal education in which all or most of the teaching is conducted by someone removed in space or time from the learner with the effect that all or most of communication between teacher and learner is through an artificial medium either electronic or print. (Greenberg1998).

In the light of above definitions difference of both terms can be defined as distance education is a process of non-formal education in which tutor is on the distance from learner, and teaching learning process is conducted through electronic or print media.

2.7 CONCEPT OF VIRTUAL UNIVERSITY

Virtual University could be conceptualized as being;

Timeless: instructional materials are accessible on demand at any time

Space less: students and Tutors have no need to be present within the four walls of a classroom.

Border less environment with greater infrastructure and increased accessibility to information: increased access to and interaction or collaboration with a worldwide network of experts.

Reality amplified: virtual world models that will enable learners to fly-through or immerse themselves in, for the purpose of visualizing complex structures, conducting experiments or constructing new virtual spaces through internet which are otherwise not achieve able by texts videos and other graphic models or images. (Chong, 1997).

It can be concluded from above discussion that Virtual University provides such time less and border less environment to its students in which they can easily acquire education with the help of internet.

2.8 PEDAGOGY OF VIRTUAL UNIVERSITIES

In the case of Virtual Universities, the tutor is not present physically in the classroom but student has to contact with him through media, e-mail or video conferences. So the Pedagogical Practices of virtual universities can be described as: "transformation of face to face teaching into media based interaction".

Pedagogy of Virtual Universities is totally different from formal universities. Virtual Universities all over the world usually use a Learning Management System. Learning Management System (LMS) provides details of syllabus, supporting material, schedule of assignments and lectures and all other details related to students needs. It has also Discussion Board which is very useful component of LMS. It provides the impact of face to face teaching in which students directly contact with their tutors and class fellows and get relevant information regarding their lectures. Students also use e-mail to contact with their tutors and class fellows. Video Conferencing is another unique and useful component of Virtual Universities through which students and tutors sitting in different regions of the world contact at same time and take part in teaching learning process. Another very important feature of pedagogy of Virtual Universities is recoded lectures, which are available on websites

of Virtual Universities, on CDs, and also can view through T.V. The purpose of using all theses media of instruction is to facilitate the students of Virtual Universities with modern technologies so that they can continue their studies with their jobs or without leaving the comfort of their homes.

In both selected universities i.e. V.U and AIOU education is transferred by using different Pedagogical Practices. It would be analyzed that how these practices are similar or different from each other and which are the better and effective Pedagogical Practices and what should be done by the authorities of these Universities to bring betterment in these practices.

2.9 PHILOSOPHY OF PEDAGOGY

According to Mahmood (2006) the term pedagogy is used in English, which is about education. Watkins and Mortimore,(1999) said that it has deep chronological roots and meanings. Pedagogy is derived from French and Latin adaptations of the Greek word which literally means a man having oversight of a child, or an attendant leading a child to school. The term pedagogue that is derived from the Greek word and refers not to the tutors, but to the alert person or guardian whose responsibility was to lead (agogos) the young child (paides) to school. The adult has the duty of accompanying and caring for the child. That is the kind of leading that often walks behind the one who is led.

A basic pedagogical issue in distance education pertains to the importance of medium in distance learning environments. Brief definitions of pedagogy are offered time to time. A common example is science of teaching. The breadth of this phrase may create its own complexity, since such a definition depends on the reader's own

theory about science and their conceptions of teaching. (Watkins and Mortimore, 1999).

An alternate way of thinking about pedagogy, which is neither science nor art, is viewing pedagogy as craft, an approach suggested by writers who recognize uncertainty and limits of predictability. Watkins and Mortimore, further describe in conclusion that there is no need to define the term pedagogy in way that it's only the tutor's job and activity. Just consider the tutor as a craftsman and also take into account the learner. In fact, Pedagogy is, an activity by a person designed to increase learning of another.

2.10 PEDAGOGICAL PRACTICES

Little (2006) Stated that Pedagogical Practices involve the process of what learners learn, how they learn, what tutors teach, how they teach, the motivations of learners and tutors for education and ways in which learning is assessed (p.31).

It can be concluded that pedagogical practices have in depth meaning in which a tutor plays a role of "care taker" of his students during teaching learning process. He not only teaches his students but also leads them towards learning by playing a role of "caring leader". Pedagogical Practices are used in classrooms. There are many factors which affect the pedagogical practices such as knowledge of the tutors and students, tutors' behavior and teaching learning environment.

Mahmood (2006) presented a triangular model to show the role of tutor while educational transaction. Pedagogy would be art of mediation making it possible to build an arch between the child and the knowledge.

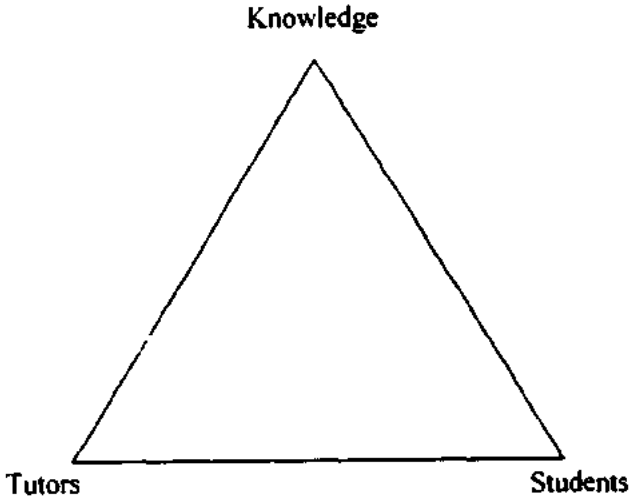


Figure 1

Tutors' pedagogical practices are not static. Despite patterns of teaching that persist across decades. The climate in which tutors practice their craft sometimes contains discourse that encourages tutors to modify their teaching styles and even their underlying beliefs about good teaching.

2.10.1 Difference between Pedagogical Practices and Teaching Practices

Pedagogical practices have some differences from teaching practices. Both terms should not be merged. According to Hill (1997) pedagogical practices are art of teaching. According to him pedagogical issues are related to teaching and learning. "Teaching Practices" means practice of teaching by a student who is going to become teacher. According to Collins English Dictionary (2003), teaching practice is temporary period of teaching in a school undertaken by a person who is training to become a teacher. It is further described by Perry (2004), Teaching Practice is an integral component of teacher training. It grants experience in the actual teaching and learning environment.

2.11 ASSESSMENT PRACTICES

Assessment Practices referred towards evaluation process of students' learning through examination, tests, quizzes, assignments and discussion on studied topics.

In education, Assessment of students' learning is not a onetime activity; it is an ongoing process aiming at continuous improvement of students learning. Therefore it can be said that Assessment is the process of reviewing, reflecting and revising the teaching learning practices and strategies in a planned and careful manner. Saeed (2001) stated that Assessment is normally of two types, formative or internal or continuous, and summative or final assessment. Continuous Assessment is carried out by the class tutor within the classroom throughout the academic year in the form of tests, quizzes, assignments, presentations and projects. It can be said that continuous assessment focuses on the performance of the student, so that required feedback can be provided. Athanasou & Lampiranou (2002) stated that during Formative Assessment, learning is measured at more than a few points during a teaching learning process, with the primary objective of obtaining information to guide the next step. In a general sense, formative assessments take a variety of forms such as questioning, remarks on a presentation, or interview.

Kumar (2007) defined that student's assessment performance has an important place. In this new era of performance assessment, related to the monitoring of a students' mastery of a core curriculum, portfolios can improve the assessment process by, enlightening a range of skills and understandings on the students' part. Assessments support instructional goals, and reproduce change and growth over a period of time. It encourages student and tutor in continuity in education from one

year to the next. Instructors can use assessment for a variety of specific purposes, including:

Encouragement of self-directed learning, enlarging the view of what is learned, promotion of learning about learning, demonstration of progress towards identified outcome, creation of intersection for instruction and assessment, provision of a way for students to value themselves as learners and to offer opportunities for peer supported growth.

Torrance (1998) stated that the best assessment practice involved a carefully balanced combination of observation. Teacher should have deep knowledge and understanding of his students. He should have command on psychological aspects of students' learning. He should also know about weaknesses of his students. Keeping in view all aspects he then examines his students. In daily routine class lectures, questioning helps students to learn and their responses provide proof of depth and quality of their learning. Assessment not only involves students learning but also teaching of teacher. Evaluators of educational process judge performance of teachers through assessment results of students. As much students show their performance, teachers' teaching would be graded as high. If results of students would not be better it would be a part of teacher's teaching.

According to Kumar (2007) evaluation is an essential part of any education system, and student evaluation is the most significant field among the major fields of educational evaluation. He says educational evaluation mean personal evaluation, institutes evaluation, student evaluation, curriculum evaluation and program evaluation. Detail is shown in the figure below:

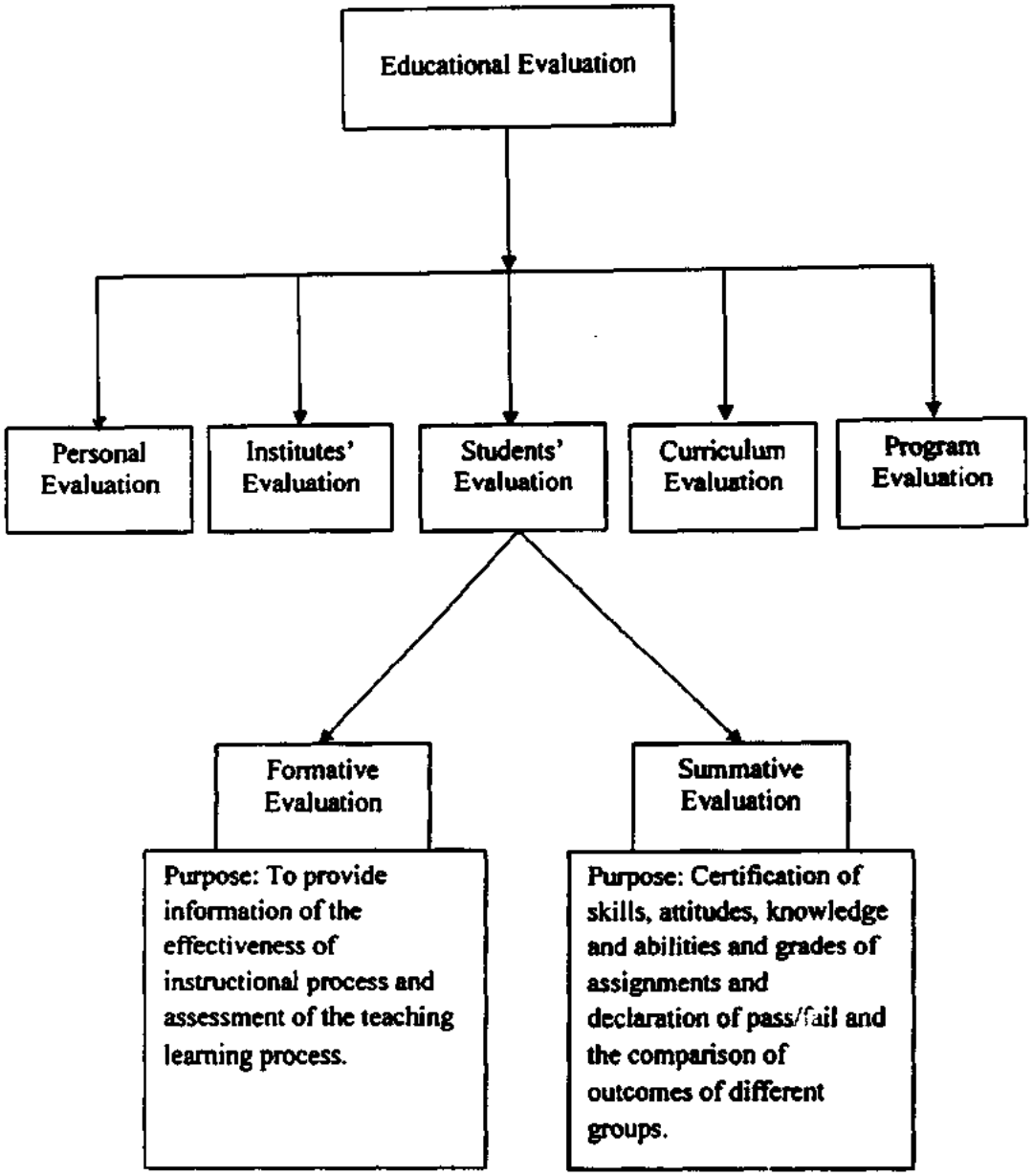


Figure 2

It is the most commonly used process for collecting data regarding students' academic achievement and making decisions on their base.

Torrance (1998) explained that promoting children's learning is a major objective of schools. Assessment lies at the heart of this process. It can provide a

framework in which educational objectives may be set, and students' progress charted and articulated. It can give a base for planning the next educational step in response to the child's need. It should be an essential part of the educational process, repeatedly providing both 'feedback' and 'feed forward'. It therefore needs to be included systematically into teaching strategies and practices at all levels.

2.12 ALLAMA IQBAL OPEN UNIVERSITY

Allama Iqbal Open University was established in 1974 under an act of Parliament. It was the pioneer University in non-formal and distance education in Pakistan. Its functions and overall structure differs from other universities. Open University is a university which is open to people without formal qualifications and where teaching is provided by correspondence or broadcasting. In some countries like Pakistan, it is open for people of all age groups. (No age limit for admission). These are also called 'open' due to free of time constraint. Students are free to prepare their courses at any time. There is no need to take classes properly like formal system.

First Open University was established in UK in 1969. Allama Iqbal Open University was then the second Open University of the world. Now Allama Iqbal Open University is 4th among the list of 17-Mega Universities of the world. It gives an opportunity to working people to increase their qualifications without giving up their jobs or homes. It suits the female and disabled population, as it offers them an opportunity to study at home. Similarly it suits to people living in the tribal and far-flung areas where there is no formal education system. Majority of people in Pakistan cannot access or afford higher education through formal universities. AIOU helps them to acquire higher education. Enrollment of AIOU is about 1,127,038 and it has become 4th mega university of the world. (www.aiou.edu.pk).

2.13 VIRTUAL UNIVERSITY OF PAKISTAN

Second Distance University established in Pakistan was Virtual University of Pakistan. In November 2001, Government of Pakistan released the funds of about 16 million dollars to launch Virtual University of Pakistan. It was decided that the university would officially start operating from the last week of March 2002. But the given time period to the team of VU for preparation and initiation was just five months.

