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TO THE READER

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EDITORIAL

PERPETUAL PROCESS OF LEARNING AND RESEARCH

The process of learning is not a new thing. It is as old as the human being itself. If we go through the history of mankind, it would be revealed to us that this very nature of *Learning* was embodied in Adam, the first man of the universe. As soon as he came to existence, Almighty God taught him the *Names* of all things which he remembered and even retrieved when ordered by High Command to repeat.

Since then, the process of learning has had been perpetual and pageant. It was only because the life itself never remained in a quiescent state, and didn't respite from toil. From the cave-age to computer-era, the human being has had been travelling on the long route of life with excessive stimulus and unbounded enthusiasm. During such tiresome and tormented travel, the human being used to augment his limited knowledge by investigation, by effort and even by recalling to mind. Thus, he remained throughout engaged in *Search* and thence *Research* of new, unknown and hidden elements of the *Universe*. This process is continuing from the D-Day of human existence on earth to this last decade of running century, and is bound to be prevailing in future as well!

The nature of human-learning and the process of his activity has been generally formal, systematic and scientific; but to some extent it remained even *informal*. The specific way of research and learning excites the human being to deduct from the whole material a bit of particular, or to revert from the single item to the entire element. Through this process of *deduction* and *induction*, the human being becomes able to manipulate a lot of material with skill and to manage by dextrous use of experience and observation. In the long run, he evaluates his own investigation duly conducted in the past, and even scrutinizes its findings and conclusion. This process of activities, encompassing the boundaries of observation, deliberation and experience, is known as *Research*.

From the time immemorial, this very method of *research* is continued

and destined to be carried on as the eternal norm of nature. But, what the 21st century would derive from the observations and experiences of the concluding era, is entirely unknown to all of us. Either it could adhere to our research or might totally obliterate our findings. In the case of latter one, it may be a challenge for all and sundry of the twentieth century.

It may not be out of place to mention here that all types of inventions and discoveries_____ranging from Newtonian theory of the universe to latest electronic and supersonic system_____are evidentally the outcome of *research*. If these outcomes of knowledge, research and investigation are utilized in *positive way*, then they ought to be blessings for human beings, otherwise the earth and all its belongings are destined to be destroyed through wrong implication of such scientific discoveries and depleted devices.

This very aspect of *research* has been discussed in two articles of this issue. In the first one, the elementary and simple way of *research* has been elaborated while in the second one, pragmetic process and matter-of-fact treatment is being dealt with.

It may be borne in mind that in *research*, we cannot say something as final and perfect. There are so many kinds of and various ways for conducting *research* that variation of resurt is inevitable. Thus, this process has a vast scope whereon we have to apply all the sources of learning, knowledge and intellection. Even we are required to count the outcome of past experience, research and evaluation. This will help a lot and may become a source for further processing of any problem and complication confronting the human society. This very characteristic of continuity is coherent even in the distance learning system. Through this way, knowledge is updated to a higher degree.

Thus, we come to the conclusion that *Research* and *Evaluation* are part and parcel of *Knowledge*, and these *Troika* have been playing a pivotal role in the process of spreading education since the very first day of life and expected to be carried on till the *Last Day*.

Dr. Mahmudur Rahman
Editor

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Electronic Course Development and Delivery in Distance Education: MBA Experience at Athabasca University

By

Konrad Michalski*

Abstract

This paper provides an overview of the development of the electronically delivered Master of Business Administration programme at Athabasca University (AU). The MBA programme and its electronic delivery platform have been developed by a small group of people in very short time. The paper focuses primarily on the technology that facilitates interaction among students and instructors, and the design of effective instructional systems. Based on a commercial package, the system presents a very cost effective alternative for distance education. The system runs on two of the most popular platforms: Windows and Macintoshes and is excellent for communication purposes and as a transportation vehicle for distributing other software.

Overview

In September 1993, the Centre for Innovative Management (CIM) was created with its goal to have first MBA students by September 1994. The Centre is quite independent from the University, and this fact is very important because it can make decisions fast and independently. During one year, the Centre has developed the Master of Business Administration programme and its electronic delivery system.

The MBA programme is based on the MBA from Henley Great Britain, but has been customized to the Canadian environment and converted to the

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electronic delivery mode. Generally MBA programmes put emphasis on collaboration among students, but Athabasca University is a distance education institution and almost all students work in isolation, on their own, from their homes. To overcome the isolation problem, an electronic system has been developed to enable students to carry out work and to enrich the teaching and learning environment. The electronic delivery system is called RELATe which stands for Resources for Electronic Learning and Teaching. The system has two components: the dynamic one which changes every day and allows students to communicate with others, and the static one which is used for reading and studying.

The CIM adopted Lotus Notes as the electronic platform for teaching and learning in its electronic MBA programme. Lotus Notes is a user-friendly, off line system which operates across a variety of computer platforms. Notes combine electronic mail, conferencing, and file transfer in a single environment. But much more important is that Notes are an entire environment based on a database concept which allows to create new sophisticated applications. Instructional systems can be designed, created and modified with relative ease.

Furthermore, communication is not limited to the exchange of text. Files containing animation, graphics, sound, and video may be embedded in an electronic documents and distributed to individuals or groups of students. Students can join activities to engage in debates, participate in workgroups for case study analyses, obtain practice and feedback, and receive instructional material in variety of multimedia formats.

Resources for Learning and Teaching - RELATe

The RELATe system consists of two very distinctive parts: the static one and the dynamic one.

The static part doesn't change that often and stays the same for some time (e.g. up to one year). This part also includes text books and courseware. The Centre has made a decision that all course materials developed *in-house* will be delivered to students in an electronic format instead of being print based. A package called Adobe Acrobat has been selected for the electronic delivery of the courseware. Adobe Acrobat is an electronic publishing software which allows to create an electronic file from any word processor or

desktop publishing software. A very significant change has been made to the electronic file format comparing to the traditional print based manuals, the size of the standard 8.5" x 11" printed page has been changed to 6.5" x 5" to make it more suitable for viewing on a computer screen. This decision was based on the fact that students would have to scroll through the traditional size pages. With the new size they simply go to the next screen.

The Adobe Acrobat file also allows the inclusion of hypertext links inside the file. A link allows a student to move to a relevant portion of text in the file. The links are established as part of a separate process after the Adobe Acrobat file has been generated. In the same process, when the hypertext links are established, another connections called bookmarks are made. The bookmarks work like a table of contents and allow the students to move to the part of the material the cursor was clicked on. There are also representations of each page showing its miniatures which is called *thumbnails*. Thumbnails allow students to move to a page based on a small images of all pages.

The Adobe Acrobat file also allows search by a string of characters similar to find in word processors. The cut and paste operations are also allowed. There are features like *zoom-in* and *zoom-out* especially helpful with big diagrams that have to be zoomed to make them readable. The navigation among pages is very extended and there are several ways of moving from page to page. Created with Adobe Acrobat files are cross platform compatible and can be viewed on Windows or Macintosh environment by simply converting them from Windows to Macintosh formats.

Lotus Notes has been used as the dynamic part of the system, and based on Notes a set of databases has been developed. The databases can be stand alone or interact among themselves.

There are three distinctive areas the databases are developed for:

a) *Personal/Office related:* It contains all personal databases like the mail box and address book, and other office related databases like CIM Announcements and Personal Profiles.

b) *Course related:* Designed and developed specifically for each course.

c) *Exam/Dissertation:* A set of databases developed for exams. and the final dissertation.

Because of the rich developing environment of Lotus Notes, the databases can be developed for many different activities. The databases can be stand alone or interconnected among themselves.

RELATe Activities

There are many different activities based on Notes and taking place during the course. These activities change significantly from one course to another. The following are examples of these activities:

Personal Profile: Students and staff post a short biography about themselves. A photograph can be scanned into the database as part of the profile.

Library: Provides access to books and articles related to the course module. Books can be requested from the Athabasca University Library, articles are received electronically. Students can also request other books and journals by sending an electronic request.

Reflective Activity: A discussion like structured database allows students to discuss their organizations.

Case Vignettes: A discussion based on course related cases presented on-line.

Workshop on Strategy: Students fill out the forms which are automatically calculated and collated with the forms completed by others. The forms are SWOT related and are an integral part of the course.

Learning Lab: Test students knowledge of the course module by answering questions that provide immediate feedback.

Course Help Hotline: Contains course module related problems and questions. Students can post their own questions. The database keeps growing and builds up the course related knowledge.

Evaluation Feedback: Contains the course interactive evaluation form. The feedback helps to enhance the service and the quality of the course module.

Marketing Planner: Step by step marketing plan builder. It guides students through the stages of the marketing plan building process.

Use of the Central Computer (Server)

The system allows for asynchronous communication among students through the central computer, called a server located at the Centre office. The entire concept is based on the remote client-server architecture, and the central computer works like a central storage for all messages. Students work off-line at their homes and all composed messages are stored locally on students' hard disks. Next, students connect to the server and send all composed messages. The messages are stored on the central computer before being picked up by other students. The most effective feature of the system is the fact that only changes made on students' computers are sent to the server, and only new messages waiting for them on the server are download to students' computers. This feature saves time and money. The server also keeps "templates" of all databases and if there are any changes made to the templates during the course, these changes are automatically distributed to all students when they connect to the server and replicate these database.

The MBA server is an IBM compatible 486DX2 66MHz, with 16MB of RAM and 550MB hard disk. The server also has a tape backup and additional communication ports. The additional communication ports allow to have four concurrent users on the system. The server runs the operating system OS/2 version 2.11. Personal computers are getting less and less expensive, and the fact that the server is just another PC, makes this system very affordable. The fact that the server is an inexpensive personal computer, is especially important for non-affluent countries.

At the beginning of each course, all databases have to be installed on the server in order to make them available to students and to make them replicable. Two weeks after the completion of course, all databases are removed from the server.

Student's Use of Personal Computers (Clients)

The systems can run on both most popular platforms: IBM compatible under Windows, and on Macintoshes. A basic 386 IBM compatible can run the system adequately, but it is recommended that students use 486/33 MHz with 8 MB of RAM. The installation of both packages (Lotus Notes and Adobe Acrobat) takes up to 30 MB of the hard disk space, so it is recommended that students have bigger hard disks.

A student Notes system (called client) has to be initialised before it can be used. Students receive their ID file which has to be copied to their hard disk in order to identify them to the server. Notes clients can connect to the server only after a password has been supplied.

The course related databases do not take a lot of space. Each course related set of databases takes up to 10 MB of hard disk at the end of the course after the students have taken part in all activities. For example, the Foundation Course contains 11 databases and takes 2.3 MB of space at the beginning of the course before all activities take place, and grows to approximately 8 MB at the end of the course.

The students have to have a modem and a telephone line. They access the server on an average once a day for approximately 3 minutes to replicate all databases.

For students, the systems has worked very reliably after it has been initialised. Our experience with the systems after initialization is that it can be compared to a fax machine. We have had computers with the systems for more than a year and they connect to the server continually without dropping the line.

Course Distribution

The course packages for the MBA programme are very much different than the traditionally print-based home study course packages at Athabasca University. The focus has shifted very significantly from the print based course materials to the electronically delivered. The package contains only few print based manuals and approximately 25 diskettes. The number of diskettes in the package presents a challenge for the print based institution like Athabasca

University. The Centre duplicated approximately 2500 diskettes for 100 students. The diskettes had to be labelled and shrink wrapped for shipping. Since there is always a possibility of getting a computer virus, all master diskettes were checked for viruses. The first course package (for the Foundation course) contains the following items:

* *Read me first:* This is a laminated four-page long *quick card* type document describing the system and its elements.

* *Lotus Notes software disks:* The University is allowed to duplicate the Notes disks and distribute them to students. There are 13 disks in the Windows package.

* *RELATe database disks:* There are four disks with course related databases in the Foundation course and they are distributed in a disk holder. The Foundation course databases take 2.3 MB of disk space without any data, and they may grow up to 10 MB at the end of the course.

* *Lotus Notes User's Guide:* The agreement with Lotus allows us to duplicate the disks but it doesn't include the manuals. We have developed our own Notes User's Guide, and we distribute it to our students.

* *Adobe Acrobat Reader disks:* There are two disks in the Windows version.

* *Courseware disk:* The courseware file containing the course fits on one floppy disk and for the Foundation course is approximately 900 KB.

* *Case Document file:* This is a booklet containing photocopies of the related to the course documents like annual reports from companies discussed in the course.

* *Microsoft Office:* This package is the standard package used during the entire programme.

* *Course map:* A document describing how to get started the

course, moving through the course, getting help, managing learning and assignments.

The course is distributed in a box similar to the boxes that many software packages are distributed in. The size of the box is 8.5" x 11" to allow textbooks to be put inside. Each course is distributed in a separate box, so the students can build their own library for the entire MBA programme. The box has been specially designed for the MBA.

The dynamic part of the course is delivered using Lotus Notes. It allows to keep the course contents up to date, and also to make modifications to the software. The modifications can be made to the templates residing on the server, and once they are modified the changes are automatically distributed to students' computers during the replication process. Some of the databases contain course related materials e.g., Case Vignettes contains course related cases.

Student Support

For the entire duration of the programme, a student's primary contact is a Graduate Student Advisor. Students are allocated to the GSAs at the beginning of the programme and they stay with the same GSA for the entire programme. GSAs handle all course related questions and also other problems. If they cannot answer the questions, they get the response from the right person and communicate it back to students. There is a guaranteed response time of 24 hours.

At the very beginning of the programme, when students install all software packages, the GSAs also do some technical assistance. If they cannot solve the problem, they refer student to the technical staff member. The installation and initialisation of all software packages has been relatively simple and only approximately 5% of problems has been referred to the technical person.

Another level of support is an electronic self-help support. The idea behind the Course Help Hotline databases is to create a self-help among the students. If a student has a problem, the first step is to check the Course Help Hotline database to find out if the problem has already been identified and solved. If not, a student posts the problem into the database and replicates it

to the rest of the student community. One of the GSAs role is to monitor the Course Help Hotline database for unsolved problems and correctness of the solutions.

Each course has an academic support for the duration of the course. Most of the time this is the course author who is available on line, but it may also be a subject matter expert in the course area. He/she monitors some of the activities, initialises and leads discussions, and solves course related problems.

Integration With Other Systems

Right now the Lotus Notes package has been used mostly for the communication and workgroup activities. Because of its database structure, the package is very powerful. Through it many applications can be developed using just the basic Notes environment. The MBA programme also uses Notes a transportation vehicle for distributions of other software. Students do some work using Microsoft Office packages and attach files to Notes documents for distribution. For example, some of the assignments are done using Word and sent to the marker being attached to an e-mail message.

The accounting courses will incorporate spreadsheet based templates, and in this case they are Excel based. The templates are distributed to students by attaching them to a document, or even an e-mail message. *Adobe Acrobat has integrated its new version with Notes which may enable the RELATe systems to be consolidated into one integrated part.*

For years, Athabasca University has been developing all kinds of educational software. There are multimedia packages that can be used in the MBA programme. It is feasible to use these packages and distribute them using Notes as a transportation vehicle. Other software can be fired up from inside of Notes, and after it is exited the operating systems transfers back to Notes.

Summary

Athabasca University has traditionally combined print-based instructions with telephone tutorials. The development of the new MBA programme will influence the design of instructional systems at the University. The Faculty of Administrative Studies has already started a number of initiatives and projects incorporating and further exploring the MBA experience.