In this short period, the team of about fifteen members approached the professors and experts, who would not only prepare the syllabus, but also record the lectures for the beginning of the semester. The partners from the private sector were contacted. Those who had the best facilities all over Pakistan were chosen and they started Private Virtual Campuses. In 18 cities about twenty eight Virtual Campuses were made. In private studios initial lecturers were delivered for recording and editing. Pakistan Television Corporation delivered recorded lecture on Air. People were informed about this new mode of education through a publicity campaign. (www.vu.edu.pk).

Fee of Virtual University of Pakistan is affordable but virtual system of education is new for people of Pakistan. Students living in rural areas have not such facilities of computer and internet so it is not possible for them to get admission in Virtual University of Pakistan. About ten years have been passed to opening of Virtual University of Pakistan yet there is no significant enrollment in the university.

2.14 Comparison of Selected Degree Programs of AIOU and VU

Following are the selected Master and Bachelor Programs of AIOU and VU on which this study is based:

BBA Program

Virtual University of Pakistan offers two years bachelors program in Business Administration BA-BA called Bachelors of Arts in Business Administration, a different name from other universities. This program has been specially designed to provide an opportunity for students to obtain a two year Bachelors degree for early entry into a job, in order to gain practical experience. They may then return and continue their respective four year program at a later stage. After successful completion of first four semesters, students can apply for the two year degree or continue with the four year BS program. As the name of Degree is different the Degree is also unique in its nature. Students are free to leave their four year Program after getting Degree of two years if they got job. There is not a single example in formal as well as non formal system of education in Pakistan which matches with it.

(www.vu.edu.pk).

The detail of courses of the program BA- Business Administration of VU is given in appendix-X.

On the other side Allama Iqbal Open University offers a two years full time Bachelors of Business Administration BBA program spread over four semesters. Each semester has 18 weeks duration for teaching and examinations. Classes are conducted in study centers of AIOU in face to face mode. Assignments are given which have

30% weight age in final exams. Final exams are conducted at the end of semester which has 70% weight age. (www.aiou.edu.pk).

Semester wise detail of courses for BBA of AIOU is given in appendix-IV:

To conclude from above detail it can be said that there are some differences in both BBA degree programs of AIOU and V.U first of all duration of BA-BA in Virtual University of Pakistan is six years while BBA in Allama Iqbal Open University is a two year Program. Students of V.U can get a two years bachelors degree for getting job and experience in field and after getting experience they can continue their remaining degree of four years. This facility is not available in AIOU.

Master of Business Administration (MBA)

The Faculty of Management Sciences of Virtual University of Pakistan offers a seven semester program of MBA. This program helps to learn special business techniques. The student who has two year Bachelor Degree from a recognized university, with at least 45% marks or CGPA 2.00 out of 4 is eligible for admission. (www.vu.edu.pk).

Detail of courses is given in appendix. XI.

In Allama Iqbal Open University, criteria for admission in MBA, is graduate in 2nd division. It is two years duration program. The medium of instruction is English. The classes of MBA program are conducted in approved study centers of AIOU through face to face mode of instruction. There are six credit hours per course. Fifteen courses are taught to acquire the degree. Thesis and viva is conducted at the end of degree program.(www.aiou.edu.pk).

Detail of MBA Program of AIOU is given in Appendix -V conclude it can be said that pedagogical and assessment practices of AIOU and VU have also differences for MBA Programs. First of all the duration of MBA in V.U is consist on seven semesters means 3.5 years while in AIOU it consists on four semesters means two years. AIOU offers MBA program in face to face mode while V.U offers its all programs including MBA, through online mode.

Bachelors in Computer Science (BSCS)

Department of Computer Science in Virtual University of Pakistan offers a four-year program leading to either a BS degree in Computer Science or in Information Technology. The specialization is determined by the choice of required and elective courses taken by a student. The programs are designed to meet the growing needs for computer science / IT experts in the rapidly evolving 21st century economy.

Students are required to complete a project of 6 credit hours in the final year of their BS degree program. The choice of the final project is at the student's discretion. However, consultation with the student advisor is compulsory. Students have to submit a detailed write-up of the project and in some cases may be required to give an online presentation..(www.vu.edu.pk).

On the other side AIOU also offers four years duration Program of Bachelor of Science (BS) in Computer Science. Candidates having intermediate or equivalent qualification from any recognized institution with less than 45% marks but have passed HSSC are eligible to admit in BS (CS) program however, in the foundation semester they have to take deficiency courses. Admission is given to all candidates satisfying the eligibility requirements. All eligible candidates are offered admission in

BS (CS) program, subject viable group of students. BS Computer Science Program is 140 credit hours program and complete in minimum four years, eight semesters. Two semesters are offered in a year as Spring and Autumn. The duration of each semester is 18 weeks. Medium of instruction is English. Classes are held in study centers of AIOU in face to face mode. (www.aiou.edu.pk).

Semester wise Scheme of Studies of BS Computer Science is given in appendix-VI:

To conclude it can be said that in the case of BSCS, both universities offer same duration i.e. four years for completion of degree. Pedagogical and assessment practices are also different here as described earlier. AIOU offers BSCS through face to face teaching in study centers while V.U offers BSCS through online teaching. Medium of instruction in all programs is same i.e. English.

Master of Science in Computer Science (MSCS)

Master of Science (MS) in Computer Science is a research based degree program of Virtual University of Pakistan which is offered for selected cities of the country i.e. Islamabad, Lahore, Karachi and Peshawar. MSCS program has four semesters of 18 weeks.

Scheme of Studies of MS Computer Science is given in appendix-IX:

Allama Iqbal Open University offers two years MSCS Program. Candidates with minimum first division from recognized university in Masters Degree in Computer Science/Information Technology (16 years) and Bachelor Degree (16 years) in Computer Science/ Information Technology/Software Engineering are selected through GRE (general) type test plus subject area (computer science) through NTS followed by interview of short listed candidates by admission committee.

Medium of instruction is English. Face to face classes are conducted in main campus of AIOU Department of Computer Sciences H-8 Islamabad.

Scheme of study is given in appendix-VII.

It can be concluded that duration of MSCS in both universities is same i.e. two years but in AIOU this program is not conducted in study centers and epartment of Computer Sciences arranges face to face classes of MSCS in main campus of AIOU H-8 Islamabad. V.U offers MSCS for selected cities which are Islamabad, Lahore, Karachi and Peshawar.

The above mentioned comparison of selected programs of both the universities leads towards the 2nd objective of the study i.e. to compare the pedagogical and assessment practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelors and Master level.

2.15 WORLD WIDE OPEN UNIVERSITIES

There are many open and virtual universities in the world increasing the literacy rate through distance education. Their pedagogical and assessment practices are somehow similar with each other and some components of their pedagogical practices are different from AIOU and VU. Some of them are presented to compare their systems with Allama Iqbal Open University and Virtual University of Pakistan.

2.15.1 Comparison of AIOU with Indra Gandhi National Open University

The Indira Gandhi National Open University (IGNOU) is situated in New Delhi, India. This name was decided after the former Prime Minister of India, Indira Gandhi. It was established in1985. It is one of the largest universities in the world. The aim of its establishment was to impart education through distance and open education modes. The deprived students of society are the beneficiaries of this university. It is a national resource centre due to its teaching and research. It helps to raise the standards of distance education.

Pedagogical Practices of Indira Gandhi National Open University differ from other predictable universities. Multimedia approach is used for teaching in the university. The different mechanism being self-instructional materials, counseling sessions, both face-to-face and via teleconferencing mode at selected study centers. Practical classes are arranged for courses in Science, Computers, Nursing as well as Engineering and Technology. Likewise in AIOU all above mentioned pedagogical practices are carried out except teleconferencing. To facilitate the students in the tradition of Open Learning, Indira Gandhi National Open University provides flexibility in entry qualification, place, tempo and interval of study to students. For example a Bachelor's Degree Program (i.e. BA/B.Com/B.Sc.) of 3 years duration if the student so desires can be completed in more than 3 years up to 6 years. Same is the case in AIOU.

Continuous evaluation is made through tutor-marked or computer-marked assignments, as well as through practical assignments, project work, and term-end examinations. It is compulsory to complete assignments and take term-end exams. Balanced weightage to assignments and exams is given to declare any student pass or

failed. Gold medals are awarded to students securing the highest score at the first attempt, during the annual convocation ceremony of Indira Gandhi National Open University. Same is practiced in AIOU but the assignments are just tutor marked not computer marked in AIOU and weight age to assignments is 40% and exams weight age is 60%.

2.15.2 Comparison of AIOU with The Open University United Kingdom (Uk)

The Open University UK uses a variety of methods for distance learning, including written and audio materials, the Internet, disc-based software and television programs on DVD.

AIOU also uses written materials in the shape of books, audio material broadcasted on radio and also through T.V. and internet.

The Open University UK is researching the use of virtual worlds in teaching and learning, and has two main islands. These islands are called Open University Island and Utopia Village.

On the other side AIOU has also started virtual teaching. Department of Computer Sciences initiated E-learning activities in 1999 and the idea of Open Learning Institute of Virtual Education (OLIVE) was approved in 2001. Initially course materials and Learning Management System (LMS) were developed for E-education. Online classes were conducted at AIOU main campus, Lahore region and from other places during four semesters from spring, 2002 to autumn 2003. Based on the experiences, Department of Computer Sciences decided to offer Post Graduate Diploma in Computer Sciences in online mode from spring 2005 semester due to effectiveness of E-learning low cost, fast communication methods and automated

performance measurement mechanisms that enhance the quality of learning. examinations and coursework.

The Open University UK modules are often assessed using an equal weighting of between two and seven tutor marked assignments (TMAs) and, occasionally, may also include up to six multiple-choice or "missing word" 100-question computer marked assignments (CMAs). The examinable component is usually a proctored three-hour paper regardless of the size of the module but an increasing N of modules instead have an EMA (End of Module Assessment) which is similar to a TMA, in that it is completed at home, but is regarded as an exam for grading purposes. On the other side AIOU has somehow similar system of assessment as Open University U.K. There is also a TMA (Tutor Marked Assignment) which has 40% weight age but computer marked assignments are not usually used except in OLIVE. End Term Exam has 60% marks with three hour exam like EMA in Open University UK.

2.15.3 Comparison of AIOU with Open University Malaysia

Open University Malaysia or OUM is the 7th Malaysian private university and it is owned by the Multimedia Technology Enhancement Operations a consortium of 11 public universities in Malaysia. It leverages on the quality, prestige and capabilities of its owners. Open Entry refers to non-restrictive entry requirements for a degree program, applicable to adults who have learning experience which can be assessed and matched against the learning outcomes of an academic course. On the other side certificate or degree of last passed exam is require for admission in AIOU.

Face to face meeting with tutors are held to discuss about subject and assignments in OUM. Students are required to participate in an Online Forum using

Learning Management System and discussed among each other and with their tutors and peers on their subject matters and on their assignment. AIOU also arranges face to face meetings with tutors and e-learning is also a part of open learning institute of virtual education.

Students do not have to come over for their tutorials but they still need to come for their tests. They learn by using participating in the Learning Management System and using their own modules. Likewise in AIOU students are not restricted to come for their tutorials and they just have to come for examination.

The learning materials are designed in downloadable formats that can be accessed using a desktop or laptop computer. You could then opt to transfer these contents into your hand phone to view them. All you need is a hand phone equipped with the necessary features. This technology is not started yet in AIOU.

OUM has a strong network of learning centre nationwide. These learning centers are located at major cities and towns, from Peninsular Malaysia to Sabah and Sarawak. OUM has 53 Learning Centers nationwide fully equipped with tutorial rooms, computer laboratories, library and Internet facilities. AIOU has also its study centers fully equipped with computer labs and tutorial rooms.

2.15.4 Comparison of Virtual University of Pakistan with Athabasca University

Athabasca University is situated in Athabasca. It is very well known institution of distance education. It is also recognized as one of the fastest growing universities. Courses are offered by the University both in French (The national language of Athabasca) and English. As in Virtual University of Pakistan, the courses are offered both in English and Urdu (The national language of Pakistan).

Athabasca University is especially recognized because of the students who are overseas and need a degree to get ahead in their careers, those looking after family members and the students who are working full time. This component of Athabasca University is also similar with that of Virtual University of Pakistan as disable students, students who are working full time, and overseas students are getting degrees from Virtual University of Pakistan.

There are also some differences in both of the universities for example to get admission in Athabasca University, the age limit is sixteen years but no high school diploma is required. On the other hand, to get admission in Virtual University of Pakistan there is no age limit and high school certificate is required.

Athabasca University employs an open range of distance learning methods, and relies on a variety of information technologies to deliver course materials and teaching to students. Multi-media online activities web, E-mail, print materials, Internet, CD-Rom, audio video tapes, computer software, audio video conferencing, and TV or radio are used for delivery of courses. On the other side all these media are used in Virtual University of Pakistan for distance learning.

Any exacting course might use a mixture of delivery methods. If a student registers for an online course, he will need access to a computer with an Internet connection. Assignments, midterm and final term exams are used as assessment tools, within the university. Same is practiced in Virtual University of Pakistan.

Athabasca University offers awards to its students on the basis of their outstanding performance. Virtual University of Pakistan has also started to offer scholarships for its needy students and also for those who shown outstanding performance in their studies.

2.15.5 Comparison of Virtual University of Pakistan with Hong Kong Virtual University

The Hong Kong Virtual University was previously known as Cyber University. It was established in 2001. The courses of Hong Kong Virtual University are delivered not only through online media, but also through face to face teaching. This teaching approach is known as Blended Learning Mode (BLM). Lectures are delivered through E-Learning Open Platform (e-LOP) which is an open source learning management system. It has been developed by Hong Kong University. On the other side in Virtual University of Pakistan, courses are delivered through internet, radio and T.V. and there are no face to face classes in Virtual University of Pakistan. There is also a Learning Management System (LMS) like e-LOP of HKVU. It is very comprehensive system of Virtual University of Pakistan through which students solve their queries', submit their quizzes and assignments and participate in question answer sessions of their classes.

Assessment is carried out through assignments, quizzes and examination in Hong- Kong Virtual University. Same is practiced in Virtual University of Pakistan

2.15.6 Comparison of Virtual University of Pakistan with Global Virtual University

The Global Virtual University (GVU) is a consortium/ group of universities under the patronage of the United Nations University (UNU) that works together, to increase learning for environmental sustainability. The mission of Global Virtual University is to increase people's understanding and involvement in finding solutions for environment and development issues, through a range of online study programs and courses offered by partner universities. The consortium acknowledges the

significance of education for development. It has mainly been designed to meet the educational needs of the developing world.

Online teaching is used for Pedagogical Practices of GVU. To work in a group like combined assignments, and debates, are important features of GVU. While combine assignments and work in groups is not practiced in Virtual University of Pakistan. Students' meetings with their class fellows are conducted in virtual classrooms in GVU. In Virtual University of Pakistan, Students can meet their class fellows in virtual classrooms and also in computer labs but these meetings are not arranged by the University. Sometimes face to face sessions are arranged in the beginning of course in Global Virtual University. While in Virtual University of Pakistan this concept is not in practice.

The degrees, certificates, or diplomas are awarded by one of the partner universities of the GVU, which is considered as the "home" university. In the case of Virtual University of Pakistan, the V.U is an autonomous body it awards degrees and diplomas by itself.

2.16 RELATED RESEARCH STUDIES

1. Jumani (2003) conducted a study on, "Issues and Problems Pertaining to Distance Education in Pakistan", the study concluded that Distance Education is provided to diversified target groups of the people. This indicates that Distance Universities in Pakistan cater the needs of the students. The researcher also found that rural population is the beneficent target population from Distance Education, but, there is a need of careful planning and monitoring. This research also tried to investigate the weaknesses and strengths of the distance education in Pakistan. Hence, it has found in the study that students of distance education are badly affected by the

delivery system. One of the major reasons is remote and far-flung areas where the instructional material is to be mailed. This is a major problem of distance education system in Pakistan.

The findings of Jumani's research highlighted the strengths and weaknesses of Distance Education in Pakistan which has close relation with conducted research as it was one of the objectives of conducted research to find out the strengths and weaknesses of Pedagogical and Assessment Practices of AIOU and VU. So Jumani's research will provide base and help to conduct the research.

2. Hussain (2006) conducted a study on, "Problems Faced by Distance Education Tutors in the Bahawalpur Region", the study concluded that students' poor handwriting creates difficulty for tutors to evaluate the assignments. The students mostly copy from the text, which is also troublesome for tutors while comparing the problems of the students of AIOU and V.U. This is a question on quality of education. It was further found that students' little interest and enough reference material is not available. Study centers are far away from the residences of the students. The researcher further found that tutor's remuneration is low and this poor financial provision affects the tutor's performance. It was also found that tutors are not aware about Distance Education, and tutors get tutorship due to personal relationship with the staff of the regional office. This situation creates problems for provision of quality of education in Pakistan. Role of tutor is very crucial in both the universities i.e AOIU and V.U because the system depends upon the competency level of the tutors and professional who are supposed to teach the students. The findings of Hussain's research have close relation with conducted research as problems explored will be helpful for conducted study while exploring the weaknesses of AIOU and V.U.

3. Ali, (1999) conducted a study on, "Problems faced by the Student of Distance Education of Lahore Region". The study concluded that admission fee was high, self assessment questions were useful to provide feedback, questions of the assignment were clear. The study further concluded that tutors did not return the evaluated assignment within 15 days. Guidance and counseling was provided in the center. These conclusions indicate that students are facing many problems in distance education. Again the findings of Ali's research highlighted the problems which are being faced by the students of Distance Education as the conducted research is a Comparative Study of Pedagogical and Assessment Practices of Distance Universities which have direct relation with the academic performance and problems of the students.

4. Salfi (1999) conducted a study on, "An Investigation into the problems faced by the students of AIOU of Kasur District". The findings of the study indicate that students are facing many problems, which include: Admission Problems, Postal Problems, Tutor Problems, Study Center Problems, Book Problems and Assignment Problems, etc. Findings of Salfi's research have great relevance with the conducted research as he explored the problems of the students of AIOU who were the respondents of conducted research and which is the objective of conducted research to find out the weaknesses of Pedagogical and Assessment Practices of AIOU and V.U.

5. Mehboob and Sangi (2010) conducted a study on comparative analysis of Virtual and Traditional Learning Environment in Pakistan. The researcher found that majority of the students preferred the virtual learning environment, especially, male students, even those who learned in traditional learning environment, preferred virtual learning environment. It can be concluded on the basis of this finding that virtual learning is flexible and comfortable to the students as compared to traditional learning

in the formal universities. The study further found that students study in Virtual Learning Environment (VLE) are more satisfied from the learning environment, this indicates that VLE has been designed considering the needs of the students. It is very interesting finding that the performance of VLE students is better than students of Traditional Learning Environment TLE. This is a big question mark on the performance of traditional students learning. It is commonly believed that students of formal universities perform much better than the distance universities. The findings of Mehboob and Sangi's study have immense importance for insight development for conducting Comparative study of Allama Iqbal Open University and Virtual University of Pakistan.

Review of literature leads the researcher that education has varied from generation to generation, and from situation to situation but the main point of emphasis has always been same that is mental and physical growth of the individuals. All over the world, all human beings need education to acquire a broad base of skills, attitudes and knowledge, on which they could build better lives. Distance Education focuses on the needs of those people who could not continue their education due to economic constraints, after completing a certain level of education.

Pakistan is a developing country. A large population is underprivileged and they have to do jobs to continue their life circles. The purpose of their lives is to live alive. In this situation no one can think about education. It causes high illiteracy rate in Pakistan. The second largest class is lower medium class. All family members in this class including children have to do jobs for survival. They have some sense of education so they send their children to schools but most of them have to discontinue their studies because after grade eight they could not afford the charges. Distance Universities provide an opportunity to them to enhance their qualification with

affordable charges through flexible manner, as there is no restriction to take regular classes. They can continue their education by joining different programs. The idea of Distance Education justifies that it is a further extension, of one's cognitive development. (Rashid 2001).

It can also be concluded from review of literature that Pedagogy is not only a teaching activity which is organized to impart knowledge and skills to the students but also has a meaningful value in which content, teaching methods students' achievements and their ways of learning are judged. So not only ways of teaching and contents are concerned but Assessment of students is also included in Pedagogy.

There are several ways and means which can be adopted to facilitate Pedagogical and Assessment Practices. It is fact that there is a great difference in the Pedagogical and Assessment Practices of Open and Virtual Education System. Allama Iqbal Open University uses Tutorials, Correspondence, Radio, T.V, CDs, DVDs, Text Books, Assignments, Workshops, and Projects and final exams for imparting education. Before a decade there was no face to face teaching component in Pedagogical Practices of AIOU but keeping in view the requirements of programs. now Computer Science and Management Science Programs are offered in face to face mode in study centers of AIOU. On other side Pedagogical and Assessment Practices of Virtual University of Pakistan are different from that of Allama Iqbal Open University. Online teaching through Learning Management System, discussions through Discussion Boards, Radio, T.V, C.Ds and DVDs are used for recoded lecturers. Assignment, quizzes, and mid-term and final exams are also included in Pedagogical and Assessment Practices of Virtual University of Pakistan. It is also found in literature review that Pedagogical and Assessment Practices in all over the world are somehow similar in Distance Universities. Now Open Universities of the

world are also using internet and Virtual Learning Environments. Keeping in view the world wide perspective of Open Universities, Allama Iqbal Open University has also started an institute named as Open Learning Institute of Virtual Education with the help of Common Wealth of Learning. Online teaching in two programs i.e. COL MBA and COL MPA is provided through LMS in this institute.

Main components of Pedagogical Practices are Tutor, learner and contents. The needs of learner provide results to identify suitable fusion of medium of delivery and design of contents. Most important is while designing Pedagogical Practices is to determine the learning outcomes of a unit of delivery, media selection and content design and development. The use of multimedia like internet, T.V, Radio, CDs, DVDs and Textbooks etc, lead to a difficulty in updating and synchronizing the resources. Achieving the learning goals by using optimal blend of content and design strategy with media constrains is challenging target as all contents are not easy to teach through same mechanism. It is challenging to decide that what are the needs and demands of a subject to deliver through a suitable mechanism.

Assessment Practices of Distance Universities in Pakistan also have a big challenge. Formative and Summative assessments are conducted by different tutors who cannot judge the whole performance of the student. Allama Iqbal Open University has only one component regarding formative assessment i.e. assignment, which is assessed by a tutor who does not know about the student and cannot judge whether the quarries in assignments solved by the student himself or other person or it is just copy paste from the text. Likewise tutors of Virtual University of Pakistan sitting off scène of the environment cannot judge whether students solved the quizzes themselves or their friend attempted.

Web based learning crosses the geographical and cultural boundaries which results in multilingual and multicultural class that are quite uncommon in Pakistan. The phenomenal problem will be faced by the Tutor in handling this class with its diversity and sometimes it becomes an obstacle to deliver the contents efficiently and effectively. In this regard tutor has well trained to understand all theses constraints. Another issue is well rehearsed and timed recorded lectures in Virtual Education System. Tutor should well train to record his lecture and to complete it in time. Mostly tutors of Virtual Education System in Pakistan are those came from formal system of education. They have a habit to take face to face classes. It is not easy job to record lectures without a class in front. Proper rehearsal and training is required in this regard.

Being a developing country Pakistani citizens are not well aware of Virtual System of Education. Mostly people are living in remote areas and do not have computers and internet facilities. Virtual System of Education has been introduced since one decade yet no meaningful enrolment in this system is seen. There is a need to introduce the system of Virtual Education to the masses and make it easy and interesting for them to become a part of this modern education system. Virtual Campuses may be open in rural areas of the country so that students, who have not computer and internet facility in their homes, can facilitate from Virtual Campuses. Pakistan has very low literacy rate. It cannot become a developed country without a reasonable literacy rate. Formal system of education is not meeting the challenges of low literacy rate. Majority of People prefer Allama Iqbal Open University and do not approach to Virtual University of Pakistan. Although, Virtual University has reasonable fee charges and has an understandable system of education yet the hesitation is big hurdle between students and Virtual System. Steps may be taken to

familiarize this system so that both Distance Education Universities may play a vital literacy rate in the country.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter explains the research methodology used in the study. The study was aimed to compare the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. The study also investigated the strengths and weaknesses of pedagogical and assessment practices of both the universities. Therefore, this research was designed by adopting quantitative and qualitative approaches for data collection. The detail of the research methodology is given below.

3.1 METHODOLOGY

There are several methods of study through which researchers evaluate different aspects of education. Educational researchers know that, educational research must be conducted in a systematic manner which is called Scientific Method. Scientific Method uses directed questions and manipulation of variables to systematically find information about the teaching and learning process. In this scenario questions are answered by the analysis of data that is collected specifically for the purpose of answering these questions. The two main types of data that are used under this method are qualitative and quantitative.

Qualitative Research

Qualitative research uses data which is descriptive in nature. Tools that educational researchers use in collecting qualitative data include: observations, conducting interviews, conducting document analysis, and analyzing participant products such as journals, diaries, images or blogs,.

Types of Qualitative Research

- Case study
- Ethnography
- Phenomenological Research
- Narrative Research
- Historical Research

Quantitative Research

Quantitative research uses data that is numerical and is based on the assumption that the numbers will describe a single reality. Statistics are often applied to find relationships between variables.

Types of Quantitative Research

- Descriptive Survey Research
- Experimental Research
- Single - Subject Research
- Causal - Comparative Research
- Co-relational Research (L.R.Gay)

Survey Study Method

Survey or descriptive research involves collecting data in order to answer questions about the opinions of people about some topic or issue. A high percentage of all research studies are "Survey Studies". Surveys are used in many fields, including education, Political Science, Sociology and Economics. Survey research is not as simple as it appears. It is guided by the basic steps of the scientific and disciplined inquiry approach. Survey research is more time efficient. It also provides more depth in information. Allow the interviewer to obtain visual cues. It is very

feasible, less time consuming. Survey research leads to prescriptions that instructional designers and educators can heed as they consider future direction. (Khawaja,1990).

Keeping in view the above mentioned strengths, time and limited resources, the survey study method was chosen by the researcher for the study. Data were collected from the students of AIOU and VU for Fall Semester 2009, and their Tutors. The following steps were included in the research methodology:

3.2 POPULATION

The population of the study was comprised of all the students of AIOU and VU enrolled in the Fall Semester 2009 for the programs of BBA, MBA, BSCS, MSCS and their tutors. Detail is as under:

University	Level	Program	No. of students	No. of tutors
AIOU	Bachelor	BBA	1025	45
	Bachelor	BSCS	1075	48
	Master	MBA	945	56
	Master	MSCS	875	10
Total	———	———	3920	159
VU	Bachelor	BBA	500	10
	Bachelor	BSCS	500	09
	Master	MBA	400	16
	Master	MSCS	300	11
Total	———	———	1700	36

50 students from each program of AIOU and 25 students

3.3 SAMPLE

Both universities were distance education universities. Students were scattered and non availability of students was obvious. There were 81 programs offered in AIOU, on the other side only 24 programs were offered in VU. It was a comparative study, so the similar programs were selected i.e. BBA, MBA, BSCS and MSCS. MSCS program was offered only in main campus of AIOU Islamabad and other three selected programs were offered in Rawalpindi city, in the approved study centers of AIOU; so two cities, Rawalpindi and Islamabad were selected for data collection. Convenience sampling is the major source of bias in educational research studies; it basically involves using as the sample whoever happens to be available. Two major examples of convenience sampling are the use of volunteers and use of existing groups just because they are there. (L.R.Gay). Although it is biased technique yet there was no other solution to collect data from scattered sample who were not commonly available in the field so it was decided that those students and tutors of both universities who would be available there in the campuses and those tutors of VU, who would reply the questionnaires by email, would be selected as sample of the study. After several visits, very few students were found in the campuses of both universities and very few replies of the tutors of VU were received through email. So it was decided that at least 50 students from each program of AIOU and 25 students of each program of VU, 30 tutors of AIOU and 15 tutors of VU would be included in the sample.

Detail of sample as under:

University	Level	Program	No. of Respondent Students	No.of Respondent Tutors
AIOU	Bachelor	BBA	50	07
	Bachelor	BSCS	50	07
	Master	MBA	50	08
	Master	MSCS	50	08
Total	----	-----	200	30
VU	Bachelor	BBA	25	03
	Bachelor	BSCS	25	04
	Master	MBA	25	03
	Master	MSCS	25	05
Total	---------	---------	100	15

3.4 Research Instruments

The research instruments were constructed on the basis of objectives of the study for the collection of data. Experts in the field were consulted in this regard. Afterwards under the guidance of supervisor of the study, instruments were finalized. Instruments were comprised of both qualitative and quantitative aspects i.e. questionnaires (quantitative) interviews (qualitative).

i. Questionnaire

Shami (1998,p.29) stated, "a questionnaire is a planned and written set of questions related to an area of interest". This tool involves the preparation of questionnaires that are often lengthy and therefore time consuming at the time of its preparation but inexpensive and efficient method of data collection.

There are several weaknesses of the questionnaire method. Critical weakness of said method is that it is not participatory because respondents are bound to answer the question instead of participating. There are some disadvantages of questionnaire such as "response rate may be small and cannot probe or explain items". However, in-spite of these weaknesses, questionnaire is the most popular research instrument for data collection of descriptive research.

ii. Interview

The next important instrument is interview, which can develop insight for in-depth analysis of the situation. Interviews are more participatory than questionnaires. According to Shami (1998) "interview can probe and explain items, usually high return rate can be recorded for later analysis and flexibility of use". However, this method of data collection has some limitations. Shami (1998) defines, "it is time consuming, validity and reliability of data depends upon the interviewer's skill and biasness".