The system is so cost-effective that it may have far reaching implication for other distance education institutions. While many systems force users to stay on-line while they are using it, the MBA system allows to compose all messages off-line, and its remote communication features are very cost-effective replicating only the changes and cutting down the connection time. The server presents a very inexpensive alternative for non affluent institutions. There is also a possibility of having a pool of Lotus Notes clients and distributing them to students only for the duration of the course. Students would have to sign a waiver that they return the package and erase the software after the course.

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Computer Assisted Instruction (CAI)

By

Muhammad Javed Iqbal*

INTRODUCTION

Perhaps the greatest contribution of present day technology is the development of computer which has influenced our life in every sphere. An example of this influence is *computer-Assisted Instruction*, which has proved an efficient and effective media in education. But, in our country we have introduced computer to a limited areas such as data processing and decision making only.

Computer-Assisted Instruction (CAI) is based on the principles of programmed instruction. The main aim of programmed instruction is to provide individualized instruction to meet special needs of individual learners. For this, it is necessary to have a heduge device which can store a *gigantic* amount of organized information which can serve to a great variety of educational needs with variety of educational levels; alongwith different styles of instruction and level of learning. (Chauhan, 1979, p.97) As such, CAI covers whole educational spectrum.

CAI is relatively new field in which the pioneer efforts were made around 1960s. A number of large-scale, heavily funded CAI projects have been conducted since then.

CAI is "defined as the use of computer to provide course content instruction in the form of drill and practice, tutorials and simulations". (Chambers and Sprecher, 1983, p.3.) Drill and practice is common form of CAI in which repetitive type or flash card approach emphasizes rote memory

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and is used in all educational levels.

Types of CAI

There are two major types of CAI-adjunct (first used by Victor Bunderson) and Primary. Adjunct CAI consists of materials that supplement or enrich the learning situation e.g. short CAI programmes and those support concepts which are to be discussed latter in the regular class. Primary CAI materials conversely provide instructions of a substitute and of usually longer duration. It is also part of distance learning throughout the world.

Helping Students to Learn

Computers are used by teachers for instructions. Computer is just not like tool as black board or textbook, it is rather device which provides students with interactive involvement with instructional materials. This is the advantage for which it is said that CAI contributes towards quality of education. Some of the benefits are:

1. Students may be given various degrees of control over their own learning.

2. Instructions can be tailored with individual student's needs.

3. Feedback on student performance can be had and stored for further reference.

Contribution of CAI is made through different teaching strategies: Drill and practice, dialogue, testing, problem solving, games simulations and discovery learning. For detail, each will be discussed with its specific characteristics.

Drill and Practice

Dialogues
Testing
Problems solving

C A I

Games
Simulations
Discovery learning

BASIC INSTRUCTIONAL STRATEGIES

Drill and Practice

Drill and practice is one of the basic instructional strategy of computer. In general, it promotes the acquisition of knowledge or skill through repetitive experience. In CAI, drill and practice refers to small tasks as the memorization of spelling or vocabulary, or the practicing of arithmetic facts. (digital, 1984, P.23.)

Drill and practice is automatic approach and is ready for automation accounts. CAI uses the computers in place of teachers to present the units of instruction. The most common drill and practice lessons have been designed to teach paired associate materials. This creates stimulus/response'situations (recall, B.F. Skinner.) Some of the reasons for popularity of computer based drill and practice are:

1. Drill and practice is essential to success, but teachers do not find much of time.

2. The materials are totally quantifiable, i.e. entire learning can be specified.

3. Drill and practice programmes, paired with associate, tasks, are relatively easy to design and develop.

Characteristics of Drill and Practice Programmes

Drill and practice programmes fall basically into two categories:

1. Programmes which present material from stored lists of items

2. Lessons which generate materials

Much of the development is of stanford drill and practice system. This has resulted in efficient and thorough version of traditional drill and practice procedure. Although "drill have unpleasant connotations, there is little doubt that accommodation of facts and elementary behavioural capabilities are pre-requisite to advances at conceptual and integrative levels". (Ellis, 1974, p.45.) Drill has a "fundamental, propaedeutic function". There are psychological advantages as intimation, emotion, and fear of the public display are

associated with classroom drill while computer assisted is free from all.

Sequential Versus Random Presentation

In their simplest forms, *stored list* programmes simply ready down the lists of paired associates and present them to the students. Unfortunately, students who must work through the programme more than once, may memorize the order of drill. To eliminate this problem, more sophisticated stimuli from the stored lists in a random fashion. This makes every time items presentation in a different way. Some drills have extensive capabilities to keep the track of the student's responses and for recycling missed items into the pool of items to be learned. In mature drill programmes, considerable flexibility can be given to the teacher so that characteristics of drill can be combined with individual student's characteristics and teacher's perceptions of the learning situation.

Paired associate drills are often placed in the context of games while some games add a timing factor to help students to increase speed with performance. In drill and practice programmes which are used to teach materials to the students, may often be used for testing. Actually, many programmes include completion criteria through which students may be graded. Keeping records of student performance in CAI lesson may or may not be important to the teaching aim of a teacher. In cases, where record is important, it should be stored and be provided this facility when required.

For science instructions, following five guidelines may be kept in view:

1. Drill is useful if students give right answer about 90-95%. If used in learning stage of instruction, it provides guidance to the teacher.

2. Drill does not correct misconceptions.

3. Beware that drill can be over done.

4. Drills are often used when not needed. These are designed to provide practice over objectives.

5. When drills are used inappropriately, they often give impression that science is difficult. (Woerne-et-al, 1991, p.33.)

Simulations

The second category of CAI is gaming and simulation. Simulation may be defined as "Controlled representation of real world phenomena". (Digital, 1984, p.29.) No doubt, simulation has been used since the man on the earth but its systematic use started after First World War.

Three general type of instructional simulations may be identified as: Task performance simulations, Systems Modeling simulations, Experience/Encounter Simulations.

Task Performance Simulations:

These simulations help the students in acquisition of skills related to successful completion of a specific task. Flight simulation is an example. Such simulations are, in general, goal oriented and designed to increase the quality of skill.

Systems Modeling Simulations: These are designed to increase the insight about a system. Such type of learning is difficult to achieve through other means. Such simulations provide the students with the opportunity to manipulate various system parameters and to examine their effects. These types of simulation are process oriented.

Experience/Encounter Simulations: They provide the students with a chance to have exposure to ideas and experiences which are not feasible, otherwise e.g. a student who can not travel to other country may go through the process on the computer. Pre-service teachers, if working through simulations, can be expose to pressure and decisions situations in a relatively painless way. These Simulations provide students the opportunity to think about internalized facts, feelings, and ideas.

Design Consideration: The problems faced in designing task performance and system model simulations are different from experience models. In task performance and system models, factors and parameter may be quantified and can be represented in numbers or in mathematical relationship. Experience Models on the other hand are more qualitative in nature and usually involve opinion and subjective situational analysis. Designer *often try team approach* in designing experience model. The design of task performance and system

models involve three or four steps. Nature of these steps depend upon whether the simulation is goal oriented or not:

1. ***Defining the task or system:*** identifying all variables which describe the state of task for system.

2. ***Presenting the task or system status to the learner:*** defining the method by which the student may ascertain the state of task or system.

3. ***Presenting a method for changing the status of the task or model:*** In most cases student will interact with computer through keyboard. Degree of control over use of keyboard may effect the execution of student.

4. ***Understanding criteria for task completion for task performance simulations.***

The design of experience model requires a different approach. Variables may be used to remember decisions which the student made and which have effect later activities. The students may complete or may not complete experience model simulation, moreover this is not a necessary criteria.

Experience model simulation has tendency towards goals, even it may be the simple completion of simulation. The basic steps are:

1. Definition of a primary path by which the student can achieve the goal with minimal difficulty or distraction.

2. Identification of critical decisions by which student may digress from the primary path.

3. Definition of alternative paths through which student must move. (Digital, 1984. P.31.)

Construction of experience model usually provides a flexible environment for designers if compared with other forms of simulation. Such type of simulation learning have potential for creative innovation and

motivating instructional experiences, but this type is under-utilization.

Games: Games are known for their motivating and entertainment value. Research in home video and arcade has shown that only few activities have more motivating value than games. "Games are exercises which involves competition and have set rules." (Ellington et-al, 1993, p.114) or it may be defined as goal oriented activity which can be successfully be completed by skilful application of set of rules. (Digital, 1984, p.32). These rules specify the process by which students achieve the objective. This process involves problem solving situations.

Characteristics of Games: Learning situation can be broadly divided into learning by competition and learning by co-operation. Games may be divided into games of competition and games of co-operation. Majority of games fall into competition class. This teaches competitiveness, individuality, and skills to personal development which are otherwise difficult to fuse in students. Games, falling under the title of co-operation, are used to fuse the skill of group problem solving, team work and social skills.

Games may also be divided into recreational and instructional games. Recreational games may be used to reduce anxiety in the classroom, thus helping students to learn. Anxiety is both trait and state. "As a trait, anxiety is a general disposition to feel threatened by a wide range of conditions. As state, anxiety is related to particular situations". (Gage and Berliner, 1988, p.165.) Both types of anxiety are corelated about 0.60. The high-anxiety children perform worse than low-anxiety-children.

The content of instructional games are closely related with instructional objectives.

Adventure games: They provide direct competition between parties. An adventure games present dilemma in the form of environments and choices selected from real-world instances.

Arcade Games: These games are patterned after arcade variety. *Math Blasters and World Attack* are popular examples. Both have drills and set of questions, then culminate with test in the form of action-filled arcade segments. The student shoots down the word that matches a definition. Various level of difficulty may be provided to cater the potential of different students.

Logic Games: Logic-games are usually said as problem solving software. The player is analytical in this type.

Design Consideration

A game constitutes a formal system similar in many respects to other formal system. Rules which underlay the behaviour of any formal system can be used to construct a game. The game then can be used to teach characteristics of the formal system. The game is instructional sound if it represents accurately the formal system being taught. But, while designing a game, construct on which game is to be designed should be clearly defined, then define the criteria of victory (Criterion referenced). Third; develop rules on which game will be played. Learning can only occur if these are based on psychological principles.

Problem Solving

Development of student's ability to specify and solve the problems remain a major objective of every educational system. This objective can be easily achieved by normal teaching method when simple problems are presented. But, it is difficult to achieve when higher level of skills are presented. Here CAI renders help.

In more sophisticated situation, it is not possible for a student to write the process step by step and if problem is huge calculations are time consuming (in mathematics). Here students are allowed to use computers. Ideally the students analyse the problem, formulate a representation of the problem design, use a computer programme to produce correct result. The students fully concentrate on formulating and solving the problems.

In non-academic disciplines, various techniques are to be used. Various programmes are available to assist the students. Problem-solving through CAI is not, really different from problem-solving made through other means, but computer can expand the learning experiences in a different and even significant new ways.

Many authors have identified elements of problem-solving which are applicable to a wide variety of situations. These are:

1. Identification of problems
2. Definition of problems
3. Representing problems
4. Exploration of strategies
5. Acting on ideas and
6. Looking at the effects

Each of the components has effect on problem-solving. Students, ability to identify, define, explore act and look at the effect depends upon their previous knowledge.

Our preceding discussion provides a basis for evaluating the role of different methods of instructions in problem-solving.

***Logo and Problem Solving*:** Logo was developed as language for facilitating thinking and problem-solving. Besides providing children insight as how we think, logo provides opportunity to learn new concepts. As such it permits discovery learning. During the past several years, a number of researchers have investigated the effects of programming in logo on children's abilities to solve a variety of problem. The majority of these studies have found "no evidence that logo programming develops general skills that transfer to other problem-solving situations, but people still claim otherwise."

***Defining the logo problem*:** One definition of problem "Why do students who learn Logo fail to show transfer to other problem solving situations?" This question assumes that students learn *LOGO* first. To answer this question, Vanderbilt University conducted a research which found a number of problems with discovery-learning-method. Children were found in impulsive, random play rather than actually choosing goals and achieving them.

***Beyond Mastery*:** The above-quoted study showed that certain ways of teaching *LOGO* lead to better master than others. Data concluded that structural tutorial approach is not sufficient to develop more general problem-solving skills.

In general, a teaching procedure that helps students, relate their experiences in *LOGO* to a broader aspects of problem-solving needs two characters: framing and bridging. Framing involves the act of relating a specific set of behaviours. Bridging involves the act of relating process that

)ccur elesware.

***Computer-Software that provides tools for enhancing problem-solving*:** We ook at computer advertisement on problem solving. In the same way, :omputer programmes can help students to solve problems they face in ıcademic area.

DISCOVERY LEARNING

In discovery-learning, students are required to find their own concepts,)rinciples and solutions. They do not adopt from teacher or text book. (Gage ınd Berliner, 1988, p.433.) This method is both applicable for individuals and groups. The learner solves the problem through sampling of information and ıypothesis testing. Teacher has the task of creating climate in which it is ıcceptable for students to make mistakes. Teachers also stimulate guessing so hat students can restructure their knowledge and try various strategies in solving problems. Nature of outcomes are not the same. Discovery-technique devised by Bruner include "emphasizing, contrast, stimulating guessing, encouraging participation, arousing awareness". (Biehler and Snowman, 1986, p.359.) It is an old saying that *experience is best teacher*. Indeed complete education may be thought of as the sum total of all a student's experiences. Teaching may be seen as process of arranging, organizing and providing structured experiences for students. These are fundamental to the concept of discovery-learning, a strategy by which educators place students in structured environments and provide them with tools for exploring, analyzing and mastering new concepts and principles.

Papert and his associates have worked on problems which children may face in mastering the fundamental concepts and operations of mathematics. Papert used computer to develop such environment where discovery-learning may occur. *LOGO* is one of his product. *Logo* is graphically oriented and students move a turtle around terminal scale in accordance with the rules of the language to produce graphic shapes and images. Theoretically, such computer-based learning environment can be built for any formal system. But, such a goal is difficult to achieve. Element of discovery learning may be blended in CAI. When adequate soft-ware is available, students may be allowed to take a pre-test and receive recommendations on the lessons, and then take post-test. Particularly when post-test is generated from a bank of items, then students may take repeatedly tests over

the same materials, study at their own convenience until they are able to pass the post-tests (Criterion).

Dialogue

Dialogue is most common method used in CAI, though there appears relative difficulty of effective design and implementation. Dialogue lessons emulate dialogue between teacher and student. The computer has information which student must learn through some type of interaction. There are two general type of dialogue. Computer-controlled dialogue (tutorials) and learner-controlled dialogue (inquiries).

Tutorial Dialogues

In the early days of CAI, tutorials were nearly synonymous with programme instruction. In these, a frame was presented, question was asked and selected subsequent information based on students responses. But, this was not designed on the knowledge of good teaching practice. Research developed language as *COURSE WRITER, PLANIT AND PILOT* to help the educators so to provide better instructional content. Such systems provide methods for entering test frames, right answer options, wrong answer options and mechanisms for the selection of subsequent material based student responses. (Digital, 1984, p.26.) Some characteristics (advantages) are below:

1. ***Linear page turning*:** Novice tutorial designer writes the frames of the test with little or without interaction with the student. Students turn pages electronically while studying. This has actually little advantage over text or other print media.

2. ***Linear with branching*:** Principles of programmed instruction are used by the computer. The design of effective instructional-frames, use of frequent student interaction, graphics and other techniques help to improve the quality of teaching.

3. ***Menus, modules, sequences*:** Computers have advantages that they can provide menus as organizers, sequence the materials in reasonable modules.

The effectiveness of tutorials relies on its content and design.

Production of good tutorials lessons requires following skills:

1. Appropriate message design
2. Good questioning techniques
3. Response judging (digital, 1984, p.27)

Computer Assisted Testing (CAI)

Testing is most popular form of measurement. It gives quantitative estimate of ability or achievement: They tell us how much. (Gage and Berliner, 1988, p.570.) Tests may be objective or subjective, norm referenced tests or criterion referenced tests. Test may be of any type but is of significance value in instruction and contributes towards upgradation of learning process. Computers have moved into classroom having more role in testing and evaluation. Computers assisted testing system has following five capabilities:

1. Test construction
2. Test delivery
3. Grading and analysis
4. Item analysis
5. Item banking

This cycle is reflected in the diagram:

Item Banking ----> Test Construction

Item Analysis The Testing Cycle Test Delivery

Grading and Analysis

Student Records, Grades and Reports

(Digital, 1984, p.35.)

Large computers have enough storage and power to support all aspects of testing cycle. Due to this association, Educational Testing Services were developed. But, with the advancement in computer technology, storage

capacity has come to small computers also.

Computer-Assisted Test Construction

Traditional classroom teacher makes certain decisions befor construction of test. How many questions? How many concepts? How man question on each concept? How many objective questions are to be included Among objective questions how many types are to be included? And on eac turn this process is repeated. But now personal computers improve th process. Questions can be stored in files, more over several advantages ca also have:

- The computer can order the items in a number of ways, so tha many versions of the same test can be produced so minimizin cheating.

- Item bank can be developed.

- Type and re-type becomes easy.

Computer-Assisted Test Delivery: If sufficient terminals are available, student may be asked to take test at a terminal. This has a number of advantages.

- Order of question is irrelevant, but computer can be pro grammed for questions to be asked.

- On system which have a clock, students may be allowed t take the test independently within a certain frame of time.

- The support of typing, grading test, and handling papers ar eliminated.

- Students may receive immediate feedback on test performance

Grading and Analysis: Mark-sense answer sheets can be fed to an optica scanner which will automatically record students responses and grade the tes Profile of test can be constructed on software. Grades may be reported o paper print out or electronic grade book.

em Analysis: Constant evaluation of tests itself is needed to improve tests. case of multiple choice items, effectiveness depends upon the construction stem, selection and construction of right answer, selection and construction distractions. A good test has discriminatory property. In fully developed mputer operations, the computer maintains a profile of history, of each test em. Each time, when administered item is upgraded, bad items are iminated and new items are added. Such a process is essential to effective aching.

em Banking: Item banking requires computer. Item banks may take years to evelop. Followings are the characteristics of large item bank.

- Items are characteristised according to the field to which they apply. Each pool is further sub-divided. This subdivision may be content based or objective based.

- Each item consists of two parts: item identifier and item itself. The item identifier is like serial number. It consists of information that identifies the items as distinct from all other items in the data base.

The advantages of item banking include all those mentioned above, long with the ability to construct equivalent forms of a given test. Feasibility f CIT depends upon availability of hardware software, financial resources, ature of local testing situation and attitudes of teachers but it is not all, ffectiveness of system requires investment of time and efforts also.

dvantages of CAI

People learn in terms of following four overlapping stages.

Vanting to learn: motivation, enthusiasm, interest and so on.

Doing: go, tryout things, experimenting practice, learning from mistakes. It lso permits the learner to proceed at its own pace.

Digesting: making sense of learning, experience and of feedback, taking stock, aining sense of ownership what has learned.

Wanting: Computer based learning systems such as interactive video can be highly attractive to use, makes use interesting by colours and different sounds. It provides immediate feedback e.g. try a option, push a button, have a result. In other words, people enjoy working with such a learning resources. It is said that wanting stage of the learning is catered for many kinds of computer based learning.

Doing: Computer-based instructions in any of its form provide chances for learning by doing. All CAI provides people chances to make decisions, options to select, data to enter or interpret and so on. Learning by doing is more effective than learning by watching moreover CAI can be used in privacy. Actually most learners, using CAI packages, are interested to see how package will respond if they feed wrongly. This is the way where making mistakes is non-threatening.

Feedback: This is the strongest link in the chain with CAI. Feedback is instant. The response from learning package will appear on the screen: advantage over traditional style.

Digesting: In a well-designed CAI package learner have a great deal of control over the package. There is often considerable opportunity for learners to go backward and forward through the package at will, repeating the package till it is digested.

Reduction in Learning Time: The learning time is reduced when compared to regular class. (Based on the work of Ellington and et-al; 1993.)

Disadvantages of CAI:

1. It is alleged that warmth and emotional climate which is created by the teacher in his class, cannot be created by CAI. CAI fails to appreciate the emotions of students.

2. CAI fails to develop essential features of language competency where ability to generate of construct meaningful sentences is essential. The performance of complex tasks depend upon hierarchical structure rather than stored exercises. It is complex task; constructive in its nature guided by set rules rather than minutely controlled sequence of stimuli and response.

3. It is difficult for teachers to move from accepted methods. Untried methods in which most individuals have little expertise.

4. CAI cannot appreciate the students artistic endeavor and cannot strengthen the friendship with those who are around him. In CAI children may sit still for a long time and receive feedback. This kind of forced feeding is the "antithesis of the thinking of such prominent educators as Dewey, Piaget and Bruner etc; and it is understandable why this mechanical approach to education is under criticism" (Chauhan, 1979, p.105)

5. Main problem in using CAI in Pakistan is money. Even the prices of mini-computers have been dropped sharply but still high. Moreover, computer technology has been developing so rapidly that priced computer once purchased needs to be replaced very soon. So, how schools can pay for computers so to allow student easy access to this promising educational technology?

6. It is natural that money problem is not of equal importance in all schools since some of the rich schools have access to the computers. But our concern is with equal access. Schools of 'disadvantages' students have no access to CAI, more over the majority of the population of these schools has no initial computer experiences (i.e. use of home computers). (Madaus et-al, 1989, p.423.) Second issue is of gender, Boys have more exposure to computers.

7. Teacher is an important element in teaching-learning situation. Researchers, conducted in U.S.A. show that majority of teachers graduated the colleges before the invention of computers. So schools should provide special-in-service training for teachers. Training costs money; another stress on budget.

8. The majority of available CAI material is poorly constructed. There are four main problems with regards to quality. (1) Much of software is not well documented... (2) Many software programmes are not easy to use.... (3) Computer programmes are yet to be successfully integrated into regular classroom

instruction... (4) Software developed for one machine may not run on other ...". (Madaus, 1989, p.124.)

Final Words

Computer is used in direct instructions where learning tasks are highly specified and highly sequenced with clear defined pre-requisites. [Schibeci referred by Woerner, et-al, (1987) p.54]. Knowledge, comprehension, and application objectives are emphasized for software design. In this phase CAI includes tutorial programmes and Drill and Practice programmes.

In revelatory category, computer is used to mediate between the students and a qualitative or quantitative model of real world situations. These programmes can supplement laboratory experiences which are time consuming, expensive, dangerous, technical, or remote to be practical in the classroom. Computer application includes simulations and games.

In conjectural use, computers are used to build interactive models of various science phenomena. Computer application in this category includes micro worlds (Problem-solving environment) and model building.

Emancipator use: In this computers make student free from non-productive work i.e. which does not contribute towards objectives e.g. organization of data into productive work.

For elementary classes, CAI can put fun back in the classroom. Curricular activities can be packed to stimulate student interaction. CAI can permit even some what ill trained teachers to lead students in achieving important insights rather than rote memorization of information printed in the book. CAI can provide laboratory environment without frustration, thus enhancing the quality of education.

But in spite of these, computer is not panacea. Teachers still need training in instruction. CAI only enhance academic learning and facilitates the effective application of principles of educational psychology.

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ALLAMA IQBAL OPEN UNIVERSITY

Adaptation of multimedia technologies in distance education

By

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INTRODUCTION

Is education a process of nourishing someone to the growth of special kind of behaviour? Or is it an aggregation of all the processes by means of which a person develops ability, attitudes and other forms of behaviour of positive values in society? Is it an art of making available to each generation the organized knowledge of the past? It could be argued that a true education involves free access to knowledge of both the past and the present. An extension of such access by distance education means methodologies, such as off campus study correspondence courses with radio, television and other audio visual media. Arthur S. Cropley and Thomas Kahl define distance education as being essentially based on communication procedures. These procedures assist the learning processes towards their main objectives. In such learning processes no face to face contact between the teacher and the learner exists.[1] Tony Dodds endorses this by suggesting three elements where correspondence, broadcasting and occasional face to face tuition is provided. These according to him are most common elements of distance education.[2]

Many scholars have attempted to analyze the importance of distance education and its practice through multimedia technology and have pointed out its weaknesses and strengths. In this paper an effort is made to discuss multimedia technology in distance education. At the end of this paper, Allama Iqbal Open University's (AIOU) model is discussed.

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MULTIMEDIA TECHNOLOGY

On the international scene major changes are taking place. The turnover of knowledge in all fields is unprecedented. The economic future of developing countries lies in their abilities and capacities to transform knowledge into new technologies. The world is moving fast towards the period of intense competition. In Pakistan emphasis is given to high technology society, a society which could standup to the future challenges. These issues have been recently debated and discussed in several seminars and conferences in Pakistan. As a result of this, the Institute of Education and Technology is re-equipped along the new lines. The University has replaced its old technology through investing 380 million rupees. Presently the previous facilities at the AIOU are upgraded to the level of international institute of communication technology. Thus, the use of second channel is maximized for educational purposes.

Certainly this investment of the AIOU reflects in human capital which will be consumed by individuals. In the age of multimedia technology, it is widely accepted that distance education has emerged as an innovative means to provide education to the common man in both developing and developed countries. According to the views of an author on distance education, *multimedia* is like:

> *a land of contrasts. Now here these are more evident than in the technologies used by distance teaching institutions. With great promise for the future, in principle, it implies a commitment to increased accessibility, to a vast variety of audiences.*[3]

From the above point of view, accessibility is seen in terms of a wide variety of audiences, coupled with wide-range of educational objectives. The emphasis is on the use of an array of communication technologies which is further confirmed by R.Mc Corn:

> *Most educators would now agree that the broadcast media have a valuable role to play in education. Even within the context of formal education, broadcasting has been used both in institutional settings and in people's own homes.*[4]

Distance education has to be on an arduous journey in achieving the

social objectives which were spelled out by its founders. Wichit Srisa-an[5] suggests that in multimedia approach the selection and development of instructional media should be as appropriate to the conditions of individual societies. He further suggests the following factors in the selection of media:

(i) Availability (ii) Accessibility
(iii) Acceptability (iv) Validity
(v) Economics

To Srisa-an, availability means the chosen instructional media and delivery systems must be technologically practicable, i.e. the technology is commonly used with sufficient manpower in individual society. Accessibility means instructional media and the delivery systems to be used must be accessible to both the distance teaching institutions and the learners.[6] For acceptability, the instructional media must be accepted by the teachers and students. The outcome would be very productive and effective. Validity means it should not be more expensive.[7]

Janet Jenkins suggests that the most difficult issue for institutions, moving in this direction, is the management of this change. She points out first change in institutional arrangements (sharing experiences with conventional institutions). Secondly, *New Technologies*. To Jenkins, multimedia has not yet reached the stage where it is within range of the average learner. Therefore, it could be possible to provide such facilities in centers where a learner could benefit.

Jenkins further suggests professionalization in distance education by giving and setting priorities, but at the same time care should be given to the *Quality assurance*. This includes design and operation system, the learning materials, delivery systems, staff development review, testing, evaluation of material, monitoring and feed back. Her conclusion is that distance education has certainly a bright future. It is possible that further growth will be accompanied by less visibility. As it takes the lead in changing higher education and training, it is likely to become less differentiated from conventional options, and gradually integrated into the mainstream.[8]

S.A Shirazi[9] in his article *Mass media and Agriculture* suggests that multimedia approach could be more effective in producing courses in agriculture. This approach is effective, having the ability, by using various

techniques, to educate/train the field staff and the farmer. Shirazi suggests the utilization of correspondence material, radio, T.V and various audio-visual aids (films, recorded cassettes, photographs diagrams, sketches and demonstrations). The models are already applied in Philippine, Sri Lanka, India, Indonesia and Malaysia. The programmes have been successfully launched for the uplift of the farmer community.

According to Shirazi and S.Khan[10], multimedia technology depends on the major elements for the communication process of delivery system, which includes proper understanding of the audience, economic conditions, past history, knowledge, status, habits, beliefs and values. This would help in designing and delivering the message effectively.

Most of the scholars agree that understanding of the communicator, its message, purpose, and implications are vital to the audience.[11] Sheikh Abdul Latif suggests two communication strategies for agriculture programmes.

Latif recommends to use two types of radio programmes, which are open broadcasting and regular listening groups. Open broadcasting is a teaching which is delivered as a message to the unorganized or non-captive mass audience. In this approach, there appears random supply of supporting material not any further more guidelines to listeners. The scholars have testified this approach as:[12]

> *Training of group leaders, production of print material, distribution and coordination problems, all divert resources from the one component which a radio project can best control quality of broadcast message.*[13]

Most of the experts are convinced of its desirable long-term benefit, but the message must be given in the traditional way. Latif also suggests three models in this regard. First, the *top down* where he recommends advertising approach. The second, he endorses *Bottom up*, which means that audiences must participate. The third is testified as *Quiz-show approach*.

About the regular listening group strategy, D.T Jamison and Mc Anany E.G observe:

> *The regular listening group strategy consists of combination of .*

radio messages broadcast on a consistent schedule usually coupled with some printed material. The group is organized to listen to the broadcasts together. They discuss then or share some common learning experience.[14]

In Pakistan, open broadcasting and regular listening techniques both are offered in several programmes from the radio. Multimedia technology is also equally applied in the areas of population education literacy, agriculture, environmental programmes and social sciences at AIOU.

THE AIOU MODEL

EXPANSION OF OPEN UNIVERSITY SYSTEM

The demand for education in the Third World countries through the formal system, has consistently run ahead of resources and the bulk of their populations, therefore, remain educationally deprived. Social and economic pressures continue to increase and more and more countries have turned to distance education as a solution often with considerable success.

The popularity of the system can be seen from the fact that within twenty years of the establishment of the open university in the United Kingdom, about 48 (forty eight) institutions of distance education have been established in the world. India alone has five open universities at the Federal and state levels and quite a few more are in the pipeline. Besides, full-fledged open schools are operating to provide education through correspondence supported by multi-media. The Asian Association of Open Universities (AAOU) serves as a strong vehicle for the promotion of distance education in the Asian region.

MULTIMEDIA APPROACH IN AIOU

The Allama Iqbal Open University being a distance education institution relies heavily on all varieties of available media to reach its students in an effective manner.

The main components of its multimedia package are the following:

a) Correspondence materials including self learning study package

and supplementary study materials (readers, textbooks and study guides).

b) Radio and television broadcasts generally related to the study materials of the package.

c) Non-broadcast media including slides, audio cassettes, fillip charts, and leaflets (generally for basic functional and literacy level courses).

d) Periodical tutorial instructions through contact sessions and guidance facilities at study centres (mostly in the afternoons).

e) Group training workshops for advanced level courses/programmes, generally at M.A/MSc/ M.Phil and Diploma levels as well as for teacher education courses at PTC, CT, B.Ed and M.Ed levels.

f) Internship short-term and long-term internship for teaching practice in case of teacher education programmes as well as at industrial/ business/commercial concerns in B.B.A. and M.B.A. programmes.

g) Course assignment as an instrument of regular instruction, continuous assessment and general guidance of students.