The major strength of interview is the interviewer can guess the truth of answer through eye contact and gestures of the interviewee. Keeping in view the strengths of questionnaire and interview the researcher selected both tools for this survey study.

Questionnaires for Students and Tutors were constructed and interviews of Manager VU Rawalpindi Campus and Regional Director AIOU Rawalpindi region were conducted.

Two types of questions were included in the questionnaires i.e. open-ended and close-ended questions. Open-ended questions were related with the strengths and

weakness of the pedagogical and assessment practices of AIOU and VU. Both categories that were the students and the tutors provided their views in different measurable forms. The close-ended questions were designed to get information regarding Pedagogical and Assessment Practices used in both the universities.

The interviews were also related with the Pedagogical and Assessment Practices used in both the universities, and the strengths and weaknesses of Pedagogical and Assessment Practices of both the universities.

3.5 Validity of Research Instruments/Tools

- Pilot Testing of Questionnaire

After initial construction of the questionnaires, each questionnaire was presented to experts in the field of pedagogy and assessment in distance education for professional validation through content validity. According to Gay, content validity is the degree to which a test measures an intended content area. Content validity is determined by expert judgment. Suggestions of expert were accommodated in the respected tool. Preliminary designed questionnaires were pilot tested on population which was comprised of five tutors of each selected university, seven students of AIOU and eight students of VU. After pilot testing, the instruments were improved. Again these instruments were discussed with the supervisor and experts, desired changes were incorporated in the instruments and finalized.

- Pilot Testing of Interview

The respondents of the study were Regional Director of AIOU (Rawalpindi Region) and Manager of V.U (Rawalpindi Campus) therefore an interview was designed to collect information from these respondents as the number of respondents

was limited therefore pilot testing of interview was conducted from Islamabad Region of AIOU and Islamabad Campus of V.U. During conducting the interview few questions were not clear, which were improved in the light of discussion with experts and supervisor.

3.6 Reliability of Research Instruments/Tools

- **Questionnaire for Students**

As a result of pilot testing and after calculating reliability of sample questionnaires, only those statements were retained in the questionnaires which were found statistically significant with high reliability and correlation among the items. then research questionnaire for the students were finalized.

Table regarding details of Questionnaire for Students:

Pedagogical and Assessment Practices	No. of Statements	Scale
Use of correspondence/ self learning material	6	5 (point)
Lecture through Media	3	5 (point)
Use of multimedia approach to instruction	11	5 (point)
Use of Tutorial Instruction	4	5 (point)
Provision of group Training Workshop	3	5 (point)
Use of Online Teaching	3	5 (point)
Provision of Virtual Learning Environmental System	4	5 (point)
Use of Discussion Board	5	5 (point)
Practice of content development and lecture recording system	5	5 (point)
Provision of Continuous Assessment	5	5 (point)

Final Assessment/Examination	2	5 (point)
Proportionate Weightage for Final Assessment	3	5 (point)
Weaknesses of Pedagogical Practices	1	5 (point)
Strengths of Pedagogical Practices	1	5 (point)
Suggestions for improvement of Pedagogical Practices	1	5 (point)
Suggestions for improvement of Assessment Practices	1	5 (point)
Problems of distance university	1	5 (point)

Reliability of instrument which was designed regarding students' views was calculated by using statistical package for social sciences (SPSS). The result is presented in the following table.

Table: Reliability of Questionnaire for Students

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standarized Items**	**No. of Items**
0.980	0.997	41

It was found that there was high reliability in the research instrument. Moreover, statistically high correlation among the items was found after deletion of three items as desired by the experts. Details of the results calculated regarding reliability can be seen in Appendix-XII.

- **Questionnaire for Tutor**

Pilot testing of questionnaire was conducted. The items which were found statistically significant with high reliability and correlated were selected for the research questionnaire for the Tutors then finalized.

Table regarding details of Questionnaire for Tutors

Pedagogical and Assessment Practices	No. of Statements	Scale
Use of correspondence/ self learning material	6	5 (point)
Lecture through Media	3	5 (point)
Use of multimedia approach to instruction	11	5 (point)
Use of Tutorial Instruction	4	5 (point)
Provision of group Training Workshop	3	5 (point)
Use of Online Teaching	3	5 (point)
Provision of Virtual Learning Environmental System	4	5 (point)
Use of Discussion Board	5	5 (point)
Practice of content development and lecture recording system	5	5 (point)
Provision of Continuous Assessment	5	5 (point)
Final Assessment/Examination	2	5 (point)
Proportionate Weightage for Final Assessment	3	5 (point)
Weaknesses of Pedagogical Practices	1	5 (point)
Strengths of Pedagogical Practices	1	5 (point)
Suggestions for improvement of Pedagogical Practices	1	5 (point)
Suggestions for improvement of Assessment Practices	1	5 (point)
Problems of distance university	1	

Table: Reliability of Questionnaire for Tutors

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standarized Items**	**No. of Items**
0.980	0.997	41

It was found that there was high reliability in the research instrument. Moreover, statistically high correlation among the items was found after deletion of three items as desired by the experts.

- **Interview**

The interview was finalized in the light of discussion with experts and supervisor. Only those questions were retained in the interview, which were found comprehensively understandable.

3.7 PROCEDURE FOR DATA COLLECTION

The study was conducted in Rawalpindi and Islamabad. The researcher personally visited the campuses of both the universities. Academic approval for collection of data was taken from both the universities. A covering letter was prepared along with the questionnaires describing that information provided by the respondents will not be used for any other purpose except research, no personal question regarding respondents will be asked, keeping in view Pakistani perspective names and other relevant personal data of female tutors and students will not be asked and any personal information will not be included in the questionnaire. Convenience sampling technique was used. The researcher visited campuses of both universities and collect back questionnaire after multiple visits.

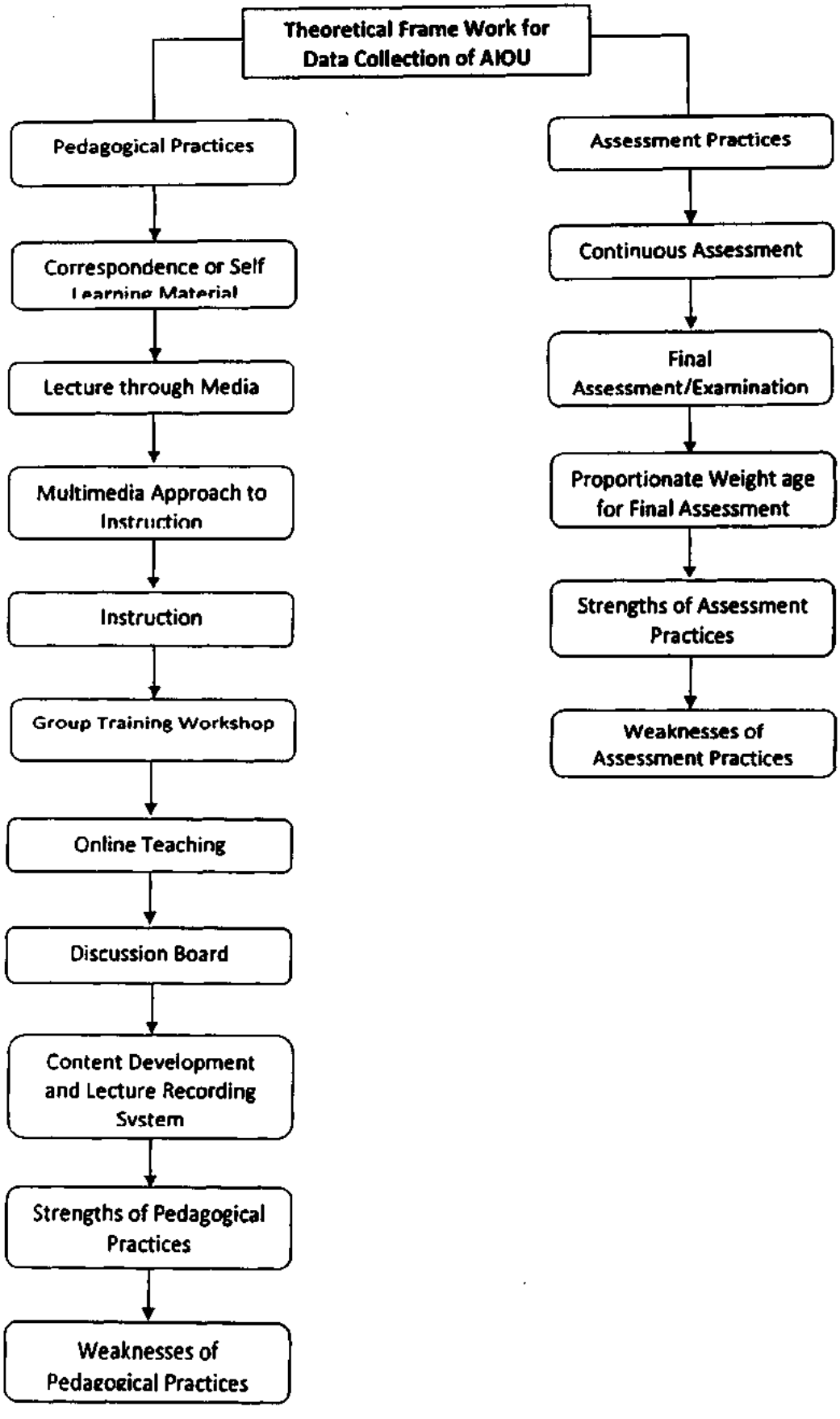
As for as V.U is concerned, the researcher used e-mail to collect data from tutors of V.U and just 15 tutors of V.U respond. The researcher went herself in the field and visited Virtual Campuses to collect data from students. There were four campuses of V.U in Rawalpindi and one in Islamabad. There were no respondents in Islamabad campus during the first visit, and after multiple visits to the campus few respondents were found .The main head quarter was located in Satellite Town Rawalpindi, where many respondents were found in the morning but in the campus of Khyber Institute of Professional Skills, only two respondents were found. The research instruments were given to the in charge of the campus, and collected back after a week. The required number of respondents was also not found in two more campuses located in Saddar Rawalpindi. According to the guidance of the campus manager, the researcher visited again in the evening as most of the respondents were job holders, and they came to the campus in the evening and then required number of respondents was found. In this way the researcher personally collected the data from the respondents.

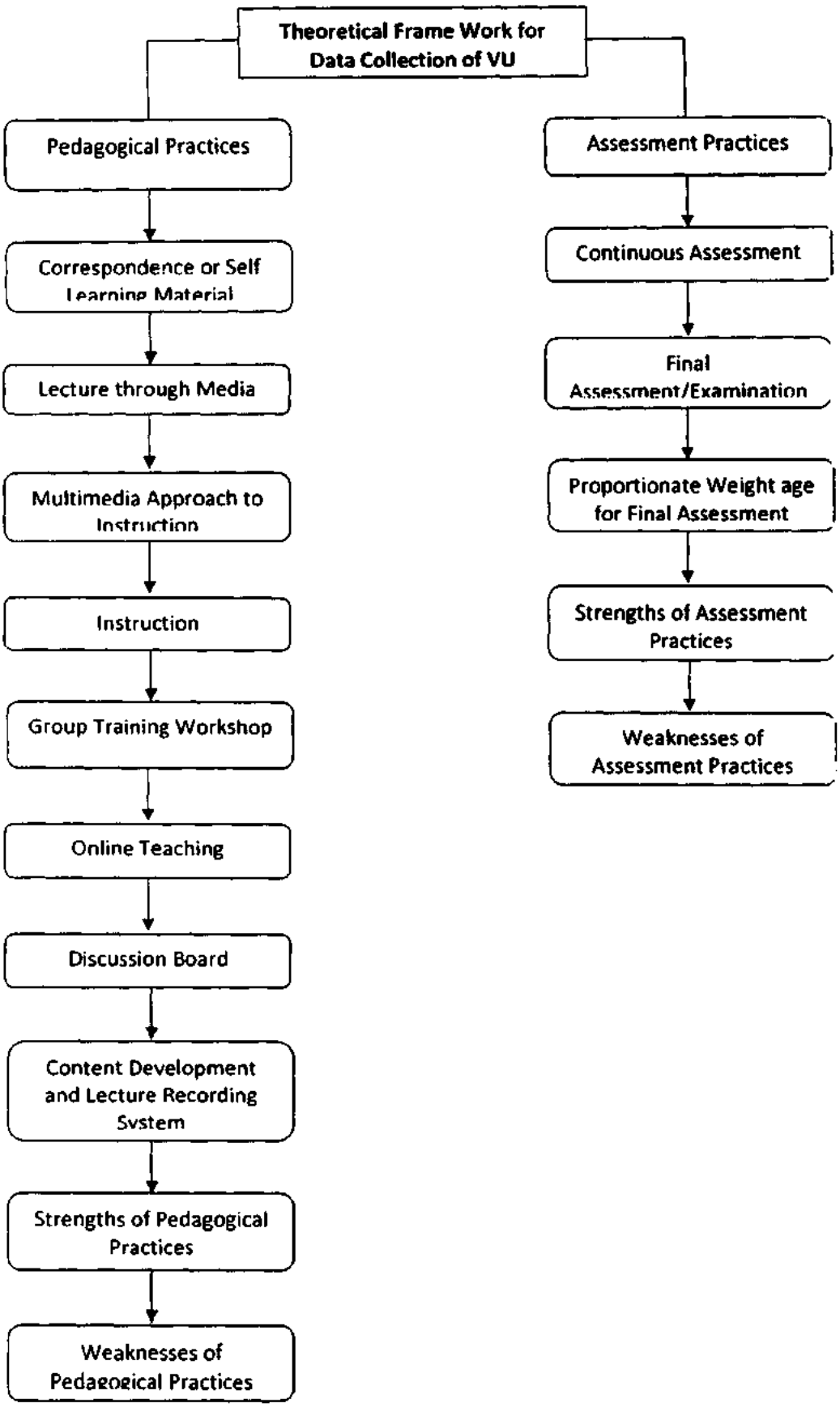
The Researcher was suggested by the administrative staff of AIOU that e-mail is not commonly used in the University so get data personally. So during the first visit of approved study center of Allama Iqbal Open University Rawalpindi, 23 respondents (20 students and 3 tutors) were found, and the coordinator told that most of the respondents will be found on Monday, as most classes of selected programs were held on Monday. The researcher visited the campus again, and found a reasonable number of respondents there. After multiple visits, the research instruments were given to the coordinator and collected after one week. For the data collection of MSCS from AIOU main campus Islamabad the researcher went there personally, and collected data in three days. The data of the tutors of AIOU was also

collected through personal visits to the tutors in approved study centers, and the main campus of AIOU. Tutors of both universities filled up multiple choice items of the questionnaires but none of them filled up open ended questions.