CRITICAL STEPS

i) Formulation of curriculum objectives
ii) Production of books/guides
iii) Production of audio support material/slides/ charts
iv) Production of video support
v) Appointment of tutors
vi) Organising workshops
vii) Practical training
viii) Tutor assignments
ix) Final examinations

ENROLMENT

The students' enrollment has shown a very fast increase over the last few years. The following figures reflect the recent trend in student numbers:

Semester		M	F	T
Autumn	1992	20873	11570	32443
Spring	1993	30881	15743	46624
Autumn	1993	21457	11808	33265
Spring	1994	61848	49402	111250
Autumn	1994	46917	41636	88553

Roughly 35% of the above students are females although the number fluctuates between 32 to 38 percent in various semesters. In the spring semester 1994, the percentage of female population in PTC has gone as high as 51% of the total enrollment in the programme.

Provincial Break-Up (Percentage)
Spring-94 Semester

Semester	M	F	T
NWFP	12.0	4.0	16.0
Punjab	30.0	34.0	64.0
Balochistan	0.5	0.2	0.7
Sindh	10.0	4.0	14.0
AJK	0.1	0.1	0.2
Islamabad	2.0	2.0	4.0
FANA/FATA	0.6	0.5	1.1

NUMBER OF APPLICANTS & SELECTED CANDIDATES

Number of applications against number of students admitted during the last four years in programmes where the number of seats were limited due to resource constraints:

	Year	No. of Application	No admitted	%
1.	1990-91	69300	21076	30
2.	1991-92	56860	16791	30
3.	1992-93	47161	14171	30
4.	Spring 94	87812	67377	77
5.	Autumn 94	62401	61775	98

This applies only to programmes where restriction of seats is being made because of various reasons. These are PTC, C.T., B.Ed., M.A./M.Sc, M.B.A and all M.Phil programmes. There is no restriction of seats in other programmes.

As per following informations, 2,10,030 students have obtained certificates; diplomas and degrees upto June, 1995. It is assumed that more than 50,000 students will receive their awards upto June, 1996. The following statements give adequate information on completers of various programmes who have completed their programmes and applied for their awards:

Certificate/Diplomas/Degrees awarded by AIOU upto June 1995:

1.	Basic Functional Education*	22,713
2.	Literacy	3,373
3.	Primary	477
4.	Matric	484
5.	Primary Teacher's Certificate (PTC)	40,490
6.	Certificate of Teaching (CT)	8,942
7.	Primary Teacher's Orientation Course (PTOC)	48,201
8.	Daftari Urdu for Federal/Provincial Govt Officers	1,653
9.	Elementary Arabic	8,381
10.	Arabic Teacher's Training Course (ATTC)	4,172
11.	Agricultural Courses	3,632
12.	Course Certificates	15,746

*Statistics utilized are supplied by AIOU's Research Cell.

13.	Intermediate	20,234
14.	B.A	16,673
15.	B.Com	329
16.	BBA	250
17.	B.Ed (General)	11,604
18.	B.Ed (Arabic)	49
19.	M.A Educational Planning and Management (EPM)	287
20.	M.A Teaching of English as a Foreign Language (TEFL)	119
21.	M.B.A	33
22.	M.Sc Pakistan Studies	42
23.	Certificate in Librarianship	1,138
24.	Post-graduate Diploma in English Language Teaching	516
25.	Diploma in Computer	159
26.	Diploma in TEFL	114
27.	Diploma in Teaching of English as an International Language (DIPTEIL)	82
28.	Diploma in EPM	23
29.	M.Phil Iqbaliat	37
30.	M.Phil Islamiat	31
31.	M.Phil Urdu	46
	Total:	2,10,030

Major Programmes in the Pipeline

1. Middle (Women)
2. Certificate in Pre-school Education
3. Matric (Tech)
4. F.Sc (General)
5. F.Sc (Community Health)
6. Diploma of Associate Engineering (Computer Science)
7. Post Graduate Diploma Hospital Diatetics
8. Post Graduate Diploma in Mass Communication
9. B.Sc. (Computer Science)
10. B.Ed (Tech)
11. M.A. (Economics)
12. M.Ed, M.A (Education)

3. M.A. History
4. Ph.D in
   * Urdu
   * Islamiat
   * Iqbaliat
   * Education
5. Short term Professional Development Courses in:
   * Management
   * Exports
   * Business
   * Rural & Development
   * Social Research
   * Demography
   * Journalism

Essential Features of AIOU Course/Programme Offerings

There has been a continuous increase in course offerings. The number of courses has increased from 6 in 1975-76 to 280 in 1993-94. The present number of programmes is 38 as listed below:

Programmes

1. Integrated Functional Literacy Programme
2. Basic Functional Education Programme (BFEP)
3. Primary Education (Abridged)
4. Matric (Women)
5. Primary Teacher's Certificate (PTC)
6. Primary Teachers Orientation Course (PTOC)
7. Certificate in Teaching (CT)
8. Daftari Urdu for Federal/Provincial Government Officers
9. Elementary Arabic
10. Arabic Teachers Training Course (ATTC)
11. Agricultural Courses (Functional Non-Credit)
12. Non-Credit Functional Course (Industrial Arts)
13. Intermediate
14. B.A

15. B.A (Mass Communication)
16. B.Com
17. B.B.A
18. B.Ed (Arabic)
19. B.Ed (General)
20. M.A. (Special Education)
21. M.A. (EPM)
22. M.A. (TEFL)
23. M.B.A.
24. M.Sc Pakistan Studies
25. M.Ed (Special Education)
26. Certificate in Librarianship
27. Post-graduate Professional Certificate in Business Administration
28. Post-graduate Diploma in English Language Teaching (ELT)
29. Diploma in Teaching of English as an International Language
30. Diploma in Special Education
31. Diploma in (TEFL)
32. Diploma in EPM
33. Diploma in Computer Application (DCA)
34. Diploma in Computer Maintenance (DCM)
35. M.Phil (Iqbaliat)
36. M.Phil (Islamiat)
37. M.Phil (Urdu)
38. M.Phil (Education)

CONCLUSION

World-wide demand for education is substantially increasing. Prerequisites for effective use of multimedia technology depend on the major elements for the communication process of delivery systems. Most of the experts agree that proper understanding of the audience, economic conditions, past history, social and cultural values and beliefs are to be considered prerequisites to the development of any instructional material.

The AIOU has spread across the country and covers urban and rural Pakistan. It has been playing vital role. However, methods are required to be innovated to reach the general clientele. The future of educational development in Pakistan will be determined by the extent to which the common man will be benefited from the electronic and print media.

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ALLAMA IQBAL OPEN UNIVERSITY

RESEARCH AND PRAGMATISM IN LEARNER SUPPORT*

By

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INTRODUCTION

In the literature on learner support in open and distance education, description and prescription outweigh empirical inquiry or research. Publications on learner support are often in the form of *how to do it* guidance or reports of experience. These can have practical value but may be theoretical, unsubstantiated or lack validity when transferred to other contexts. While many accounts express the conviction that learner support services make a difference to outcomes, demonstrations of the relationships are less easy to find. Learner support has so far received less research attention than other aspects of open and distance learning. Why should this be? There are four possible reasons: learner support may be perceived as a less glamorous activity than some others in open and distance education (support staff often have less power, status and pay); it is often regarded as peripheral to the *real business* of developing materials; it is an element particularly vulnerable to financial cuts; or it may essentially be a pragmatic activity rooted in the lessons of experience.

The last of these possibilities is the focus of this chapter which seeks to examine two questions:

* Is there an established body of research findings on learner support?

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* Research and Pragmatism in learner support', in F.Lockwood (ed), Open and Distance Learning Today, London, Routledge, 1995, pp.221-231.

* Can decision-making about learner support be based on research findings, or is it essentially a pragmatic activity, contingent on each individual system and context?

WHAT CAN THE RESEARCH TELL US?

Research on learner support in open and distance education comes from several sources:

- investigations of individual elements of a support system, for example, tutoring by the media (audio-tape, audio-graphics, computer conferencing, telephone and audio-conferencing), correspondence tutoring, counselling, turnround times for course work;

- in the wake of research on drop-out or persistence, in terms of the kinds of interventions that institutions and staff can make;

- analyses of roles and characteristics of 'successful' support staff;

- description and analysis of institutional or individual practice; and

- studies of learner satisfaction with support services (such as Rashid et al, 1994), now growing in number along with attempts to measure and assure quality.

In the literature on learner support there are few reviews of research. Of these, some take a wider focus than learner support alone and not all distinguish between empirical research and other kinds of writing. Cookson (1989) identifies empirical work on learning at a distance (but not specifically learner support). Wright (1991) focuses on learner support, but does not distinguish between research reports and other kinds. Sweet (1993) reviews the literature (not the research) on student support and some more general aspects of learning. Faced with the disparate array of research and theory on learners and learning at a distance (a broader focus than learner support alone), Gibson (1990) attempted 'to add order where none ... appeared to exist' by using Lewin's (1936) field psychology of learning to provide a theoretical framework for exploring it. A critical review of the research done

on learner support is still needed.

So what can we conclude from the research? The following is an attempt to list broad findings:

* learner-institution contact, such as regular contact with support staff, appears to have a positive effect on learner performance and persistence rates;

* factors which correlate positively with course completion rates include the use of course assignments, early submission of the first one, short turn-round times for giving learners feedback, pacing of progress, supplementary audio-tapes or telephone tutorials, favourable working conditions in the learner's context, the quality of learning materials and reminders from tutors to complete work;

* multiple interacting factors (personal, environmental and course variables) are at work in determining learner success; some institutional interventions can assist if appropriately targeted;

* learners value contact with support staff and other learners, though do not always use the services provided; learners most often report a preference for face-to-face tutoring compared to other media, though where face-to-face meetings are not possible, other forms of contact are rated as acceptable or valuable;

* what happens in the early stages of recruitment and enrolment affects later success or failure; and

* personal circumstances and lack of time are the most common reasons given for withdrawal from study.

However, stating these broad conclusions in this way may give some of them more substance than they warrant. Some are based on studies which have produced marginal or equivocal findings. Replication studies are few and frequently produce conflicting findings or fail to confirm the earlier ones. For example, Taylor et al's (1993) study on student persistence and turnround

times in five institutions in four countries failed to produce generalizable results; it drew attention to the very considerable differences between institutions and their practices, and the difficulties these created for achieving generalizations. Often too narrow range of research methods are used yet different research approaches can elicit different answers, for example, Garland's (1993) use of an ethnographic approach revealed different reasons for drop-out to those elicited by questionnaires.

SOME ISSUES

There is enormous variation in learner support systems in open and distance learning. Commonalities may lie in similar goals (such as 'providing interactivity and dialogue', 'personalizing a mass system', 'mediating between the materials, the institution and the learners', 'institutional responsiveness to individuals', 'differentiation of support services according to different group and individual needs'), but with diverse ways of achieving them.

CONCEPT DEFINITION

Definitions of learner support vary. To take just three: one describes it as the elements of an open learning system capable of responding to a particular individual learner (Thorpe, 1988, p.54); another as the support incorporated within the self-learning materials, the learning system and assignments marking (Hui, 1989, p.131); and a third as 'the requisite student services essential to insure the successful delivery of learning experiences at a distance' (Wright, 1991, p.59). Some authors include learner support as an integral part of a course, others place it as a supplement. Some include administration and delivery operations in their definitions, others do not. The range of services included in models of learner support also varies; some include pre-entry services, others do not (see Reid's Chapter 00). In some cases, support services are provided in partnership with other agencies (such as mentor support for teachers in school-based training, or for in-company learners), adding yet another dimension of variation.

Learner support can be viewed as having three components: the *elements* that make up the system, their *configuration*, and the *interaction* between them and the learners, which creates its dynamic. The elements are:

Configuration of these elements varies, depending on the requirements

of course design, infrastructure of a country, distribution of learners, available resources, and the values and philosophy of the open and distance education provider. Interactivity between the provider and learners differs in level, intensity and function.

1) personal contact between learners and support agents (people acting in a variety of support roles and with a range of titles), individual or group, face-to-face or via other means; peer contact;

2) the activity of giving feedback to individuals on their learning;

3) additional materials such as handbooks, advice notes or guides;

4) study groups and centres, actual or *virtual* (electronic);

5) access to libraries, laboratories, equipment, and communication networks.

The choice and use of these components are based on practicalities as much as on research findings (if not more). For example, though feedback on learning has been identified in one empirical study as having beneficial effects on learner progress and course quality (Boondao and Rowley, 1991), some institutions cannot afford to provide it, or see it as a low priority in the face of competing demands, or cannot find enough and appropriate people to carry out the tasks, or find the logistics of doing it too difficult given the infrastructure of the country. Reports of practice illustrate that learner support is heavily contingent on local circumstances. Comparisons can be misleading, sometimes based on false assumptions. How far then do findings from one context apply elsewhere?

DIVERSITY AND GENERALIZATION

Some of the problems in generalizing are illustrated by differences in the roles of support staff. In some cases different titles refer to essentially the same kinds of roles; in others the same title encompasses quite different tasks. In some systems, *tutors* do no marking or commenting on learners' course-work; in others, *tutors* spend 80-85 percent of their time allocating grades and designing tests for learners, or yet again, use commenting on assignments as

he main mans of dialogue with learners. The amount of learner support liffers as does the proportion of resources allocated to it. The ratio of learners o tutor varies widely: within my own experience it has ranged from 3:1 to 300:1, a difference of scale which has predictable implications for the tutor's ·ole (see Aalto and Jalava's Chapter 00). In some cases, learner-support staff are selected by qualification, experience and interview, in others they are elected by the group of learners (Warr, 1992). Usually support-staff are paid oy the open and distance education provider, but sometimes they are paid by the learners, or do the work unpaid. Do these differences matter? I think they do, in two ways: firstly, they make generalizations unsafe for the unwary, and secondly, they have consequences for the motivations of support staff, the meanings they attribute to their roles and work, and for the match between the role as specified by the organization and as enacted by staff (aspects little researched but of concern to managers).

A similar caution about generalizing arises from the myth of *the learner*. The term has a generic ring about it, but in fact refers to a very wide variety of people with different backgrounds and concerns even within one institution (Evans, 1994). Not all open and distance learners are adults, highly motivated or self-managing. Some are primary school-age children (Forbes and Wood, 1994) or disadvantaged young adults with negative and politicized attitudes to learning (Nonyongo and Ngengebule, 1993); or post-graduate doctors or engineers. Contexts of learning vary from yurt-based in-service courses for teachers in Mongolia to multi-national in-company training by computer networks in Europe.

The research on learner support in open and distance education does not reflect this diversity. Its base is relatively narrow: most published research studies are on formal education, institutionally based, and usually higher education in the more developed countries. Yet cultural contexts have considerable implications for the generalizability of the research findings. Models of *good practice* developed in western institutions are not always appropriate for other countries and cultures, for example:

> "Given the fact that the socio-religious tradition is one of seeing the younger generation as necessarily in a position when they should take orders, listen to elders, their individuality or independent thinking or decision-making is not nurtured. Often these traditions and customs

run contrary to the basic expectations required of open learners."

Priyadarshini, 1994, p.458.

and

"While education means spreading awareness and lifting taboos, it does not mean violation of people's customs and traditions. This must be kept in mind while planning a support system."

Ibid, p.462.

The diversity described points to the situated nature of learner support in three respects: its place in curriculum and course design, the characteristics and milieu of the learners, and the culture and social structures in which it operates. What role then can research play if concerns are so specific? What are the implications for constructing research agendas?