Interview of the Regional Director (Rawalpindi Region) of AIOU was conducted by the researcher in the main campus Islamabad.

Interview of Manager Virtual University Rawalpindi Campus, was conducted in Virtual Campus Rawalpindi.


Theoretical Frame Work for Data Collection of AIOU
Pedagogical Practices
Correspondence or Self Learning Material
Lecture through Media
Multimedia Approach to Instruction
Instruction
Group Training Workshop
Online Teaching
Discussion Board
Content Development and Lecture Recording System
Strengths of Pedagogical Practices
Weaknesses of Pedagogical Practices
Assessment Practices
Continuous Assessment
Final Assessment/Examination
Proportionate Weight age for Final Assessment
Strengths of Assessment Practices
Weaknesses of Assessment Practices


Theoretical Frame Work for Data Collection of VU
Pedagogical Practices
Correspondence or Self Learning Material
Lecture through Media
Multimedia Approach to Instruction
Instruction
Group Training Workshop
Online Teaching
Discussion Board
Content Development and Lecture Recording System
Strengths of Pedagogical Practices
Weaknesses of Pedagogical Practices
Assessment Practices
Continuous Assessment
Final Assessment/Examination
Proportionate Weight age for Final Assessment
Strengths of Assessment Practices
Weaknesses of Assessment Practices

3.8 DATA ANALYSIS AND INTERPRETATION

Data collected through the above mentioned instruments were tabulated and analyzed by using percentage and mean score. Value allotted to each response was:

Strongly agree	=	5
Agree	=	4
Undecided	=	3
Disagree	=	2
Strongly disagree	=	1

The mean score of each item was calculated by using formula:

$$\text{Mean Score: } \frac{FSA \times 5 + FA \times 4 + FUNC \times 3 + FDA \times 2 + FSDA \times 1}{N}$$

Reliability of research instruments was calculated by using Statistical Package for Social Sciences (SPSS). As for as validity of research instruments is concerned that was determined through pilot testing of interview and questionnaire. Triangulation cross checking was also done while relating the findings of research with the related researchers in literature review and objectives of the study.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

This chapter presents data analysis and interpretation of data. The study was designed To Compare Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. The study further investigated the strengths and weaknesses of Pedagogical and Assessment Practices of both universities. This chapter is divided into three sections. Section 'A' deals with analysis of questionnaire of students of both universities, section 'B' deals with analysis of questionnaire of Tutors of both universities and section 'C' deals with analysis of interviews of Manager of VU and Director AIOU. Comparative analysis of data collected was separately made by calculating mean and percentage.

Section A (Comparative Analysis of Questionnaire of Students)

The analysis of the students' questionnaire is presented in the following tables.

Table 4.1: Correspondence or Self Learning Material

	AIOU		VU	
Statement	N	Mean	N	Mean
Effective use of textbooks	200	4.5	100	4.3
Use of study material	200	4.6	100	4.5
Effective use of study guides	200	4.5	100	4.1
Effective use of CDs	200	4.2	100	4
Effective use of DVDs	200	4	100	4

Table 4.1 shows that text books, supplementary study material. study guides CDs and DVDs were effectively used in both universities. Mean scores were similar which indicates that there was no difference of opinion of the students of both universities.

Table 4.2 Lecture through Media

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of T.V to deliver recorded lectures	200	3.4	100	3.6
Use of Radio to deliver recorded lectures	200		100	

Table 4.2 shows that T.V and radio were used in both universities to deliver recorded lectures. Mean score was same which indicates that there was no difference in opinion of students of both universities.

Table 4.3 Multimedia Approach to Instruction

	AIOU		VU	
Statement	N	Mean	N	Mean
Effective use of self instruction material	200	4.5	100	4
Effective use of counseling session	200	3.6	100	3.1
Use of Internet for teaching	200	3	100	4
Use of E-mail for teaching	200	3	100	3.3
Effective use of audio cassettes of lesson	200	2.4	100	3.2

Table 4.3 shows that self instructional material, counseling sessions and E-mail were used in both universities as mean scores were almost same. Internet and audio cassettes of lesson were used only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.4 Use of Tutorial Instruction

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of face to face teaching	200	5	100	2.1
Instruction on assignments	200	5	100	2
Discussion on difficult concepts	200	4	100	4

Table 4.4 shows that face to face teaching and instruction on assignments was provided only in AIOU. The difference of mean score was significant at 0.05 levels.

While discussion on difficult concepts was arranged in both universities as mean score was same.

Table 4.5 Use of Group Training Workshop

	AIOU		VU	
Statement	N	Mean	N	Mean
Group training workshop	200	5	100	2
Group Assignment	200	5	100	2

Table 4.5 shows that group training workshops and group assignments were used only in AIOU. The difference of mean score was significant at 0.05 levels.

Table 4.6 Use of Online Teaching

	AIOU		VU	
Statement	N	Mean	N	Mean
Provision of online Teaching	200	2	100	4

Table 4.6 indicates that online teaching was used only in VU. The difference of mean sore was significant at 0.05 levels.

Table 4.7 Virtual Learning Environmental System

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of client server architecture	200	2	100	4
Use of server software package	200	3	100	5
Use of LMS	200	2	100	4

Table 4.7 shows that client server architecture; server software package and learning management system were used only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.8 Discussion Board

	AIOU		VU	
Statement	N	Mean	N	Mean
Group assignment on discussion board	200	2	100	4
Group discussion on discussion board	200	3	100	4
Research work on discussion board	200	3	100	3
Activities on discussion board	200	2.3	100	2.4

Table 4.8 shows that group assignments, group discussions, and activities on discussion boards were arranged only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.9 Content Development and Lecture Recording System

Statement	AIOU		VU	
	N	Mean	N	Mean
Well rehearsed and timed recorded video of each lesson	200	1	100	2
Use of TV inserts	200	3	100	3
Use of web inserts	200	3.3	100	3.4

Table 4.9 indicates that well rehearsed and timed recorded videos of lessons were used only in VU as mean score was high while TV inserts and web inserts were used in both universities as mean scores were same.

Table 4.10 Assessment Practices

	AIOU		VU	
Statement	N	Mean	N	Mean
Assessment through assignments	200	4.5	100	4
Provision of academic guidance	200	4	100	4
Use of project work	200	3	100	3

Table 4.10 shows that assessment through assignments was used in both universities as mean scores were similar, academic guidance was also provided to the

students of both universities as well as project work was assigned in both universities as mean scores were same.

Table 4.11 Final Assessment or Examination

	AIOU		VU	
Statement	N	Mean	N	Mean
Final Examination at the end of semester	200	5	100	5

Table 4.11 shows that final assessment or examination was held in both universities at the end of semester mean score was same.

Table 4.12 Proportionate weight age for final Assessment

Name of university	Assignment	Quiz	GDB	Midterm	Final exam
VU	10%	10%	5%	25%	50%
AIOU	40%	-------	--------	---------	60%

Table 4.12 shows that proportionate weight age of marks was different in both universities. VU gives 10% toassignments,10% to quiz 5% to GDB, 25% to midterm and 50% to final exam while there are just two components of assessment in AIOU 40% to assignment and 60% to final exam.

Open ended questions were asked from the students and tutors of both universities about strengths and weaknesses of pedagogical and assessment practices of both universities. Tutors of both universities did not reply, students responses were diversified so their analysis was presented separately. Percentage was used to analyze open ended questions.

Table 4.13 Strengths of Pedagogical and Assessment Practices of V.U

Sr. #	Strengths	Percentage
1.	Easy learning, no time and place restriction.	80%
2.	Flexible pedagogical practices are best for job holders.	70%
3.	Lectures through television help in better learning.	45%
4.	Lectures can be understood anytime with the help of CDs and Internet.	43%
5.	Different and new styles of pedagogy create interest of learning in the students.	30%
6.	Assignments are best way of assessment.	27%
7.	Tutor can assess the intelligence of students through quizzes.	25%
8.	Online exams provide good assessment practice as there is no chance of cheating.	22%
9.	Moderated Discussion Board helps Tutors and students to interact with each other.	15%
10.	Assessment of mid-term and final term is very fair no bias element is found.	10%

Table 4.13 shows that 80% of the students were of the opinion that there was no restriction of time and place for getting education.70% were of the view that flexible pedagogical practices are best for job holders.45% were of the view that lectures through television help them in better learning. 43% said that lectures can be understood anytime with the help of CDs and Internet. 30% of them replied that different and new styles of pedagogy create interest of learning in the students. 27% were of view that assignments are the best way of assessment. 25% said that Tutors can assess the intelligence of students through quizzes. 22% replied that online exams provide good assessment practice as there is no chance of cheating. 15% were of the

view that Moderated Discussion Board helps Tutors and students to interact with each other. 10% said that assessment of mid-term and final term was very fair as no bias element is found.

Table 4.14: Weaknesses of Pedagogical and Assessment Practices of V.U

S.No	Weaknesses	Percentage
1.	Sometimes slow Internet service creates problem during quizzes, because the quiz has a limited solving time.	72%
2.	Some concepts not understandable without Tutor.	72%
3.	Sometimes lectures delivered in the English language create hurdles in concept clarity.	65%
4.	When a Tutor gives an answer to the question of a student by E-mail and the student cannot understand it so the student hesitates to send the E-mail again and it causes problems for the student.	65%

Table 4.14 indicates that 72% of the students were facing slow Internet service problem. 72% students said that some concepts cannot be understood without Tutors. 65% students were of the opinion that lectures are delivered in the English language which create problems. Similarly 65% students cannot understand some concept through E-mail.

Table 4.15: Strengths of Pedagogical Practices of AIOU

Sr. #	Strengths	Percentage
1.	Evening classes in study centers are suitable for job holders and housewives.	57%
2.	Study guides are provided which are very informative.	57%
3.	No restriction of age for admission.	45%
4.	Cooperative and competent Tutors.	45%
5.	Best environment and perfect management in study center.	40%
6.	Face to face teaching is best for students' understanding and guidance.	40%
7.	Assignments are the best way of assessment.	40%

Table 4.15 indicates that 57% of the students held the view that evening classes in study centers were suitable for job holders and housewives. Similarly they got study guides which were informative. 45% said that there was no restriction of age for admission. 45% were in the opinion that their Tutors were cooperative and competent. 40% said that there was the best environment and perfect management in the study center .40% said that face to face teaching was best for students' understanding and guidance.40% said that assignments were the best way of assessment.

Table 4.16 Weaknesses of Pedagogical and Assessment Practices of AIOU

Sr. #	Weaknesses	Percentage
1.	Mid- terms are not included in assessment practices.	80%
2.	Some Tutors do not follow the outline of the subject provided by them which creates problems for students especially in the exams.	67%
3.	Some Tutors give lots of presentations which disturbs the study of other subjects.	57%

Table 4.16 indicates that 80% of the students of AIOU were of the opinion that Mid-terms were not included in assessment practices. 67% were of the view that some Tutors do not follow the outline of the subject provided by them, which creates problems for students especially in the exams. 57% of the students said that some Tutors give a lot of presentations which disturbs the study of other subjects.

Section B (Analysis of Tutors' Questionnaire)

Table 4.17 Correspondence or Self Learning Material

	AIOU		VU	
Statement	N	Mean	N	Mean
Effective use of Text books	30	5	15	5
Use of supplementary study material	30	5	15	5
Effective use of study guides	30	5	15	5
Effective use of CDs	30	5	15	5
Effective use of DVDs	30	5	15	5

Table 4.17 shows that text books, supplementary study material, study guides, CDs and DVDs were used by teachers of both universities as mean scores were same.

Table 4.18 Lecture through Media

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of T.V to deliver recorded lectures	30	4.2	15	4.4
Use of Radio to deliver recorded lectures	30	4.4	15	4.2

Table 4.18 shows that T.V and radio were used in both universities to deliver recorded lectures as mean scores were same.

Table 4.19 Use of Multimedia Approach to Instruction

	AIOU		VU	
Statement	N	Mean	N	Mean
Effective use of self instruction material	30	4	15	4.2
Effective use of counseling session	30	4.5	15	4.6
Use of Internet for teaching	30	3.2	15	3.4
Use of E-mail for teaching	30	2	15	4
Effective use of audio cassettes of lesson	30	4	15	4

Table 4.19 shows that self instructional material, counseling sessions internet and audio cassettes of lesson were used in both universities as mean scores were same

while e-mail was used only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.20 Use of Tutorial Instruction

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of face to face teaching	30	5	15	2
Instruction on assignments	30	5	15	4.3
Discussion on difficult concepts	30	5	15	5

Table 4.20 shows that face to face and instruction of assignments were provided in as AIOU. The difference of mean score was significant at 0.05 levels. While discussion on difficult concepts was arranged in both universities as mean score was same.

Table 4.21 Provision of Group Training Workshop

	AIOU		VU	
Statement	N	Mean	N	Mean
Effective use of group training workshop	30	5	15	2
Use of Group Assignments	30	5	15	2.1

Table 4.21 shows that group training workshop and group assignments were given only to the students of AIOU. The difference of mean score was significant at 0.05 levels.

Table 4.22 Use of Online Teaching

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of online Teaching	30	2	15	4.3

Table 4.22 shows that online teaching was used only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.23 Virtual Learning Environmental System

	AIOU		VU	
Statement	N	Mean	N	Mean
Use of client server architecture	30	2	15	4
Use of server software package	30	2	15	5
Use of LMS	30	2	15	5

Table 4.23 indicates that client server architecture, server software package and learning management system were used only in VU. The difference of mean score was significant at 0.05 levels.

Table 4.24 Discussion Board

	AIOU		VU	
Statement	N	Mean	N	Mean
Group assignment on discussion board	30	2	15	5
Group discussion on discussion board	30	2.3	15	5
Research work on discussion board	30	21	15	5
Activities on discussion board	30	1	15	5

Table 4.24 shows that group assignments, group discussion, research work and activities on discussion boards were arranged in VU. The mean score was significant at 0.05 levels.

4.25 Content Development and Lecture Recording System

	AIOU		VU	
Statement	N	Mean	N	Mean
Well rehearsed and timed recorded video of each lesson	30	4	15	3
Use of TV inserts	30	5	15	5
Use of web inserts	30	5	15	5

Table 4.25 shows that well rehearsed and timed recorded video of lessons was available only in VU. TV inserts and web inserts were used in both universities as mean score was same.

Table 4.26 Assessment Practices

	AIOU		VU	
Statement	N	Mean	N	Mean
Evaluation through assignments	30	5	15	5
Provision of academic guidance	30	5	15	5
Use of project work	30	4	15	4

Table 4.26 shows that assignments and projects were used in assessment practices of both universities and academic guidance was also provided to the students of both universities as mean scores were same.

Table 4.27 Final Assessment or Examination

	AIOU		VU	
Statement	N	Mean	N	Mean
Final Examination at the end of semester	30	5	15	5

Table 4.27 predicts that final exams were conducted at the end of semester in both universities as mean scores were same which indicate that there was no difference in the opinion of tutors of both universities.

Section C (Interviews of Director AIOU Rawalpindi Region and Manager of VU)

Table 4.28 : Use of Pedagogical Practices

Regional Director AIOU Rawalpindi	Campus Manager V.U Rawalpindi
Correspondence or self learning material	Correspondence or self learning material
Lecture through media	Lecture through media
Multimedia approach to instruction	Multimedia approach to instruction
Tutorial instruction	Not in practice
Group training workshop	Not in practice
Not in practice	Online teaching
Not in practice	Learning Management System (LMS)
Not in practice	Discussion boards
Content development	Content development
Lecture recording system	Lecture recording system
Face to face teaching	Not in practice
Text books	Text books
Study guides	Study guides
CDs and DVDs	CDs and DVDs
Television network to deliver recorded lectures	Television network to deliver recorded lectures
Radio Network to deliver recorded lectures	Radio network is available only on internet
Counseling sessions	Not in practice
Use of E-mail	Use of E-Mail
Not in practice	Audio Cassettes of lessons
Flip charts	Flip charts

Table 4.28 shows that online teaching, learning management system, discussion boards, and audio cassettes of lessons were included only in the

pedagogical practices of VU while counseling sessions, face to face teaching, group training workshop and tutorial instruction were included only in the pedagogical practices of AIOU.

Table 4.29 : Use of Assessment Practices

Regional Director AIOU Rawalpindi	Campus Manager V.U. Rawalpindi
Assignments	Assignments
Group Assignments	Not in use
Project work	Project work
Presentations	Not in use
Not in use	Quiz
Not in use	Mid-term exams
Final term exams	Final term exams
Not in use	Online exams

Table 4.29 shows that quizzes, Mid-term exams and online exams were included only in the assessment practices of VU while group assignments and presentations were included only in the assessment practices of AIOU.

Table 4.30: Strengths of Pedagogical Practices

Regional Director AIOU Rawalpindi	Campus Manager VU Rawalpindi
Face to face teaching in sample programs provides help to students for better learning and good understanding.	24 hour facility to access lectures.
Students of rural areas benefit from distance education.	Easy communication with tutors over the Internet.

Table 4.30 indicates that major strength of pedagogical practices of AIOU was face to face teaching in sample programs and students of rural areas were also

benefiting from distance education. On the other hand 24 hour facility to access lectures was the biggest strength of pedagogical practices of VU. Easy communication with tutors on the Internet was another large strength of pedagogical practices of VU.

Table 4.31: Problems and Hurdles Faced by the Students

Regional Director AIOU Rawalpindi	Campus Manager V.U Rawalpindi
Correspondence is the biggest problem in distance education system. Students sometime do not receive back their assignments and sometimes tutors change their addresses which creates problems.	Students don't face any problem or hurdle in V.U. All the system is perfect. They have no complaint against pedagogical and assessment practices and they also don't have any problem in virtual campuses with virtual learning environments.

Table 4.31 interprets that students of V.U were not facing any problem or hurdle while the biggest problem of the students of AIOU was correspondence.

Table 4.32: Suggestions for Improvement of Pedagogical and Assessment Practices

Regional Director AIOU Rawalpindi	Campus Manager V.U Rawalpindi
i. Appointment of well educated staff	i. New courses should be included in the syllabus
ii. Effective monitoring of tutors' marking is the key for the success of assessment practices.	ii. Way of content development should be updated.
iii. University should facilitate the tutors properly for fair marking and assessment.	iii. Assessment practices are perfect. No need of improvement. There is no cheating element in online and offline exams. Five or six tutors check each paper. One question from each paper is allotted to every tutor so the element of favor or bias is nil.

Table 4.32 shows that improvement in pedagogical and assessment practices of AIOU will be brought through appointment of well educated staff, effective monitoring of tutors' marking and provision of facilities to the tutors. On the other hand the suggestions of improvement were initiative of new courses and modification in content development.

CHAPTER 5

SUMMARY, DISCUSSION, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The study was designed to compare Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. The objectives of the study were : i) to investigate the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master level; ii) to compare the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master level; iii) to investigate the strengths and weaknesses of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan for the students of Bachelor and Master level; iv) and to suggest measures for the improvement of Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan.

Keeping in view of the objectives of the study, questionnaires and interviews were designed to collect information from the respondents. The study was delimited to Rawalpindi and Islamabad and four similar programs in both universities i.e. BBA, MBA, BSCS,MSCS ,were selected. As it was not possible to approach the sample due to distance education system, after several visits remarkable number of students and tutors was not found so it was decided with the guidance of supervisor that convenience sampling technique would be used to collect data and at least 100

Students and 15 Tutors of VU and 200 students and 30 Tutors of AIOU, would be included in sample. The collected data were analyzed considering the objectives of study. Percentage and mean score were calculated item-wise. Interviews of the Regional Director of AIOU and Campus Manager of V.U were also conducted, tabulated and interpreted.

5.2 FINDINGS OF THE STUDY

On the basis of the data analysis the following findings were drawn:

Section A- (Findings: Questionnaire of Students)

1. It was found that text books, supplementary study material, study guides CDs and DVDs were effectively used in both universities. Mean scores were 4 (similar) which indicates that there was no difference of opinion of the students of both universities. (Table 4.1).

2. It was further found that T.V and Radio were used in both universities to deliver lectures. Mean score were 3.4 and 3.6 which indicate that there was no significant difference in the opinion of students of both universities. (Table 4.2)

3. It was further found that self instructional material, counseling sessions and E-mail were used in both universities as mean scores were almost same. While internet and audio cassettes of lesson were used only in VU. The difference of mean score was significant at 0.05 levels. (Table 4.3).

4. It was found that face to face teaching and instruction on assignments was provided only in AIOU. The difference of mean score was significant at 0.05 levels. While discussion on difficult concepts was arranged in both universities as mean score was same. (Table 4.4).

5. It was found that group training workshops and group assignments were used only in AIOU. The difference of mean score was significant at 0.05 levels. (Table 4.5).

6. It was further found that online teaching was used only in VU. The difference of mean sore was significant at 0.05 levels.(Table 4.6).

7. It was found that client server architecture, server software package and learning management system were used only in VU. The difference of mean score was significant at 0.05 levels. (Table 4.7).

8. It was found that group assignments, group discussions, and activities on discussion boards were arranged only in VU. The difference of mean score was significant at 0.05 levels. (Table 4.8).

9. It was found that well rehearsed and timed recorded videos of lessons were used only in VU as mean score was high while TV inserts and web inserts were used in both universities as mean scores were same. (Table 4.9).

10. It was found that assessment through assignments was used in both universities as mean scores were similar, academic guidance was also provided to the students of both universities as well as project work was assigned in both universities as mean scores were same.(Table 4.10).

11. It was found that final assessment or examination was held in both universities at the end of semester mean score was same (5). (Table 4.11).

12. It was further found that proportionate weight age of marks was different in both universities. VU gives 10% toassignments,10% to quiz 5% to GDB, 25% to midterm and 50% to final exam while there are just two components of assessment in AIOU 40% to assignment and 60% to final exam. (Table 4.12)

13. Strengths of pedagogical practices in the opinion of 80% of the students were no restriction of time and place for getting education.70% were of the view that flexible pedagogical practices are best for job holders.45% were of the view that lectures through television help them in better learning. 43% said that lectures can be understood anytime with the help of CDs and Internet. 30% of them replied that different and new styles of pedagogy create interest of learning in the students. 27% were of view that assignments are the best way of assessment. 25% said that Tutors can assess the intelligence of students through quizzes. 22% replied that online exams provide good assessment practice as there is no chance of cheating. 15% were of the view that Moderated Discussion Board helps Tutors and students to interact with each other. 10% said that assessment of mid-term and final term was very fair as no bias element is found. (Table 4.13).

14. It was found that weaknesses of pedagogical and assessment practices of VU according to 72% of the students was slow Internet service problem. 72% students said that some concepts cannot be understood without Tutors. 65% students were of the opinion that lectures are delivered in the English language which create problems. Similarly 65% students cannot understand some concept through e-mail. (Table 4.14).

15. It was found that strengths of pedagogical and assessment practices of AIOU according to 57% of the students were evening classes in study centers which were suitable for job holders and housewives. Similarly they got study guides which were informative. 45% said that there was no restriction of age. 45% were in the opinion that their tutors were cooperative and competent. 40% said that there was the best environment and perfect management in the study center .40% said that face to face teaching was best for students' understanding and guidance.40% said that assignments were the best way of assessment.(Table 4.15).

16. It was found that weakness of pedagogical and assessment practices of AIOU according to 80% of the students, was absence of Mid-term exams. 67% were of the view that some tutors do not follow the outline of the subject provided by them, which creates problems for students especially in the exams. 57% of the students said that some tutors give lot of presentations which disturbs the study of other subjects.

(Table 4.16)

Section B (Findings Questionnaire of Tutors')

17. It was found that text books, supplementary study material, study guides, CDs and DVDs were used by tutors of both universities as mean scores were same. (Table 4.17).

18. It was found that T.V and radio were used in both universities to deliver recorded lectures as mean scores were almost same 4.2 & 4.4. (Table 4.18).

19. It was found that self instructional material, counseling sessions internet and audio cassettes of lesson were used in both universities as mean scores were same while e-mail was used only in VU. The difference of mean score was significant at 0.05 levels. (Table 4.19).

20. It was found that face to face teaching and instruction of assignments were provided in AIOU. The difference of mean score was significant at 0.05 levels. While discussion on difficult concepts was arranged in both universities as mean score was same. (Table 4.20).

21. It was found that group training workshop and group assignments were given only to the students of AIOU. The difference of mean score was significant at 0.05 levels. (Table 4.21).

22. It was found that online teaching was used only in VU. The difference of mean score was significant at 0.05 levels. (Table 4.22).

23. It was found that client server architecture, server software package and learning management system were used only in VU. The difference of mean score was significant at 0.05 levels.(Table 4.23).

24. It was found that group assignments, group discussion, research work and activities on discussion boards were arranged in VU. The mean score was significant at 0.05 levels. (Table 4.24).

25. It was found that well rehearsed and timed recorded video of lessons was available only in VU. TV inserts and web inserts were used in both universities as mean score was same.(Table 4.25).

26. It was found that assignments and projects were used in assessment practices of both universities and academic guidance was also provided to the students of both universities as mean scores were same. (Table 4.26).

27. It was found that final exams were conducted at the end of semester in both universities as mean scores were same which indicate that there was no difference in the opinion of tutors of both universities.(Table 4.27).

Section C (Findings of Interviews)

Interview of the Regional Director AIOU, and the Campus Manager of VU

Regional Director AIOU described in the interview about Pedagogical Practices that counseling sessions, face to face teaching, group training workshop and tutorial instruction were included in their Pedagogical practices.24 hour facility to access lectures and easy communication with tutors on internet were the major strengths of the Pedagogical Practices of VU.

Regional Director AIOU said that students of their university were facing problems related with correspondence, while Campus Manager VU said that students of their university were not facing any problem or hurdle as they never claimed about any problem. Regional Director AIOU suggested that appointment of well educated staff, effective monitoring of tutors' marking and provision of facilities to the tutors will bring improvement in Pedagogical and Assessment Practices of AIOU. On the other hand Campus Manager of VU suggested that initiative of new courses and

modification in content development will improve Pedagogical and Assessment Practices of VU (Table 4.28,4.29).

5.3 DISCUSSION

The study aimed to compare the Pedagogical and Assessment Practices of Allama Iqbal Open University and Virtual University of Pakistan. In order to triangulation cross checking of data, questionnaire prepared for students and tutors and interview questions for Director and Manager were similar. The responses proved that answers provided by Students, Tutors, Director and Manger were similar. The Researches presented in Literature Review were also related with the findings and objectives of conducted research. Reliability of instrument was calculated by using Statistical Package for Social Sciences (SPSS). As for as Validity of Research Instrument is concerned that was determined through Pilot testing of Questionnaires and Interviews.

The analysis of data reveals the following significant and salient features for discussion: it was observed that text books, supplementary study materials, study guides, CDs, DVDs, T.V, radio, self instructional material, counseling sessions. Internet, E-mails, audio lessons, face to face teaching and instruction on assignments were included in Pedagogical and Assessment Practices of AIOU and V.U. These finding are related with the study conducted by Ali (1999) who found that guidance and counseling were provided to the students in distance education. He also found that questions of assignments were clear and helpful for the students in pedagogical practices. He further concluded that self assessment questions were also used in the pedagogical practices of distance education.

The results of the study indicate that there are some problems of assessment in distance education system, as some Tutors do not follow the outline of the subject provided by them, which creates problems for students especially in exams. Finding about the problems of distance education is in the lines of the study conducted by Salfi (1999), who concluded that distance education creates some problems for students such as admission problems, tutor problems and assessment problems. It means that students face problems while getting admission in a distance university, as they don't follow the instructions provided in the prospectus or website. As well as they also face tutor related problems; for example sometimes students cannot find the correct addresses of the tutors and send their assignments on the wrong address, which causes failure of the student.

Research indicates that the students of rural areas were getting benefits from distance education. The reason is non availability of university for the students of rural areas, and most of the population living in the rural areas are very poor, and cannot afford the charges of hostels, and the charges of distance education are comparatively less than the formal education system, and it is easy to get education without leaving the comfort of home. Distance education helps female students of rural areas to fulfill their wish to be educated. Male students of rural areas have farm activities and they join the distance education without leaving their fields. This finding of the study is related with the study conducted by Jumani (2003). He concluded that rural population is the beneficent target population from distance education, but there is need of careful planning and monitoring when compared to formal education. Initially in Pakistan, degrees obtained through open learning mode were not being considered at par with the degrees obtained from conventional universities.

It was found through data of the study, that students of distance education were facing problems regarding correspondence. Sometimes tutors change their addresses without informing the students and sometimes students do not get back their assignments which create problems in exams.

This finding is again related with the study of Jumani (2003) as he found that students of distance education are badly affected by the delivery system. One of the major reason is remote and far flung areas. where instructional material is to be mailed.