PRACTICAL CONCERNS AND RESEARCH AGENDAS

Some of the difficulties in reconciling practical concerns with broader research agendas are illustrated in a report from a group representing several Asian Open Universities (Sweet, 1993). Practical concerns about learner support were specific, described as 'unique to a particular institution and reflected local conditions, customs and practices' (Sweet, 1993, p.97), yet the common research agenda created by them listed broad topics not specifically focused on learner support, for example, see the following questions:

"Explore the feasibility of engaging in various entrepreneurial activities. Develop models of institutional collaboration."

Sweet, 1993, p.99.

This contrasts with the research questions from a single institution, following from an empirical study of science students' needs at the Open Learning Institute (OLI) Hong Kong, for example:

"What should be the quantity of provision of tutorials in distance education? Should the attendance of these activities be made compulsory?"

(Chan Shui Kin, 1994, p.53)

As the researcher says, the answers to some of these questions are not simple, needing not just administrative answers but also some which critically

examine academic perspectives and educational values. However, answers do need to be sought in the context of the particular institution. For more theory-focused research, some of the questions would need to be re-framed, for example, to become 'in what circumstances should tutorials be compulsory?'

The contrast between these two agendas raises some questions: do research agendas on learner support only become focused when embedded in the context of a particular institution or system? Is applied research only relevant to the institution where conducted?

RESEARCH, PRAGMATISM AND DEVELOPMENT

While both research and pragmatism have influenced the development of understanding and practice in supporting learners, research so far seems to have played a weaker role. What does it add up to so far?

IS THERE A THEORY OF LEARNER SUPPORT?

Theory is essentially an account of how ideas are related, a complex system for organizing the ideas through which we conceptualize some aspect of experience. However, 'a few loosely related propositions about causal interconnections do not constitute a theory ... though they may contain elements of one' (Dey, 1993, p.52). Does this describe the current status of research on learner support? Do the research studies on learner support build convincing models or add up to one or more theories? Not so far, for several reasons. Some of the studies are not linked to any theory. There has been relatively little testing out of propositions, theory or findings from one context to another (Taylor et al's, 1993, study is unusual in this respect). A large number of topics seem to be researched in isolation from previous related work, and do not build on earlier efforts to formulate theoretical explanations. Some studies are single variable studies resulting simple explanations for what are clearly complex problems. Sometimes the interpretation of results is over-optimistic. Many studies are descriptive ___ a necessary part of the research process ___ but also lack analysis. Some guiding concepts (like 'learner independence' or 'interaction' or 'mediation') are meaningful at one level but not well understood nor well operationalised. 'Learner support' is weakly conceptualised. So looking at the research on learner support we cannot claim

to have a theory or theories, or even be close to it. But is this too pessimistic a conclusion? What kinds of research are we talking about?

WHAT COUNTS AS RESEARCH?

A distinction is often drawn between *pure* and applied research. *Pure* research is primarily concerned with advancing knowledge within a particular field rather than finding solutions to practical problems. It asks broader questions at a higher level of generality than applied research, for example 'how do tutors affect students' approaches to learning?' These kinds of broad questions apply across different contexts and countries. Applied research asks more specific questions, about practical problems focusing on particular programmes and groups ('how did those tutors on that course with that kind of role affect those students' approaches to learning?').

Much of the research in open and distance education generally is applied research (including evaluation) ___ a problem-solving activity of a practical kind. This reflects the need for managers and course developers to get answers to pressing practical questions. Sometimes it is possible to combine such applied research with more theoretical explorations, but not always. Often institutions or project groups are too small to contain the right kind of expertise within their staff or lack the resources or time. However, research of an applied kind is essential for the effective functioning of open and distance education systems: for getting feedback on the learners, the courses and the systems.

Institutions vary widely in the amount of institutional research they do. Some institutions do little and neglect to compile the necessary baseline data about learners, support staff and their activities. The following situation at the University of Papua New Guinea is, unfortunately, not unique:

> "Records are so bereft of information that students who have already matriculated cannot be easily identified, let alone separated from those are still in the process ... the problems caused by this lack of information make the other problems which impact on student performance pale in comparison".
>
> Geissinger and Kaman, 1994,p.87.

A starting point for many applied research endeavours on learner

support by an institution must be a set of baseline student statistics (Calder, 1994). This can also assist in the monitoring and review of the development process over time and is helpful for testing out organizational myths about what actually happens. Another source of institutional research is that done by practitioners.

PRACTITIONER RESEARCH

There is a broad spectrum of what can count as research in learner support. It includes more than the studies that appear in journals. The results of systematic inquiry also appear in the form of internal reports, discussion papers, learner guides and supplementary materials, and feed into training materials, staff development workshops and the development of institutional policy and practice. Dissemination of this kind of research tends to remain at the local or institutional level where it can contribute to the development of a culture of research-minded practice, often in the form of action research. Not all those who contribute new knowledge and extend understanding are 'experts' or professional researchers. Many support staff who actively research their own practice would not claim to be so and are often not active in writing up their findings for publication. This kind of practitioner research can have limited visibility outside an institution but considerable influence within it.

Within large institutions practitioners' work can be unknown or ignored by 'professional' researchers who may in any case work within a different research paradigm. The opposite is the case too. Researchers' work may not easily reach practitioners, even within the same institution (the case studies in Schuemer, 1991, illustrate the difficulties that researchers and evaluators have in disseminating their findings and influencing decision-making). This is yet another dimension in which separate worlds can exist within one institution (see Costello, 1993). One result of this lack of connection or dialectic between practitioners and researchers is missed opportunities: to build productive partnerships, to democratise evaluation, and to make use of a broader range of research approaches, particularly qualitative and participative ones. Some forms of research are more difficult for centrally-based research staff to do, and because of this, the range of approaches and methodology may become narrowly focused. For example, survey research is more easily managed by centrally based researchers than some qualitative forms of inquiry with distant learners.

Whether *pure* or applied, any piece of educational research is shaped by some underlying assumptions and researchers of all kinds adopt procedures which follow from them. It is vital for practitioners and researchers alike to know what these are in order to carry out investigations or to assess in any meaningful way the products of such research. This understanding is neither the concern solely of professional researchers nor irrelevant to distance education. This belief leads me to disagree with Coldeway's following view:

> "The debate over qualitative versus quantitative research in education is best left to those with a keen interest in the philosophy of science. The distinction appears to be far from the needs of distance education research at this time."
>
> Coldeway, 1988, p.48.

Research in distance education should not be divorced from the concerns of mainstream educational research, where there is currently lively debate and practical engagement with issues surrounding the use of qualitative and quantitative approaches and their effective combination (Bryman, 1988). To disengage from this kind of debate is to weaken the quality of research in open and distance learning.

CONCLUSIONS

Clear conclusions are difficult to draw from the research on learner support. Some of the most basic questions about learner support ___ for example, the kind of questions Perraton poses (in Chapter 00) about face to face study: *what kind, how much and for what purpose?* cannot easily be answered by present research findings, at least without so much qualifications as to be unhelpful for practical purposes. Answers to such questions most often begin with the words *it depends*. Decision-making in response to them has to take account of a number of different kinds of factors, and trade-off one set of benefits or losses against another. While research can (and should) inform practice, providing services for learners is most often a pragmatic, problem-solving activity enacted in a particular context.

But this is not an argument for abandoning attempts to do research on learner support. Useful development can be generated from within an organization which actively researches its own practice and which ensures

that it knows enough about itself in order to do this. The move from this to generalizing across settings is a large one. Building theory would need stronger conceptualization, more repeated testing of concepts and the creation of organizing frameworks or theories. And some speculation: what might a theory of learner support look like? In the meantime, research-minded practice is the route to improving learner support.

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ALLAMA IQBAL OPEN UNIVERSITY

The Role of Mass Media in Promoting Education

An AIOU Experience

By

Abid Khawaja

Introduction

Allama Iqbal Open University (AIOU) is the pioneer institution in Pakistan which has used media systematically as a learning source in the multi-media teaching system.

Media is one of the important communication tool to support a wide-range of AIOU courses. Institute of Educational Technology (IET) has been established to develop media materials as well as media trainings. This is the unique and the only kind of media set up in the country.

The Institute is responsible to conceive, workout and apply various types of mediums in the teaching-learning process. Media range from television and radio programmes, video cassettes, audio cassettes, specially designed print material and other innovative audio-visual aids.

Media and Education

Media is serving education both in formal and non-formal situations. Generally speaking, television and radio broadcasts and audio-visual aids can serve education under the following situations:

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- For regular students in formal education and training institutions to support the curriculum and text books.

- For general public to provide them information through public broadcasting service like ETV and Educational Radio.

- For students of Open Universities as a key teaching source.

This paper intends to have a deeper look into the effectiveness of media (television, radio and a/v cassettes in particular) as a communication tool in the distance learning system of AIOU.

Social and Economic Indicators in Pakistan**

o Population	131.63 million (Jan.96)
o Labour force	36.70 million
o Employed Labour force	34.92 million
o Per capita income	476 dollars (1995)
o Literacy rate	37%
o Enrollment rate	
Primary level	73%
Middle level	46%
Secondary level	32%
o Budget allocation to education % of GNP	2.5%

National planners agree that education is one vital link that can influence all other social and economic sectors of the country. Education can help to turn the population into human capital; an asset and a tool of

**Source: Economic Survey 1995-96.

development. Education is one word for:

* Knowledge,
* Attitude, and
* Skills.

Pakistan is deficient in education. It is not possible to arrange education, literacy or skill-based training to all the population in regular institutions. Even the number of those who genuinely need education and are interested to have it is enormously large. It is a challenge to provide education to the large population engaged in various trades and occupations. Non-formal education is one possible answer to this issue.

Open and Distance Education

A UNESCO bulletin quotes distance education as a system that provides educational opportunities to great many people who would have otherwise difficulty in gaining ready access to education.

Open learning and distance education comes in the category of non-formal education and can be defined in various ways. Distance education is a kind of alternate education for those who cannot receive regular education. This system is also a replacement of regular schools and training institutions. Non-formal education is complementary to the formal education.

One way to describe the concept of distance learning is to explain it in terms of three "Cs". These are:

- Clientele,
- Contents, and
- Communication.

Let us interpret these variables with reference to AIOU.

Consider the clientele. Our students are not a group of homogeneous school going full-time students. They belong to various groups of population; working people, house wives, ***parda*** observing ladies, people wish to improve their professional qualifications while remaining on jobs, and those who wish to improve their trade skills. So the students are heterogeneous.

Contents refer to the syllabus of our courses. A look at the list of our programmes will reveal that majority of our courses are of applied nature directly related to the world of work. For example, we offer various certificate-level skill-based vocational courses. In the area of general education, we also include courses such as **Family Health, Child Care and Farm Income Generating Skills.** We also offer **BBA, Library and Information Sciences and Population Studies.** At master level, we offer **EPM, MBA, Mass Communication.**

In IET, various types of media are applied for information and education ranging from television, radio, video cassettes, audio cassettes, print media (the books) and other audio-visual aids.

The last "C" stands for communication. Communication has to be inherently different since there are no regular class rooms and campus-based study in our system. It is open learning. There is a distance between the teachers and the learners. So, the communication techniques and channels take a great bulk of load on transfer of information.

Text books are especially designed to convey meaning and concepts. In addition to personal media such as counseling and workshops, the electronic media is also used. Use of various communication channels have a special significance in the distance learning system to prove that *communication is education.*

CHANNELS OF COMMUNICATION IN OPEN LEARNING

- Print Media

  (Books, study guides, self-tests, handouts, questionnaire.)

- Inter-Personal Channels

  (tutorial meetings, workshops, counseling.)

- Broadcast Media

  (Television, radio.)

0 Non Broadcast Media

(Audio cassettes, video cassettes, slides.)

THE WRITTEN WORD

Textbooks of AIOU are rightly termed as *talking books* because of the unique style of addressing the students on one-to-one basis and use of highlight techniques, self-tests, languages and visuals. Here written words are not simply a substitute of class room lectures. The text help improve the knowledge and skills of the students in behavioral terms so that they may describe and apply what they have read.

Written text remains the core and essential learning source. Most of the teaching is done through print unless supported by broadcast programmes and video cassettes etc.

Sometimes, it is the other way round and the media becomes the chief source of teaching. Basic Functional Educational Programme is one case intended for illiterate and semi literate rural population. These courses rely heavily on audio and video technology and illustrations on flip charts.

TUTORIAL SESSIONS

A face-to-face tutorial session is like a touch of *realism* painted on the abstract canvas of distance education. These meetings are important source to establish contacts between the students and their tutors. This, in turn, helps meet the educational and psychological needs of the isolated students by providing them guidance and counselling and monitor their pace of work.

ELECTRONIC MEDIA AND TECHNOLOGY

The common motives behind using media channels like radio, television and other audio-visual aids are: to explain and to provide evidence to syllabus based contents. As regards specific tasks of the media, they may vary from course to course depending upon the service that each medium can offer.

While a book covers the theoretical and analytical aspects of the course, the electronic media serves to verify them with the help of its presentational characteristics. Television for instance is used for the visual interpretation of the written words.

Allama Iqbal Open University has so far produced more than two thousand radio programmes, over four hundred television programmes, and a substantial number of non-broadcast audio-visual cassettes and slide-tape presentations in support of its various courses. For science and technical subjects, television and video cassettes are used to show demonstrations to substitute difficult experiments and industrial visits, etc.

For social sciences, various media including audio and video cassettes are used to supplement and enrich the course concepts through talks, discussions, case-studies and showing applications of principles mentioned in the text in real life environment.

For basic level functional courses for rural population instead of text books the *audio-vision* technique becomes the core teaching material. For courses like literacy the media of television and video cassettes can assume the role of direct teaching at mass level.

In language and literature, the skills of accentuation, pronunciation, and pleasure of poetry also can be dispensed through actual or dramàtized versions in audio or video programmes.

Similarly disciplines like psychology, sociology, child growth, and education for disabled, where behavior study is involved, edited version of lengthy case-studies are recommended for follow-up discussions and analysis.

Again, in teachers training clusters such as PTOC, PTC and B.Ed, video is used to show model pedagogic techniques and micro teaching. And, for subjects like earth sciences and archaeology the projected slides, showing still pictures alongwith the recorded narration, has proved fairly effective.

The *Open Tech* is a new vocational training scheme for teaching various trades and skills to the younger population of the country. Informal and flexible use of television will help improve the technical competencies of the viewers who might already be engaged in various workshops and

trades, such as repair of automobiles and electrical appliances and income generating skills.

AIOU TELEVISION

Television meets the obvious needs of home-based students by giving them vicarious experience from the scientific, technical and social fields. With the advent of PTV-2, our transmission has extended further.

Besides our primary audience, the general masses and students of formal system also gain benefits through spin-off effect.

A few advantages of television are as under:

- Being a glamorous medium it can captivate the audience who watch the information with interest.

- Real world with real people and real happenings are shown which help fill the gap of theory and practice. Television support to AIOU agricultural, technical and income generating courses enhances the authenticity of the text.

- Television helps understand information which is too complex for written or spoken explanation. Examples include: natural phenomenon, scientific explanation and skills.

- Lengthy and complex experiences are shortened by compact editing. Examples include: behaviors and processes.

- Slow motion and speeded up demonstrations are possible.

AIOU Radio

Radio in our country has the widest outreach. It can be moved every where at homes and work places. Being a medium of voice radio is more personal and intimate as compared to written text when the aim is to persuade and give arguments.

For courses on social studies, education, language and literature, radio

is used for verbal explanation, interviews and drills. Students hear voices of people about whom they had been reading in the books in subjects like community health, sociology and rural development.

Radio livens the written words of text and creates *sound pictures* in the listeners minds. The case studies and experiences presented through documentaries are interpreted by the students in a more dynamic way.

Revision and improvements of learning materials is a routine work at the University campus. While it takes time to incorporate changes in the text, radio which is a quick medium is used to deliver new information.

The regular feature *Jamia Nama* on radio helps the AIOU staff at campus to keep contacts with thousands of students all over the country.

VIDEO AND AUDIO CASSETTES

Specially designed, the video and audio cassettes provide the students a greater access through the stop-start controls. The multiple viewing and listening of cassettes make room for more dense and serious information as well as explanation of complex concepts. This is not possible through the transient nature of one-chance and one-way radio and television broadcast.

Accurate and standardized a/v materials are supplied to individuals and small groups who can proceed with convenient pace by using their analytical skills.

This format is practised in teaching of languages, teachers' training and functional education. Facilities are also provided in the network of AIOU study centres established all over the country.

SALIENT FEATURES OF MEDIA IN AIOU LEARNING SYSTEM

- Each medium is used for specific purposes:
  Print is used for record and reference. It contains the core and major information.
  Television is used to interpret the text in visual terms. Radio and audio cassettes are used for teaching where the sound predominates such as languages, persuasion, dialogues and recitation etc.

- Media overcomes the barriers of illiteracy.

- Media help inculcate the habit of learning from media itself in an environment where media is traditionally entertainment-oriented.

- In accordance with the concept of multi-media approach the best use of one medium is achieved when it is combined with other media and not independently.

POTENTIALS OF MEDIA

- The increasing influence of media in the daily life of the people is a recognized fact. Press, radio, television, cinema and posters are not merely vehicles of communication. They actually constitute a real environment. They influence our thoughts and very often determine our behaviour. Mass media has come to stay as one of the leading agent of socialization. It can serve education if systematically used.

- Space communication technology has further multiplied the influence of media. Boundaries and reach of media has expanded. The messages now directly travel through space and invade into private homes.

THE GAP

- Concern over the gap between the theory and practice in the use of media for education is not only related to Pakistan or the Third World countries for that matter. It is a world wide phenomenon. State regulations, vulnerability of media, under developed society, unstable institutions, primitive technology, lack of competency among the personnel are all important factors.

- Television is generally recognized as an entertainment media. A large proportion of the television stuff is entertainment oriented. Media is not seriously considered as an educational tool.

- Surveys are needed to assess the educational requirements of the masses. Television needs more planning.

- Media problems are not problems of media alone but are related to the

problems of the community and economy. Hence the solutions are related the entire social system.

- People working for the spread of education through media need deeper orientation.

Recommendations on Media Education

- PTV, PBC, Ministry of Education, AIOU, NARC and other such organizations should pool their experiences together. Some sort of permanent liaison should be established to exchange views.

  AIOU is one possibility that can serve as centre of excellence. We intend to establish a model training television studio within the Institute of Educational Technology.
  If resources are pooled together this facility can be extended for practical training component to the people working for educational media. Courses and workshops can be organized here.

- Children and young people are the major consumers of media. They should know how to read media. It is necessary to develop a sense of critical analyses about media materials among the young viewers.

- In view of the satellite information technology, the official media policy needs serious re-structuring.

- Media should be used for the development purposes not only for government publicity.

- Information facilities (television and newspapers) are concentrated in favour of urban areas. There is a need to approach rural population. The main hindrance so far is the lack of education and purchasing power in rural areas.

- AIOU is a multi-media university. But, so far it has mainly depended on the written text for teaching purposes. There is a need to develop tele-courses using the full potentials of television.

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ALLAMA IQBAL OPEN UNIVERSITY

SELF-EMPLOYMENT AND NON-FORMAL EDUCATION

AN APPROACH TOWARDS POVERTY ALLEVIATION IN PAKISTAN

By

Dr. A. Rashid Malik*

INTRODUCTION

According to the 1981 census, the urban population was 28.3 % and rural population as 71.3 %. The overall picture is that the majority of Pakistani population exists in the rural areas and large section is deprived of basic facilities, like clean drinking water, food, schools, sewerage, hospitals, housing, etc. The *poverty line is depressingly* low since an income of about Rs.20/= per day is miserably inadequate to obtain the barest minimum for human growth. The rural tribal population lives in the worst condition with 40% below the poverty line. Despite attainment of an impressive economic growth rate of about 5% in the past four decades the country could not harness the full potential of its manpower resources. The general approach of trickle down effect on accelerating the GNP growth has not worked to alleviate poverty and check un-employment in Pakistan. Low form productivity, very high population growth, illiteracy, double digit inflation, low level of saving and investment have further worsened the problem of poverty in the recent year. If the human resources of Pakistani people are not developed and utilized, then it would be a great havoc.

No doubt, the ultimate cause of this situation is an unequal and highly

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concentrated patterns of assets-ownership. More than 70% of the productive resources, especially physical capital land even human capital in the form of better education, are owned and controlled by less than 20% of the population. Obviously, the more important line of policy to alleviate/reduce poverty is to focus directly on reducing the concentrated control of assets and unequal access to education and income earning opportunities. Especially the introduction of land reform in this regard could be more effective step to eliminate poverty. However, no government in Pakistan has taken this basic step of land reform, except one and that too could not be implemented properly. As a matter of fact, in an economy where productive assets are concentrated in the feudal hands, the land reform or its proper implementation is not an easy job. In the past, various Governments have adopted different alternative strategies to tackle the problem of poverty. However, the strategies not only failed to achieve the objectives, but also created other socio-economic problems like loan dependency, budget deficit and an erosion of natural resources. The historical evidences indicate that whichever initiatives were adopted in the past for rural development, ironically all have at best benefitted the rural rich. This happened even in cases where the programme was absolutely designed to help the small farmers and poor peasants.

Recently, on the occasion of 120th birth anniversary of Quaid-i-Azam, the Government of Pakistan has announced relief package to those who live below poverty line. The package includes distribution of food stumps, the purchase of *atta, ghee, dal and milk.* The package may have very little positive impact in the long run as the amount of Rs.1.2 billion for launching poverty alleviation programme, was insufficient to relief more than one third of the population living below the poverty line. There is, therefore little reason to believe that suffering will be mitigated by these measures.

SELF-EMPLOYMENT

Pondering over poverty prevalent in Pakistan, there is indeed a need to critically re-examine and develop policies with a view to improving the standard of living and quality of life for people at the lower and of the income spectrum. Instead of providing food stump and other measures, it would be for better that the Government should make schemes which could help generate self-employment opportunities. It is a fact that neither public nor private sector could provide hundred percent employment. Then, the solution

to fight with the poverty lies in a scheme through which common man shoul come out to get earning and livelihood at his own. In this regard, the peopl should be provided with funds as well as guide line in doing small scale sel employment activities like vendoring, small shops, cottage industries, dair development, poltry forming or any other technical job like plumberin electrician, car and motorcycle repairing. Self-employment would not onl help to reduce poverty, but also solve many other related problems facing th economy. These may include:

[1] Self employment will reduce the problem of growing unemploymer in the country. A large number of educated peoples are without jo Agricultural as well as industrial sector is not in a position to observ maximum unemployed population. The people, therefore can get maximun job opportunities through well planned self-employment schemes.

[2] Self employment will helpful for the development of the women Almost 72 percent of Pakistani population lives in rural areas. About 4 percent of the rural population is constituted of women which can play a vita role in the economic and social life of our society. Underdevelopment of thi potential power of women is a great loss of human resources. The well-bein of women is a pre-condition of the well-being of the family, community an village. Self-employment schemes like embroidery, tailoring, knitwear, leathe work, etc. alongwith training as well as access to simple technology will hel to utilize the resources of rural women.

[3] Self-Employment will mitigate the nagative effects of urbanizatio The negative effects of urbanization can only be mitigated by introducing sel employment schemes. This will effectively helpful for the development o human resources in rural areas and will boost village economy and thu making the villagers self-sufficient. Self-employment will keep the villagers i the lamlets and thus their resources will be utilized in a more productiv manner in their own premises.

[4] Self-employment will help to reduce the fertility rate of women i rural areas. Inspite of various measures taken by the Government regardin population control, the desirable result has not been achieved so far. Due t lack of medical facilities, the children mortality rate is very high. The peopl especially in rural areas, prefer to have many children as the possibility o their survival is uncertain. The villagers could only be persuaded not to hav

ny children if, the Government can provide employment and medical ilities in rural areas. Economic self-sufficiency and self employment will p to reduce the fertility rate of women in rural areas.

[5] Self-employment will encourage the cottage industrialism: To make villages self-sufficient cottage industrialization can play significant role. ttage industrialism will not only creat new job opportunities but also enable agers to sell their products in the local village market without any ploitation of the middle man. As such the means of production will not nain only in the few hands but every individual will have the control over

[6] Self-employment will reduce the negative effects of rapid industrialtion. Despite many positive effects, rapid industrialization also leads to ne serious problems at both national as well as international level. pecially it creates sharp differences among capitalist and working class and refore, hamper peace and harmony in the society. Self employment that courages small-scale industry may extirpate this problem and establish ace as a whole.

ON-FORMAL EDUCATION FOR SELF-EMPLOYMENT

Education is an essential component in the eradication of poverty. No ting progress against poverty can be made if it is denied a central place in velopment efforts. In order to implement this programme of self-ployment in Pakistan, the government must be introduced some changes existing system of education. Community schools can serve as good ucational institutions to provide basic education in rural areas which hances the opportunities of self employment. The experience of other Asian untries shows that primary education has been a boon to their productivity improving various social indicators of economic growth. However, fortunately Pakistan has failed to popularise primary education and half of kistani children between age five and nine are not in schools. A small rtion of the educational budget has been spent on primary education as mpared with other Asian countries. Government has put in disproportionate are of its educational resources in to a higher education policy which has en only benefitted the middle class while leaving much of the rural poor ucationally impoverished. To combat poverty effectively, the system of

education therefore, should be sympolised in a way that education can made accessible to the common people in Pakistan. More over, equa important is what the people read and learn, should be put to effective use improve their every day life.

It is suggested that Allama Iqbal Open University (AIOU) and we reputed NGOs working in the areas of education, should be assigned maj responsibilities towards basic, adult and women education through tl community school. The AIOU has already launched various basic functiona non functional and open-tech programmes aimed at helping rural masses improve their day to day life. These programmes can be made more effecti through community schooling. The introduction of craft-based educatio vocational training and work experience would eventually bring se sufficiency in the system of education and lead to self-employment whi would accelerate the process of poverty alleviation.

The AIOU could play a dynamic role as a national institution provide materials, training, monitoring/evaluation and assessment facilities various NGOs working in the basic education and community schooling.

In the end, it would not be inappropriate to say that for the alleviatic of poverty, stable political conditions are very important, without which ar measure would prove to be useless and implicable.

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ALLAMA IQBAL OPEN UNIVERSITY

The Basics of Writing a Research Paper

By

Farzana Ursani*

Introduction

As human beings, we all posses an inquisitive nature which leads us to ask questions, find answers, discover facts, analyse reasons, establish rules, seek confirmations, make evaluations, form opinion and reach conclusions. Once we are able to reach conclusions, we inform others about our findings, results and achievements. So, what we are actually doing? We are searching and re-searching, and this very search for knowledge and information is what we call ***research.***

Research is not only restricted to traditional academic pursuits, but it can be as simple and mundane as searching for an anti-ageing cream or a fat free cooking oil. As students, did we have a formal training to write research-based essays or assignments? If we want to answer this question honestly, the majority would say "no". Did our teachers encourage us to do some kind of informal preliminary research on a given topic?__"no". But now there is a growing awareness about research-based learning created by a new breed of teachers and teacher-trainers. The trend is catching on, and soon we will see our students engaged in research-based writing assignments. Thus, they will learn to write formal academic papers, think objectively and fill in the information gaps in their minds.

This article serves as a curtain raiser to a more serious task of writing a research paper and focuses on basic ingredients necessary to write such paper. Furthermore, this article will give a brief overview of the *what, why and how* of a research paper, its writing process and its organisational pattern.

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The reader will take a lead from here and explore further nuances of writing a research paper.

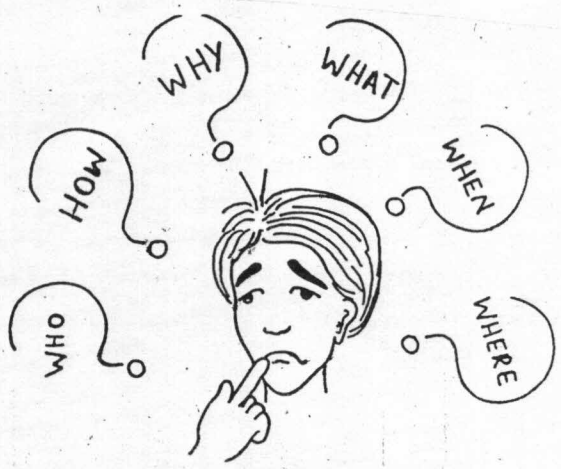
The *what* means the area of your study. Within that area, search for a subject and then a relevant topic, and finally settle for the main theme of your research paper. It is a process of fine tuning an extensive subject into a focused topic. Here is how we can fine tune a broad area and limit a topic:

Area: The Teaching of English as a Foreign Language-TEFL.

Subject: **What every EFL teacher should know about the *Reading Skills.***

Topic: **Strategies for improving reading efficiency among secondary level students.**

Theme: **The teacher will assess the reading comprehension of students and after finding the proof of their weak performance, suggest remedies to help them overcome these problems and become efficient readers.**



What	Area - Subject - Topic - Theme
Why	Purpose - Reason - Goal - Aim - Objective
Who	Audience - Readers
How	Plan - Organize - Style - Format
When	Time - Deadline
Where	Place - Institution - Research area

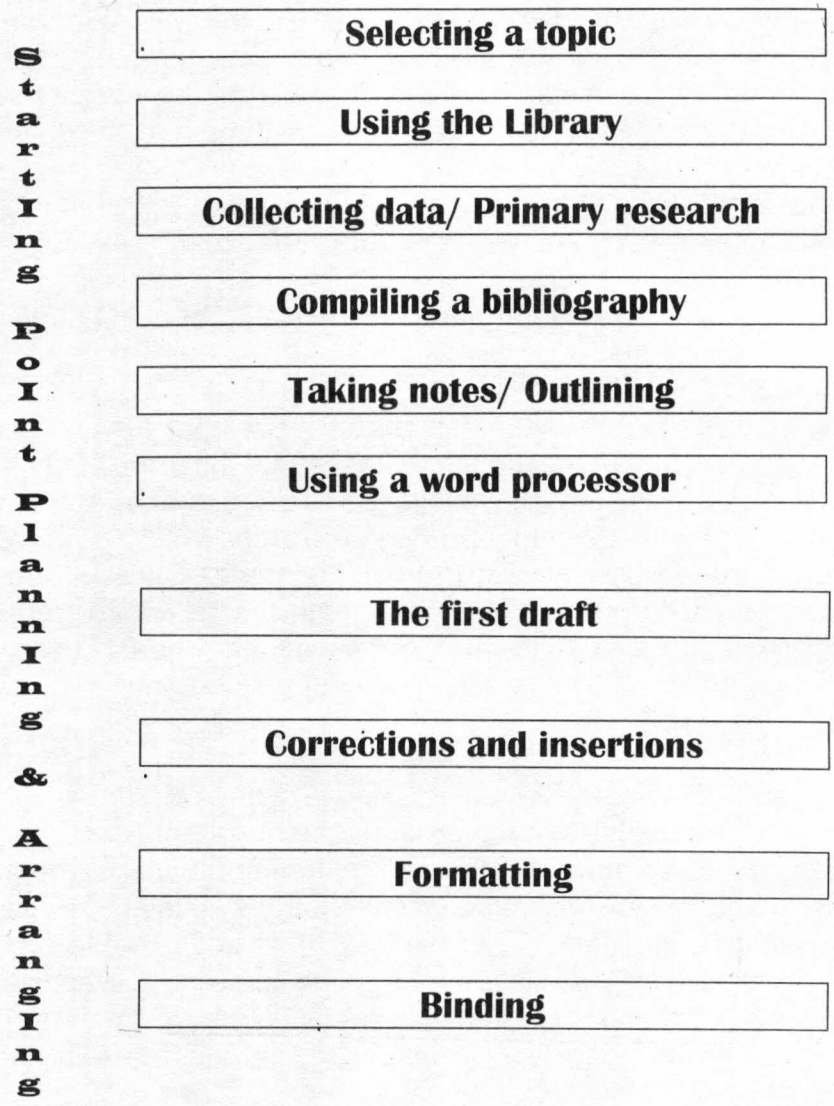
The ***why*** is the main aim and specific objectives of writing a research paper. Is the purpose of writing a research paper to get a higher degree or achieve an international or national award or compete for a scholarship? Whatever the purpose, a researcher needs to be very clear about the motive behind undertaking such a serious assignment and should "establish a definite purpose and a practical plan for achieving it, otherwise you won't know where to begin, and once you are clear about your purpose, jot it down in form of a purpose statement" (Dumont, 1988: 26). The ***purpose statement*** sharpens and clarifies a researcher's main reason for writing the reserch paper.