The study indicates that assessment of students relies in the interest of the tutors, if the tutor is not properly financed by the institution. the assessment will remain less effective. So effective monitoring of tutors' marking is the key for the success of assessment practices. The University should facilitate the tutors properly for fair marking and assessment . This finding of the study is related with the study conducted by Hussain (2006). He concluded that tutors' remuneration is low and these poor financial provisions affect the tutors' performance.

5.4 CONCLUSIONS

On the basis of findings of study following conclusions were drawn:

1. It is concluded that there are various pedagogical practices used for teaching in both distance education universities, such as correspondence or self learning material which included textbooks, supplementary study material, study guide, CDs and DVDs of the lesson. While online teaching, learning management system, discussion boards are available only in VU. Face to face teaching; group training workshop and tutorial instructions are available only in AIOU.

2. Lectures through media like television and radio network are also used for teaching in both universities.

3. Multimedia approach to instruction is used in both universities. It is concluded that self instructional material, and audio cassettes of lessons are used for teaching in both universities. Students counseling sessions are used in AIOU, but not in V.U. Internet and E-mail are used only in Virtual University of Pakistan

4. Tutorial instruction is provided to the students of AIOU, face to face teaching in tutorial classes is used. On the contrary, no face to face teaching is used in VU. Instructions on assignments are provided to students of both the universities and discussions on difficult concepts are used for teaching in both the universities.

5. Group training workshops are organized and group assignments are given only to the students of AIOU, whereas V.U does not organize these activities for the students.

6. Online teaching is used in Virtual University and not in AIOU.

7. Virtual learning environmental systems which included: client server architecture, software package and learning management system are used only in Virtual University of Pakistan.

8. It is concluded that discussion boards (Graded Discussion Board and Moderated Discussion Board) are used in V.U and not available in AIOU.

9. Continuous assessment is used in both the universities. It is found that continuous assessment through tutor marked assignments, is used for teaching in both the universities. Moreover, general academic guidance and practical assignments are provided to students of both universities.

10. Final assessment or examination is available in both the universities. It is concluded that at the end of semester final examination is taken as final assessment. However proportionate weight age for final assessment is given, which is different in both the universities. AIOU have only two components that is assignments (40%) and final paper (60%). On the contrary Virtual University gives weight-age to assignments (15%), quiz (10%), GDB (5%), Mid-term (25%) and final examination (50%).

11. It is concluded that students of Virtual University are facing the following problems: slow Internet service problem, absence of face to face teaching, lectures delivered in the English language, difficulty to understand some concepts through E-mail. Load shedding also creates problems for home based students.

12. It is further concluded that students of AIOU are facing the following problems; Mid-terms are not conducted, some Tutors do not follow the outline of the subject provided by them, which creates problems for the students especially in the exams. Some Tutors give lot of presentations which disturbs the study of other subjects.

13. The strengths of Pedagogical and Assessment Practices of Virtual University are no restriction of time and place for getting an education, flexible pedagogical practices are best for job holders, lectures through television help the students in better learning, lecture can be understood anytime with the help of CDs and the Internet, different and new styles of pedagogy create interest of learning in the students, assignments are the best way of assessment, Tutors can assess the intelligence of students through quizzes, and online exams provide good assessment practice as there is no chance of cheating. Moderated Discussion Board helps Tutors and students to interact with each other. Assessment of Mid-term and Final term is very fair as different tutors are involved in checking.

14. Strengths of pedagogical and assessment practices of AIOU are face to face teaching in sample programs, evening classes in study centers are suitable for job holders and housewives. Similarly, study guides are informative for students. There is no restriction of age. Tutors in face to face classes are cooperative and competent. There is best environment and perfect management in study centers of AIOU. Assignments are best way of assessment.

5.5 RECOMMENDATIONS

It is recommended that face to face teaching at least once in a semester may be included in the Pedagogical Practices of Virtual University of Pakistan to improve learning and understanding of the students.

According to findings of the study, face to face teaching was not used in pedagogical practices of V.U. as well as in response of the open ended question regarding weaknesses of pedagogical practices of V.U students respond that some concepts cannot be understood without face to face interaction with Tutor. So it is recommended that face to face teaching may include in Pedagogical Practices of V.U.

Discussion Board may be added in Pedagogical Practices of AIOU to get clarity in concepts of students' learning through discussions.

According to finding of the study, Discussion Board is not included in the Pedagogical Practices of AIOU, students who are shy and cannot participate in class room discussion, felt deficiency of this component so it may be added.

It is recommended that mid terms may include in Assessment Practices of AIOU.

As findings of the study predict that midterm exams are not included in Assessment Practices of AIOU, students want this practice to be started as burden of courses is shared through midterms so this component is very necessary to be added.

Lectures of both Universities may be delivered live on air on Sundays and question answer sessions at the end of lecture may be conducted through live calls.

Most students of both distance universities are job holders who cannot view recorded lectures on T.V. in working days so it is recommended to deliver live lectures on Sundays.

It is recommended to Governmental Authorities that electricity load shedding should not applied in educational institutions specially in the campuses of V.U as its whole instructional system is dependent on electricity.

According to finding regarding weaknesses of Pedagogical Practices of VU, home based students were suffering due to load shedding so it is recommended that load shedding should not applied in educational institutions especially in the campuses of V.U so that home based students may get benefit from the campuses.

Inter universities workshops may be arranged for students of both universities, so that good experiences can be exchanged in order to improve teaching learning process for students.

Educational authorities may consult with children, youth, parents and community groups while setting up non-formal educational programs for the betterment of non formal educational institutions.

Replication

The research was conducted within Islamabad and Rawalpindi and just computer science and business administration related programs of AIOU and V.U. were selected. Therefore its results may not be generalized for the entire country and all programs of these universities. Therefore it is suggested that future researches may be conducted by increasing sample size and target areas. Furthermore researches may also be conducted to compare pedagogical practices of other programs of these universities because there are many distance programs of AIOU which have much differences as compare to the V.U. Future researchers can also conduct the study on the comparison of pedagogical and assessment practices of these both universities with the other distance and virtual universities of the world which have been described in literature review of this study.

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APPENDEX-I

QUESTIONNAIRE –A
FOR STUDENTS

Student: _____

University:_____

Gender: 1. Male 2. Female

Program :i. BBA ii. MBA iii. BSCS iv. MSCS

Which of the following pedagogical practices are being applied in your university for imparting knowledge? Please tick (✓) the relevant practice which seems to be appropriate in your opinion? Choose any one column for giving an answer. Following is the description of abbreviations given in columns.

- Strongly Agree (S.A)
- Agree (A)
- Undecided (UND)
- Disagree (D.A)
- Strongly Disagree (S.D.A)

PEDAGOGICAL PRACTICES

1. Use of Correspondence or Self Learning Material

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Textbooks					
ii.	Supplementary study material					
iii.	Study guides					
iv.	CDs					
v.	DVDs					
vi.	Any other Please specify					

2.Lecture through Media

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Television network to deliver recorded lectures					
ii.	Radio network					
ii.	Any other Please specify					

3. Use of Multimedia Approach to Instruction

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Self instructional material					
ii.	Counseling sessions					
iii.	Teleconference					
iv.	Internet					
v.	E-Mail					
vi.	Audio cassettes/lesson					
vii.	Flipcharts					
viii.	Disc based software instruction					
ix.	Television programs on DVD					

x.	Telephone					
xi.	Any other Please specify					

4. Use of Tutorial Instruction

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Face to face teaching in tutorial classes					
ii.	Instruction on assignments					
iii.	Discussion on difficult concepts					
iv.	Any other Please specify					

5. Provision of Group Training Workshop

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	At the end of the semester					
ii.	Group assignment					
iii.	Any other Please specify					

6. Use of Online Teaching

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Online guidance					
ii.	Lesson deliver					
iii.	Any other? Please specify					

7. Provision of Virtual Learning Environmental System

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Client server architecture					
ii.	Server software package					
iii.	Learning Management System (LMS)					
iv.	Any other? Please specify					

8. Use of Discussion Board

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Group assignment					
ii.	Group discussion					
iii.	Research work					
iv.	Activities work					
v.	Any other? Please specify					

9. Practice of Content Development and Lecture Recording System

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Well rehearsed and timed recorded video of each lesson					
ii.	Support material or TV inserts, which includes, e.g. slides,					

	graphics and video clips					
iii.	Support material for web inserts, which include e.g. slides, graphics, animation and video clips.					
iv.	Assignments, exams (mid term and final), etc.					
v.	Any other? Please specify					

ASSESSMENT PRACTICES

10. Provision of Continuous Assessment

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Continuous assessment through tutor marked assignments					
ii.	General academic guidance to students					
iii.	Practical assignments					
iv.	Project work					
v.	Any other? Please specify					

XI. Final assessment/examination

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	At the end of semester final examination					
ii.	Any other? Please specify					

XII. Proportionate Weight age for Final Assessment

i.	Assignment obtained marks	70%	30%
ii.	Final examination obtained marks	30%	70%
iii.	Any other weight age? Please specify		

13. What are the weaknesses of pedagogical and assessment practices you are facing while getting the (BBA/BSCS/MBA/MSCS) program. Please write in your own words in order of priority?

i. _____

ii. _____

iii. _____

14. What are the strengths of pedagogical and assessment practices of acquiring (BBA/BSCS/MBA/MSCS) program from your university? Please write in your own words in order of priority?

i. _____

ii. _____

iii. _____

15. Please provide some suggestions for the improvement of pedagogical practices of your university.

i. _____

ii. _____
iii. _____

16. Please provide some suggestions for the improvement of assessment practices of your university.

i. _____
ii. _____
iii. _____

17. Please identify major problems which you are facing while acquiring education through Distance University?

i. _____
ii. _____
iii. _____

Thank you for your cooperation

APPENDEX-II

QUESTIONNAIRE –B

FOR TUTORS

1. Name of Tutor: _____

2. Name and address of university: _____

3. Program:

i. BBA ii. MBA
iii. BSCS iv. MSCS

4. Which of the following pedagogical practices are being applied in your university for imparting knowledge? Please tick (✓) the relevant practice which seems to be appropriate in your opinion? Choose any one column for giving answer. Following is the description of abbreviations given in columns.

- Strongly Agree (S.A)
- Agree (A)
- Undecided (UND)
- Disagree (D.A)
- Strongly Disagree (S.D.A)

PEDAGOGICAL PRACTICES

1. Use of Correspondence or Self Learning Material

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Textbooks					
ii.	Supplementary study material					
iii.	Study guides					
iv.	CDs					
v.	DVDs					
vi.	Any other please specify					

2. Lecture through Media

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Television network to deliver recorded lectures					
ii.	Radio network					
iii.	Any other please specify					

3. Use of Multimedia Approach to Instruction

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Self instructional material					
ii.	Counseling sessions					
iii.	Teleconference					
iv.	Internet					
v.	E-Mail					
vi.	Audio cassettes/lesson					
vii.	Flipcharts					
viii.	Disc based software instruction					
ix.	Television programs on DVD					
x.	Telephone					
xi.	Any other? Please specify					

4. Use of Tutorial Instruction

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Face to face teaching in tutorial classes					
ii.	Instruction on assignments					
iii.	Discussion on difficult concepts					
iv.	Any other? Please specify					

5. Provision of Group Training Workshop

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	At the end of the semester					
ii.	Group assignment					
iii.	Any other? Please specify					

6. Use of Online Teaching

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i..	Online guidance					
ii.	Lesson deliver					
iii.	Any other? Please specify					

7. Provision of Virtual Learning Environmental Systems

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Client server architecture					
ii.	Server software package					
iii.	Learning Management System (LMS)					
iv.	Any other? Please specify					

8. Use of Discussion Board

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Group assignment					
ii.	Group discussion					
iii.	Research work					
iv.	Activities work					
v.	Any other? Please specify					

9. Practice of Content Development and Lecture Recording System

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Well rehearsed and timed recorded video of each lesson					
ii.	Support material or TV inserts, which includes, e.g. slides, graphics and video clips					
iii.	Support material for web inserts, which include e.g. slides, graphics, animation and video clips.					
iv.	Assignments, exams (mid term and final), etc.					
v.	Any other? Please specify					

ASSESSMENT PRACTICES

10. Provision of Continuous Assessment

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	Continuous assessment through tutor marked assignments					
ii.	General academic guidance to students					
iii.	Practical assignments					
iv.	Project work					
v.	Any other? Please specify					

11. Final assessment/examination

Sr. #	Practice	S.A	A	UND	D.A	S.D.A
i.	At the end of semester final examination					
ii.	Any other? Please specify					

12. Proportionate Weight age for Final Assessment

i.	Assignment obtained marks	70%	30%
ii.	Final examination obtained marks	30%	70%
iii.	Any other weight age? Please specify		

13. What are the weaknesses of pedagogical and assessment practices your students are facing while getting (BBA/BSCS/MBA/MSCS) program? Please write in your own words in order of priority?

i. _____
ii. _____
iii. _____

14. What are the strengths of pedagogical and assessment practices of acquiring program (BBA/BSCS/MBA/MSCS) program from your university? Please write in your own words in order of priority.

i. _____
ii. _____
iii. _____

15. Please provide some suggestions for the improvement of pedagogical practices of your university.

i. _____
ii. _____
iii. _____

16. Please provide some suggestions for the improvement of assessment practices of your university.

i. _____
ii. _____
iii. _____

Thank you for your cooperation.

Appendix -III

INTERVIEW OF CHAIRMAN VU RWP.CAMPUS/DIR.RWP.REGION.AIOU

Name of Chairman (VU Rwp. Campus)/ Dy. Dir. Rwp. Region AIOU: _____

Name and address of university: _____

Gender: 1. Male 2. Female

1. Which of the following pedagogical practices are being applied in your university for imparting knowledge to the students?

Sr. #	Practice	Yes	No
i.	Corresponding / self learning material		
ii.	Lecture through media		
iii.	Multimedia approach to instruction		
iv.	Tutorial instruction		
v.	Group training workshop		
vi.	Online teaching		
vii.	Virtual learning environment system		
viii.	Discussion board		
ix.	Content development and lecture recording system		
x.	Textbooks		
xi.	Supplementary (additional) study material		
xii.	Study guides		
xiii.	CDs		
xiv.	DVDs		

2. Do Tutors deliver lectures through media including:
   i. Television network to deliver recorded lectures
   ii. Radio network
3. Is multimedia used in your university during pedagogical practices?
4. If yes, then which approach is included?
   i. Self instructional material
   ii. Counseling sessions
   iii. Internet
   iv. E-Mail
   v. Audio cassettes/lesson
   vi. Flipcharts
5. Does your university arrange tutorial classes for the students?
   i. Yes ii. No
6. If Yes, are these component included in tutorial classes?
   i. Face to face teaching
   ii. Instruction on assignments
   iii. Discussion on difficult concepts
7. Is online facility available for your students?
   i. Yes ii. No

8. Do you have virtual learning environment system in your university?
i. Yes ii. No
9. Do you have discussion board in the university?
i. Yes ii. No

10. Do you have content development and lecture recording system?
i. Yes ii. No
11. What is the mechanism of evaluation of the students?