The ***who*** is the audience. Who are the readers? What information are they looking for? What do they expect from you? Are they expecting a brand new research product or something additional? As a writer it is very essential to have your readers' profile in mind which would help in maintaining the standard of the research paper.

The ***how*** is the way you plan and organize your research paper. It is about the process of writing and in the final stages the formatting. A research writer has to have an initial framework to follow and has to rely on the importance of conducting the ***primary research*** which is all about the background information one has about the topic. Once a researcher is comfortable with the primary data, start with the ***secondary research*** that involves collecting data specific to the research topic. The secondary research includes compiling a bibliography, designing questionnaires, conducting interviews and much more.

Now It's time to assess your knowledge of the word processor and start writing a working outline. As you go about the business of writing a research paper, you would be develping this outline further till it takes the shape of a final formal document. Formatting involves putting all the parts of a research report together. The parts, given in the organization table, are not all compulsory. Some of you might prefer giving an abstract, whereas, another writer prefers a summary, yet another will agree on giving an introduction. But, as a researcher, you need to know exactly what goes in an abstract, summary or an introduction.

The Research Paper - Process



THE RESEARCH PAPER : ORGANIZATION

THE PRELIMINARIES

- Cover
- Contents
- List of Illustrations
- Acknowledgments
- Preface/Foreword
- Abstract
- Summary
- Introduction

THE RESEARCH MATERIAL

- Background
- Rationale
- Description/main body/discussion
- Investigation/ research methods/ techniques/ strategies
- Conclusions/ results/ analysis/ findings
- Recommendations/ action/plans/proposals

THE SUPPLEMENTARIES

- Appendixes: graphs/ charts/ questionnaires/ samples/ illustrations/ tables
- Bibliography
- References
- Glossary
- Index

The ***how*** also includes a research writer's knowledge about the mechanics of writing, the technicalities of language and style essential for writing an academic paper and the knowledge about quoting books and authors. All these necessities might give cold feet to researcher, but as one goes about the business things fall into places and once a person takes a plunge, the whole writing process itself turns into a learning experience.

To summarize the article, I would like to quote:

* A research paper is, first and foremost, a form of written communication. Like other forms of nonfiction writing—letters, memos, reports, essays, articles, books—it should present information and ideas clearly and effectively.

* Select a subject that interests you and that you can treat within the assigned limits of time and space.

* Determine your purpose in writing the paper. For example, do you want to describe something, explain something, argue for a certain point of view, or persuade your reader to think or do something?

* Consider the type of audience you are writing for. For example, is your reader a specialist or a nonspecialist on the subject, someone likely to agree or disagree with you, someone likely to be interested or uninterested in the subject?

* Develop a thesis/purpose statement expressing the central idea of your paper.

* Arrange materials in an order appropriate to the aims of the paper.

Decide on the method or methods you will use in developing your ideas (e.g., definition, classification, analysis, comparison and contrast, example).

* Make a detailed outline to help you keep your plan as you write.

* Write a preliminary draft, making sure that you have a clear-cut introduction, body and conclusion.

* Improve it, revising, rearranging, adding, and elimination of words, phrases, and sentences to make the writing more effective. Follow the same procedure with each subsequent draft.

* Proofread the final draft, making all final corrections.

* Always remember that no set of conventions for preparing a manuscript can replace lively and intelligent writing and that no amount of research and documentation can compensate for a poor presentation. (G. Baldi, and Walten, 1988:I)

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ALLAMA IQBAL OPEN UNIVERSITY

Women's Secondary Education Programme

By

Syeda Najeeba Batool &
Saskia M. Bakker*

I support my family with tailoring business, since my father has died. I need the Secondary School Certificate to improve my chances for a good job. I can become a trainer in a vocational school then. But I have no time to go to school daily.

(Perveen-A student of Punjab)

In 1986, the Allama Iqbal Open University (AIOU) added a new and unique branch to its educational tree: the *Women's Secondary Education Project*. It started on small scale i.e., in pilot area, but as the project matured into a regular University programme, it expanded into a growing number of regions and consequently the number of students increased. Presently the programme covers the whole of Pakistan, including Azad Kashmir and the current enrollment is about 4000 students per semester. This number represents a wide variety of women, young and old, married and unmarried, living in cities like Rawalpindi and in tiny villages situated in the mountains of the Northern Areas or in the desert of Sindh. They have in common that they had to discontinue their education after eight class. It may have been due to marriage or some other family situation which made it difficult for them to attend school, or (most likely) there was no secondary school near enough for them to attend.

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The AIOU took up the challenge to provide these women the opportunity of continuing their education through the Distance Learning System. This article discusses the results of the students of the Women's Secondary Education Programme, but first a brief introduction to the programme will be given.

WOMEN'S SECONDARY EDUCATION PROGRAMME

The students of the Women's Secondary Education Programme take 2 to 4 courses per six-month semester, depending on the weightage of the course (half credit or full credit). In two years, they can complete the curriculum, consisting of 5 1/2 credits of compulsory courses and 2 1/2 of elective courses. Once in a week the students receive guidance from a tutor, during a tutorial session in a local study centre. For each subject the students submit assignments, which are marked by the tutor. At the end of the semester, examinations are held in regional examination centres. After completing the curriculum, the student acquires the Secondary School Certificate. The certificate of the AIOU is officially recognized as equal to those of the formal secondary schools.

AIOU has developed a curriculum of course material for self study, supported with media and tutorial support. Although the curriculum covers the compulsory subjects of the formal education system, it is different in two ways. Firstly, it is designed for distance learning; and secondly, it is developed especially for its main target group-adult rural women. In course books are included examples of women's everyday life and teach them more than just what is necessary to get the Secondary School Certificate. The students for example read about balanced food, how to deal with a bank or to treat minor injuries. A number of elective courses explicitly aims at enhancing women's income generating opportunities, for example *Poultry farming, First Aid and Garment making.* (See Annex-1 for list of courses.)

OBJECTIVES AND METHODOLOGY OF THE RESULT ANALYSIS

A side effect of the distance learning system is that there is only limited contact between the students and the educational institute. It is, therefore,

more difficult to assess the students' progress and their problems, than in a regular school system, where teacher and student meet each other daily. The study presented below is an effort fill in part of this information gap.

The result analysis was done during June to September 1995. Its main objectives were:

- To get a picture of the performance of the students in different stages of their study.
- To compare the results of different courses and regions.
- To find out the possible dropout at different stages.
- To provide feedback to course coordinators who are in the process of the revision of their courses.
- To formulate questions for a forthcoming Dropout and Completers Study.

The researchers compiled the result data of three semesters (Spring 1993 to Spring 1994) of all students of Women's Secondary Education Programme. In this way they could follow the performance of the students for a longer period, through various semesters and the various chances they get to clear a course. The combination of the results of various semesters not only provides a more complete picture (because students may take several semesters to clear a course), but it also shows the developments in the results.

The basis of the study are the result lists of Spring 1993, Autumn 1993 and Spring 1994. The result statistics of Autumn 1994 were received shortly after the calculations had been completed, but some of these data could also be included. The result lists present the data of assignments, practicals, written examination and final results, per student and per course. In each semester, the University issues three result lists: one for the results of the students who appear for the first time in the examination, one for the Reappear and one for the Again Reappear exams. All these lists were included in the study. This adds up to a total of 8 result lists. (See table 1.) The examinations for the ninth, the Again Reappear for Spring 94, were taking place at the time of the study and its results could not yet be made available. The data were counted

manually, with help of the Lotus 123 software for the calculations. The total number of students in each stage of study can be found in Annex II, Course wise result data.

The study is a quantitative analysis where appropriate, possible explanations for the outcomes were explored. However, the researchers intend to implement a qualitative Dropout and Completers Study to get a better insight in the causes of the trends that appear from this study.

Table-1 **Results used for Analysis**

Date of Exam	Exams that were	Exams that were	Exams that were
Oct-Nov.1993	Spring 1993 Fresh		
April 1994	Spring 1993 RA*	Autumn 1993 Fresh	
August 1994	Spring 1993 ARA*	Autumn 1993 RA	Spring 1994 Fresh
April 1995		Autumn 1993 ARA	Spring 1994 RA

ASSIGNMENTS AND PRACTICALS

Assignments

> *When the last date for the assignment comes near, I drop all work. My family members do it for me, so I can spend the whole day on writing the assignment.*
>
> (Nargis-A student from Northern Areas)

The assignments form one of the most important components of the learning system of the AIOU. The purpose of the assignments is not only enhancing students' writing ability, but also to make them go through the course material to find the answers. The students are required to submit four

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* RA means Reappear, ARA means Again Reappear.

assignments for a full credit course and two for a half credit course. A student is only eligible for the final exam if she passes the assignment component.

The below table presents the average and course wise pass percentage in assignments over three semesters (Spring 1993, Autumn 1993 and Spring 1994). This table actually represents the students who made and submitted the assignments. In fact, the number of the students who fail in assignments is very low (less than 5%). Therefore, the rest of the students who have not made the assignment (absent) are the dropouts for this course. The average pass percentage in assignments shows an increasing trend. This trend is quite encouraging because it means that more students are writing their assignments, and are making themselves eligible for the final exams. This also shows that the students are interested in continuing their education through Women's Secondary Education Programme.

Table-2 **Pass Percentage in Assignments**

Course Title	Spring 1993	Autumn 1993	Spring 1994
Islamiat	58%	71%	80%
Pakistan Studies	0.65	77%	77%
General Science	62%	58%	77%
Urdu	--	73%	78%
Family health & Care	45%	70%	82%
English I	58%	55%	72%
Garment Making I	48%	56%	63%
Home Economics	43%	57%	76%
Garment Making II	60%	58%	43%
Sindhi	--	97%	96%
Arithmetic	60%	52%	65%
English II	59%	60%	50%
Average pass %age	56%	68%	77%

The course wise analysis of data shows that with the exception of one or two courses, all others have an increase in pass percentage in each semester. For the compulsory courses, i.e.; Islamiat, Pakistan Studies, General Science, Urdu and Arithmetic, the pass percentage in assignment has increased over three semesters. The pass percentage in assignments of English part I also shows an increasing trend, but English part II has fluctuating pass percentage. For English I and II, Arithmetic and General Science, a low pass percentage is expected because students give the impression that these are difficult courses. However, we get an average result with an occasional low performance.

The results of some elective courses surprised the researchers. For example, the pass percentage in assignments of Garment Making I and II and General Home Economics remains low in all semesters under study. We expected a high pass percentage in assignment and practicals because generally these are the courses of women's interest and are related to their daily life. But, the figures show a contrary situation. Further study will be done to find the explanation of these results. However, the pass percentage of the Family Health and Care, another elective course, has been rising over these semesters.

PRACTICAL WORK

> *The courses are very useful, especially Garment Making. After studying the course and doing the practical work, I now know how to stitch my children's clothes and I also make the covers for the furniture.*
>
> (Khair-un-Nisa-A student from Punjab)

For three courses, i.e; Home Economics and Garment Making I & II, the students have to do practical work which is compulsory, like the assignments. Its marks are included in the final result. The table below gives the average and course wise pass percentage in the three semesters. The percentage is taken of those who were enrolled in theses courses.

Table-3 **Pass Percentage in Practicals**

Course	Spring 1993	Autumn 1993	Spring 1994
Garment Making I	48%	9/18*	61%
Home Economics	30%	55%	80%
Garment Making II	59%	44%	40%
Average pass %age	48%	49%	61%

*9/18 means that 9 students out of 18 passed the practicals.

The practical pass percentage of Garment Making part-I and Home Economics has an increasing trend and is consistent with the average pass percentage. Garment Making part II has a decreasing pass percentage in practical work that goes down from 59% to 40%. There is a considerable difference in the result of Garment Making part I & II. A possible reason for this difference can be that the students have to make relatively difficult practicals in part two (drafting, embroidery etc.). The average pass percentage is increasing, but it is quite low in all semesters (Spring 1993-48%, Autumn 1993-49%, Spring 1994-61%).

The reasons of the low pass percentage in practicals can be that either students do not submit their practicals or that the marks are not included in the result lists by the tutor. The later reason is reported by the students more frequently. In general, we know that sometimes the assignment and practical marks are not reflected in result list by mistake, although the students have submitted both. From the students we know that this problem occurs, but in the table we see that figures do not support this reason. The problem lies somewhere else, perhaps with the submission of assignments.

After analyzing the above tables we see that the average pass percentage of assignments and practicals have overall an increasing trend. This trend is very encouraging because the higher the pass percentage in assignment and practicals the lower will be the dropouts at the first stage of

the programme. The average pass percentage in practicals is quite low, but still has an increasing trend. It is obvious from the data that almost all those who pass assignment also pass practical work with only one exception (Garment Making II in Autumn 1993). That indicates that the students are well aware of the importance of the practical work.

PERCENTAGE OF APPEARANCE IN WRITTEN EXAMINATION

> *The examination centre is very far and there is no public transport available. But we have to go, so we hired private transport. All the girls of this village went together and some of the fathers also came with us.*
>
> (Shabana-A student of Azad Kashmir)

The students who pass the assignments and practical work are considered eligible for the final examination. They receive a roll number slip and appear in written examination at central places. The table below gives the percentage of the students who appeared in the exam. after passing the assignments and practicals. In AIOU examination system, every student gets three chances to pass the examination. First attempt, Reappear and Again Reappear, Separate percentage for these have been calculated for three semesters.

Table-4 **Percentage of Appear in Examination (Of those who passed the assignments)**

Examination	Spring 1993	Autumn 1993	Spring 1994	Autumn 1994
First Attempt	55%	78%	82%	86%
Reappear	31%	30%	52%	—*
Again Reappear	22%	23%	—*	—*

*Results of these exams were not announced at the time of the study.