_____
_____
_____

12. What are the weaknesses and hurdles your students are facing while getting (BBA, BSCS, MBA, MSCS) program? Please write in your own words in order of priority

1. _____
2. _____
3. _____

13. What are the advantages of getting (BBA, BSCS, MBA, and MSCS) program in your University? Please write in your own words in order of priority?

1. _____
2. _____
3. _____

14. Please provide some suggestions for the improvement of pedagogical practices of your university.

1. _____
2. _____
3. _____

15. Please provide some suggestion for the improvement of assessment practices of your university.

1. _____
2. _____
3. _____

16. Please identify major problems which your students are facing while getting education through Distance University?

1. _____
2. _____
3. _____

Thank you for your cooperation

Appendix-IV

Semester wise offered courses for BBA program of AIOU

Semester-I:

Name of Course	Course Code	Credit Hours
Compulsory English-I	1423	3
Micro Economics	131	3
Fundamentals of Accounting	134	3
Business Mathematics	135	3
Fundamentals of Computers	3400	4

Semester-II:

Name of Course	Course Code	Credit Hours
Business Statistics	133	3
Business Communications	136	3
Management theory and Practice	137	3
Financial Accounting	182	3
Pakistan Studies	417	3

Semester-III:

Name of Course	Course Code	Credit Hours
Computer Applications for Business	184	3
Cost Accounting	186	3
Banking Law and Practice	189	3
Islamiyat and Ethics	416/418	3
Marketing Theory and Practice	138	3

Semester –IV:

Name of Course	Course Code	Credit Hours
Macro Economics	185	3
Human Resources Management	187	3
Marketing Management	190	3
Fundamentals of Financial Management	191	3
Entrepreneurship	193	3

Appendix-V

Courses semester wise offered for MBA (specializations in Marketing, Finance and HRM) program of AIOU

Semester - I:

Name of Course	Course Code	Credit Hours
Business Communications	525	3
Management Theory and Practice	526	3
Financial Accounting	528	3
Marketing Theory and Practice	561	3
Economics Analysis	522	3

Semester – II:

Name of Course	Course Code	Credit Hours
Business Research	524	3
Human Resource Management	527	3
Computer Applications for Business	566	3
Cost and Management Accounting	568	3
Business Mathematics and Statistics	523	3

Semester – III:

Name of Course	Course Code	Credit Hours
Financial Management	562	3
Organizational Behavior	565	3
Business Policy and Strategy	887	3
Total Quality Management	890	3
Management Information System	891	3

Semester – IV

A student can select only one package of specialization from below:
Specialization in Marketing Management:

Name of Course	Course Code	Credit Hours
Project Management	569	3
Marketing Management	573	3

International Marketing	574	3
Advertising and Sales Promotions	575	3
Marketing Research	576	3

Specialization in Human Resource Management: How does all of this information fulfill your understanding of the needs of a lit review? It needs synthesis and is not part of a scholarly review

Name of Course	Course Code	Credit Hours
Project Management	569	3
Training and Development	819	3
Labor Management Relations	821	3
Compensation Management	823	3
Business and Labor Laws	824	3

Specialization in Financial Management:

Name of Course	Course Code	Credit Hours
Project Management	569	3
Taxation Management	530	3
Investment and Security Management	577	3
Corporate Finance	579	3
Banking Law and Practice	898	3

Appendix-VI

BSCS Program of AIOU

Semester – I:

Name of Course	Course Code	Credit Hours
English- I	1423	3(3+0)
Pakistan Studies	417	3(3+0)
Fundamentals of Computers	3400	4(3+1)
Mathematics for Computing-I	3401	4(4+0)
Physics	3404	4(4+0)
Total Credit Hours	NIL	18

Semester – II:

Name of Course	Course Code	Credit Hours
Foreign Language(Arabic or French)	114/112	3(3+0)
Islamic Studies or Ethics	416/418	3(3+0)
Electronics	920	4(4+0)
Programming Concepts	3402	4(3+1)
Mathematics for Computing-II	3403	4(4+0)
Total Credit Hours	NIL	18

Semester – III:

Name of Course	Course Code	Credit Hours
Discrete Mathematics	3406	4(4+0)
Programming Language – I	3407	4(3+1)
Digital Logic Design	3409	4(4+0)
Business Communications	3456	3(3+0)
Statistics and Probability	3447	4(4+0)
Total Credit Hours	NIL	19

Semester – IV:

Name of Course	Course Code	Credit Hours
Data Structure	3408	4(4+0)
Research Methods	3412	3(3+0)
Data Communications	3413	4(4+0)
Computer Organization and Assembly	3453	4(3+1)
Management Theory and Practice	3457	3(3+0)

Semester – V:

Name of Course	Course Code	Credit Hours
Operating System	903	4(4+0)
Data Base- I	3410	4(3+1)
Programming Language- III	3415	4(3+1)
Analysis and Design of Algorithms	3466	3(3+0)
Design Fundamentals	3477	3(3+0)
Total Credit Hours	NIL	18

Semester – VI:

Name of Course	Course Code	Credit Hours
Software Engineering – I	3414	4(4+0)
Computer Architecture	3416	4(4+0)
Network Design	3418	3(3+0)
Artificial Intelligence	3451	3(3+0)
Theory of Automata	3452	3(3+0)
Total Credit Hours	NIL	17

Semester – VII:

Name of Course	Course Code	Credit Hours
Management Information System	3406	3(3+0)

Compiler Construction	3468	3(3+0)
CS Major – I	-	-
CS Major – II	-	-
CS Major – III	-	-
Total Credit Hours	NIL	6

Semester – VIII:

Name of Course	**Course Code**	**Credit Hours**
CS Major – IV	-	-
CS Major – V	-	-
CS Major – VI	-	-

Appendix-VII

Semester wise offered courses for MSCS program of AIOU

Semester – I:

Name of Course	Course Code	Credit Hours
Theory and Computation	5700	3(3+0)
Advanced Algorithm	5701	3(3+0)
Distributed Systems	5702	3(3+0)
Elective – I	-	-

Semester – II:

Name of Course	Course Code	Credit Hours
Research Study	5703	3(3+0)
Elective – II	-	-
Elective – III	-	-
Elective – IV	-	-

Semester – III:

Name of Course	Course Code	Credit Hours
Thesis Part – I	5745	6(6+0)

Semester – IV:

Name of Course	Course Code	Credit Hours
Thesis Part – II	5745	6(6+0)

APPENDIX-VIII

Semester wise offered Programs for BSCS of V.U

Semester-I

Course Code	Title	Credit Hours
CS301	Data Structures	3
CS302	Digital Logic Design	3
CS304	Object Oriented Programming	3
CS601	Data Communication	3
PHY101	Physics	3
PHY301	Circuit Theory	3

Semester -II

CS101	Introduction to Computing	3
ENG101	English Comprehension	3
MGT101	Financial Accounting	3
MTH101	Calculus And Analytical Geometry	3
PAK301	Pakistan Studies	2
ETH201	Ethics (for Non-Muslims)	1
ISL201	Islamic Studies	1

Semester-III

Course Code	Title	Credit Hours
CS201	Introduction to Programming	3
ECO401	Economics	3
ENG201	Business and Technical English Writing	3
MTH202	Discrete Mathematics	3
MTH301	Calculus II	3

Semester IV

Course Code	Title	Credit Hours
CS408	Human Computer Interaction	3
CS410	Visual Programming	3
CS506	Web Design and Development	3
CS508	Modern Programming Languages	3
MTH601	Operations Research	3

Semester-V

Course Code	Title	Credit Hours
CS619	Final Project	3
CS607	Artificial Intelligence	3
CS609	System Programming	3
CS614	Data Warehousing	3
MGT201	Financial Management	3
MTH603	Numerical Analysis	3

Appendix-IX

Semester wise courses of MSCS of VU

Semester-I

Course Code	Title	Credit Hours
CS701	Theory of Computation	3
CS702	Advanced Algorithms Analysis and Design	3
CS712	Distributed DBMS	3

Semester-II

Course Code	Title	Credit Hours
CS703	Advanced Operating Systems	3
CS704	Advanced Computer Architecture-II	3
CS708	Software Requirement Engineering	3
CS716	Advanced Computer Networks	3

Semester-III

Course Code	Title	Credit Hours
CS706	Software Quality Assurance	3
CS709	Formal Methods for Software Engineering	3
CS718	Wireless Networks	3
CS723	Probability and Stochastic Processes	3

Semester-IV

Course Code	Title	Credit Hours
CS720	Thesis	6

Appendix-X

Semester wise Programs offered for BBA in VU

Semester-I

Course Code	Title	Credit Hours
CS101	Introduction to Computing	3
ENG101	English Comprehension	3
MGT101	Financial Accounting	3
MTH302	Business Mathematics & Statistics	3
PAK301	Pakistan Studies	2
ETH201	Ethics (for Non-Muslims)	1
ISL201	Islamic Studies	1

Semester-II

Course Code	Title	Credit Hours
ENG201	Business and Technical English Writing	3
MGT211	Introduction To Business	3
MGT301	Principles of Marketing	3
MGT503	Principles of Management	3
STA301	Statistics and Probability	3

Semester-III

Course Code	Title	Credit Hours
ECO402	Microeconomics	3
MCM301	Communication skills	3
MGT111	Introduction to Public Administration	3
MGT401	Financial Accounting II	3
MGT603	Strategic Management	3

Semester-IV

Course Code	Title	Credit Hours
ACC501	Business Finance	3
ECO403	Macroeconomics	3
IT430	E-Commerce	3
MGT501	Human Resource Management	3
MGT502	Organizational Behaviour	3

Appendix-XI

SCHEME OF STUDY FOR MBA (VU)

Semester-I

Course Code	Title	Credit Hours
CS101	Introduction to Computing	3
MCM301	Communication skills	3
MGT101	Financial Accounting	3
MGT211	Introduction To Business	3
MTH302	Business Mathematics & Statistics	3

Semester-II

Course Code	Title	Credit Hours
ECO401	Economics	3
MGT301	Principles of Marketing	3
MGT411	Money & Banking	3
MGT503	Principles of Management	3
STA301	Statistics and Probability	3

Semester-III

Course Code	Title	Credit Hours
ENG301	Business Communication	3
IT430	E-Commerce	3
MGT401	Financial Accounting II	3
MGT501	Human Resource Management	3
MGT502	Organizational Behaviour	3

Semester-IV

Course Code	Title	Credit Hours
ACC501	Business Finance	3
CS507	Information Systems	3
MGT610	Business Ethics	3
MGT613	Production / Operations Management	3
MKT501	Marketing Management	3
STA630	Research Methods	3

Semester-V

Course Code	Title	Credit Hours
MGT201	Financial Management	3
MGT402	Cost & Management Accounting	3
MGT601	SME Management	3
BNK601	Banking Laws & Practices	3
BNK603	Consumer Banking	3
CS201	Introduction to Programming	3
CS403	Database Management Systems	3
FIN621	Financial Statement Analysis	3
FIN622	Corporate Finance	3
HRM624	Conflict Management	3
MGMT611	Human Relations (alt. code=HRM611)	3
MGMT623	Leadership & Team Management - MGMT623 (alt. code=HRM623)	3
MGMT625	Change Management (alt. code=HRM625)	3
MKT610	Customer Relationship Management	3
MKT621	Advertising & Promotion	3

Semester-VI

Course Code	Title	Credit Hours
MGT510	Total Quality Management (alt. code=MGMT510)	3
MGT602	Entrepreneurship	3
MGT603	Strategic Management	3
CS610	Computer Network	3
CS615	Software Project Management	3
FIN623	Taxation Management	3
FIN625	Credit & Risk Management	3
FIN630	Investment Analysis & Portfolio Management	3
HRM627	Human Resource Development	3
MGMT628	Organizational Development (alt. code=HRM628)	3
MGMT629	Crisis Management	3

MGMT630	Knowledge Management	3
MGT604	Management of Financial Institutions (alt. code=BNK604)	3
MKT624	Brand Management	3
MKT630	International Marketing	3

Semester-VII

Course Code	Course Code	Course Code
BNK619	Final Project-Banking	3
BNKI619	Internship Report-Banking	3
FIN619	Final Project-Finance	3
FINI619	Internship Report-Finance	3
HRM619	Final Project-Human Resource Management	3
HRMI619	Internship Report--Human Resource Management	3
IT619	Final Project - Information Technology	3
ITI619	Internship Report - Information Technology	3
MGT619	Final Project-Management	3
MGTI619	Internship Report-Management	3
MKT619	Final Project-Marketing	3
MKTI619	Internship Report-Marketing	3

Appendix-XII

Item wise Results of Reliability

Item No.	Scale Mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Correlation	Cronbach's Alpha if item deleted
A1	266.83	7412.853	.929	.979
A2	266.06	7505.820	.899	.979
A3	266.28	7463.389	.930	.979
A4	266.00	7504.588	.904	.979
A5	266.17	7455.676	.933	.979
B1	266.00	7481.176	.888	.979
B2	266.28	7463.389	.930	.979
C1	266.33	7418.706	.951	.979
C2	267.39	7445.428	.883	.979
C3	266.00	7524.353	.784	.979
C4	266.50	7431.912	.951	.979
C5	266.56	7438.614	.946	.979
C6	263.28	6931.859	.289	.979
C7	265.78	7539.242	.848	.979
C8	266.44	7450.732	.943	.979
C9	266.06	7456.173	.907	.979
D1	266.33	7468.941	.967	.979
D2	266.61	7443.193	.862	.979
E1	266.50	7419.676	.973	.979
E2	266.50	7408.618	.963	.979

F1	266.50	7398.382	.930	.979
F2	266.17	7455.676	.933	.979
G1	266.22	7436.889	.932	.979
G2	266.56	7456.850	.864	.979
G3	266.56	7438.614	.946	.979
G4	267.11	7459.752	.901	.979
H1	266.72	7411.624	.959	.979
H2	266.72	7438.918	.931	.979
H3	266.61	7397.781	.902	.979
H4	266.50	7399.324	.926	.979
I1	266.28	7503.271	.849	.979
I 2	266.28	7538.330	.799	.979
I 3	266.83	7412.853	.929	.979
I 4	266.33	7444.588	.930	.979
J1	266.89	7442.222	.919	.979
J2	266.17	7434.853	.928	.979
J3	266.61	7418.605	.965	.979
J4	266.67	7425.294	.962	.979
K1	266.78	7425.242	.930	.979
L1	266.39	7421.899	.8894	.979
L2	266.44	7453.320	.931	.979