The above table shows an increasing trend in the percentage of the students who appear for the examination. This trend for the first attempt is quite encouraging. It means that more and more students after passing the assignments try for the examination, which results in less dropout at this stage.

For the Reappear (RA) and Again Reappear (ARA) exams, the appearance percentage (of those who get the chance) remains quite low. There can be a number of possible reasons for the low appearance in RA and ARA exams. One reason can be related to the administration i.e. the way the roll number slip and result sheets are presented. We know from our students through correspondence that due to the late mailing of roll number slips, results and the use of confusing symbols in result card, they miss the exam. The analysis of the correspondence with students shows that roughly 20% of the total result problems are related to the confusion about symbols, like RA, ARA*, etc. About 10 to 15% of the students complain about the late arrival of the roll number slips. Some of the students sit and wait for their roll number slips and would not contact the University to find out the examination dates. The other reason, of course, is that students get discouraged of the failure in the first chance and do not try for the second chance. Finally, the students who, after completing their assignments, stopped studying (for whatever reason) still automatically get their three examination chances. As most of the serious students pass the exams, the percentage of 'on paper' students increases comparatively.

There is an overall increasing trend of appearance in all chances which indicates that there is some improvement in the administration of roll number slips and result cards and students get more instructions and better guidance from the University.

PASS PERCENTAGE IN EXAMINATION

> *For me the courses are very easy. I sit down to prepare for the exam for only two days and I pass with good marks. But my sister needs much more time. She has to read the books again and again to understand and remember them.*
>
> (Zeba - A student from Balochistan)

In an examination some students pass and others fail. Besides, a number of students do not appear in the exam. Those who fail and those who did not appear, automatically get a Reappear chance and, if necessary, an Again Reappear chance. If after these three chances the student still does not manage to clear the course, she either has to re-enroll for the course or will be a dropout for that course.

Table-6 **Pass Percentage in Examination**
(Of those who appeared in examination)

Examination	Spring 1994	Autumn 1993	Spring 1994	Autumn 1994
First Attempt	65%	77%	66%	76%
Reappear	55%	57%	57%	–
Again Reappear	78%	51%	–	–

Data not available at the time of the study, because exams were held in the same period.

Table-6 gives the pass percentages for the first attempt, the Reappear and the Again Reappear exams of those who appeared in the examinations. This represents the three chances of the *same group of students*. It means that those who did their first attempt in Spring 1993, had the Reappear chance for the same course in the Autumn 1993 semester and their Again Reappear exam was in the Spring 1994 semester. (See also Table 1.)

For the first attempt, the pass percentage goes up and down between 65% and 77%. The pass percentage for the Reappear exam is more or less stable at 55 to 57%. This is much lower than the pass percentage for the first attempt. For Again Reappear exams, the data of only two semesters are available, 78% in Spring 1993 and 51% in Autumn 1993. The figures do not show any clear trend. One could expect the pass percentages to go up from the first attempt to the Reappear exam and from the Reappear to Again Reappear exam. After all, if students read the same course material for the second or third time, their chances to pass could increase. On the other hand, time has passed since the first exam attempt. The students are busy in other things and thus they may forget part of what they learned. Also, for the students who failed the first time, apparently the course is difficult. Even in a second attempt they may find it hard to pass the exam. In this light the pass percentages for the Reappear and Again Reappear exam are not so surprising.

The pass percentage of the students of Women's Secondary Education Programme in Autumn 1994 (76%), is comparable to that of the FA students

of the AIOU in the same semester, which was 77%. Comparison to the results of the formal schools is difficult, because the systems are different. In the formal system exams are held only once a year, instead of each semester and the students have to prepare for all subjects at the same time, which makes it more difficult. On the other hand, schools sometimes conduct admission tests before sending the registration for the exams to the Board and only send the papers for those who passed the admission test. This means that the schools' pass percentage are artificially increased. In the Open Learning system, it is up to the student to decide if she is well enough prepared to make the exam.

There are several factors which can influence the pass percentages. Pass percentages for the same course can fluctuate from semester to semester, because the *difficulty of the examination paper* is different. If in one semester, the examination paper is relatively easy, this will result in higher pass percentages for that course in that semester. If the *services* of the University improve (for example clear and timely information about the exams), this can help the students to prepare themselves better. This can payoff in an overall improvement in the results. Both these factors are likely to have played a role during the period of the study. A *change in the course material* can also have effect on the pass percentages. However, the course material of Women's Secondary Education Programme remained the same during the whole period of study, so it is not likely that the course material caused any fluctuation in the results. Lastly, the *relative difficulty of the course books of one course, as compared to the other,* can explain differences in pass percentages between courses. This would appear as pass percentages which are consistently lower or higher than those of other courses.

The table below presents the course wise pass percentages of the students who appeared in the exam. The data of all three semesters have been combined for each course. This is done to make sure that for each course a considerable number of students is involved, to make comparison between course possible. The data in this table only represent the pass percentages of the first attempts. For the Reappear and Again Reappear results the numbers of students in some courses are too small for a course wise comparison.

Table-7 **Course wise Pass Percentage in Exams in First Chance (Of those who appeared)**

Course	Compulsory/ Elective	Cumulative Pass
Islamiat	Compulsory	88%
Pakistan Studies	Compulsory	41%
General Science	Compulsory	72%
Urdu	Compulsory	94%
English 1	Compulsory	33%
English 2	Compulsory	71%
Sindhi	Compulsory	99%
Arithmetic	Compulsory	72%
Family Health and Care	Elective	94%
Garment Making 1	Elective	56%
Garment Making 2	Elective	82%
General Home Economics	Elective	76%
Average	Elective	68%

The overall average pass percentage over the three semesters is 68%, but the table shows considerable differences between courses. Three courses stand out for their very high pass percentages, namely Urdu, Sindhi and Family Health and Care. Urdu or Sindhi is studied by students in their first semester. Apparently these new students, who still have to get familiar with Distance Learning system, have no difficulty with these courses. The other course which new students take is Pakistan Studies, which has a very low pass percentage. The most likely explanation for this low performance is the course material. For Pakistan Studies the book of the formal system is used, because the

distance learning book is still in the developing stage. In itself this is no explanation for the low performance, because for Islamiat, which has a high pass percentage, also the books of the formal are used. However, the Text Board book for Pakistan Studies is much thicker than that of Islamiat and the contents of the last mentioned book are relatively easy to memorize.

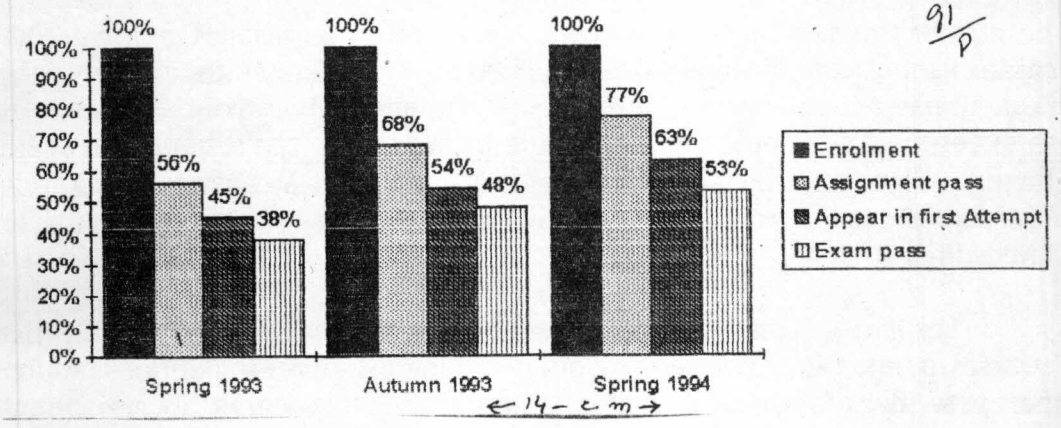
The pass percentage of the remaining compulsory subjects is around or even above the average. A striking exception to this *rule* is the English-I course, with a pass percentage of only 33%. The figure is not surprising, because in the formal system, the results for English are also much lower than for the other subjects. This is not to negate the seriousness of such a low pass percentage, as students who do not clear this compulsory course, cannot get their certificate. Luckily, the students perform better in the second part of the English course, with a pass percentage of 71%. The analysis of the results reveals no indication for the striking difference in pass percentage between English-I and English-II.

Students usually perform well in the examinations for the elective courses. The topics of these courses are close to students daily life. The high pass percentage can indicate that students take a special interest in the courses, or that they already know most of what is written in the course books. However, this seems contradictory to the fact that the students do not perform particularly well in the assignments of the same courses (see previous paragraph).

FLOW OF STUDENTS THROUGH THE SEMESTERS

With the flow of students we mean the number of students who go through all the stages of a semester. In the previous paragraphs, we have looked at the *pass percentages* for assignments and examinations separately. Now, if we combine these data, a picture emerges of the stages in which the majority of the dropout takes place and the variation over the semesters.

Figure 1 **Flow of students through evaluation stages**



The above figure shows how many students of the initial enrollment in each semester, pass through the various evaluation stages of the WSEP. Each first bar represents the total initial enrollment, shown as 100%. The next bar shows how many of those 100% passed the assignment, while the third bar represents those who appeared in the examination. The last bar shows how many students passed the examination, either in the first attempt, or in the Reappear or the Again Reappear examination. These are the cumulative data of all courses. The percentages given, refer to the *initial enrollment* for the courses. This is why, for example, the examination pass percentages are different from the pass percentages in paragraph 4 (which refer to the students who *appeared in the examination*). In Spring 1993, only 56% of the total enrollment of the students passed the assignments and were eligible to appear in the written examination. Not all of them actually appeared in the examination: about 9% did not appear, so that the third column of Spring 1993 shows that 45% of the initial enrollment appeared in the first attempt of the

examination. The fourth column shows how many cleared the course. Of the total of 38% who passed the examination, 29% passed in the first attempt, 5% in the Reappear examination and 4% in the Again Reappear examination. In Autumn 1993 we see an increase of all figures: a larger percentage of the students passes the assignments, appears in the examination and clears the course. Of the total of 48% who cleared their course, 41% passed in the first attempt, 5% in the Reappear examination and 2% in the Again Reappear examination.

The figures of Spring 1994 are better again. Of the total enrollment 77% passed the assignments and 63% appeared in the examination. The figure of students who cleared the course: 53%, though higher than the previous semesters, is still incomplete. This figure includes only the first attempt (42% passe) and the Reappear examination (11% passed). When the data of the Again Reappear examination become available, the figure will raise to approximately 55%*.

The phase which shows the highest dropout in each semester is that of the assignments. As has been mentioned above, the problem is not so much that students cannot pass the assignments. Rather they either do not submit the assignments or there is some problem with the making, due to which the marks could not be included properly in the evaluation system. Luckily the dropout in the stage of the assignments is decreasing. As it is the first phase, this automatically influences the following stages. More students who pass the assignments means more students who can appear in the examination and more to pass the examinations. The figure clearly shows the effect of the increasing trend in appearance and pass percentages. Each semester more students manage to clear the course, which means that less students dropout. Combined with the fact that enrollment is rising, this causes a sharp increase in the absolute number of students passing the courses (from 1006 in Spring 1993, via 1151 in Autumn 1993 to an estimated 3700 in Spring 1994). See Annex II.

COURSE WISE COMPARISON OF THE FLOW OF STUDENTS

The figures that have been discussed above, represent the average of

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*
Assuming that 22% of the 1761 students eligible for the ARA exam and 55% of those pass the ARA examination.

all courses. A comparison of the courses can give information on which courses cause more drop out.

Figure 2 **Course wise percentage of students who clear the course**

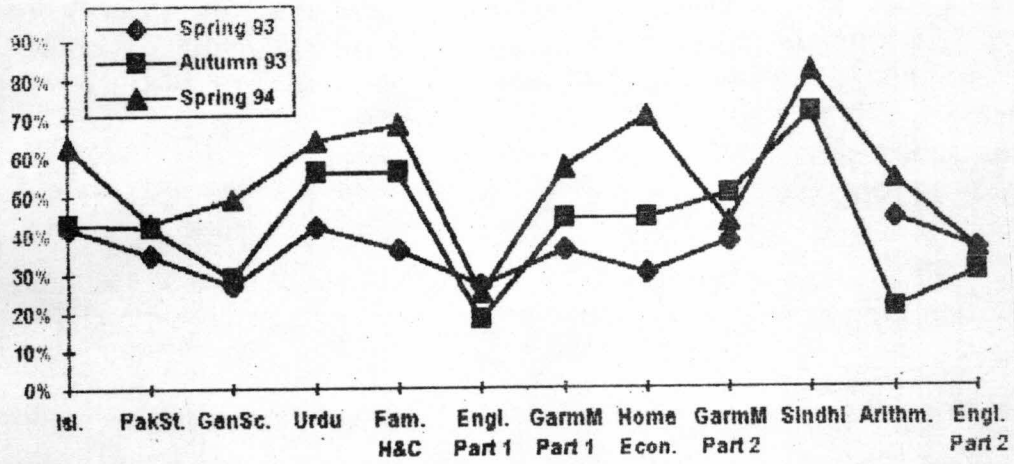

Figure 2 represents the percentage of students for each course who cleared the course in the three chances (first examination, Reappear and Again Reappear) that every student has. For Spring 1994, the data of the Again Reappear examination were not yet available, so the results of only two chances are given. This graph shows the *combined effect of the various evaluation stages* (assignments, practical work, examination) that have been discussed in the previous paragraphs. For most of the courses, the group of Autumn 1993 did better than the students of Spring 1993 and for Spring 1994 the results were again better. Only for English I and II and for Mathematics the results for Autumn 1993 were worse than for Spring 1993. All lines show a steep drop when they reach the English I course. This means that this course could not be cleared by many students. English is a compulsory course, so the students who did not clear it after three chances, have to enroll again for this course, or they will dropout. General Science scored low for the Spring 1993

and Autumn 1993 semesters, but luckily he students of Spring 1994 performed better. The success percentage of Pakistan Studies, though not as low as English, remains below average. Urdu and Family Health and Care scored high for all three semesters, which confirms earlier suggestions that these are easy courses. The other elective courses (Garment Making 1 and 2, Home Economics) fluctuate around the average. As mentioned before, we expected better results for these courses, because they are close to women's daily life. Because they score relatively low at the assignment stage and relatively high at the stage of the examination, the combined result is near the average. Most other courses also fluctuate around the average. It means that success percentage for these courses are more or less the same, with the exception of English, which scores low and Urdu and Family Health and Care, which score high.

CONCLUSIONS

The analysis of the results of the students of Women's Secondary Education Programme for the Spring 1993, Autumn 1993 and Spring 1994 semesters shows that the dropout rate decreases in each semester. At the same time, the enrollment of new students increases sharply. This is a positive trend, because it means that not only more students start studying in the Secondary Education Programme, but also more will be able to complete their Matric through this University.

The other outcomes are as follows:

The average pass percentage in assignments has an increasing trend, from 56% in Spring 1993 to 77% in Spring 1994. It means that more students submit their assignments and the dropout at this stage is decreasing. The average pass percentage in practicals is quite low, but still has an increasing trend (from 48% in Spring 1993 to 61% in Autumn 1994). The data show that almost all those who pass the assignments also pass the practical work. Only those students who passed the assignments and practical work are eligible to appear in the examinations. The overall trend of appearance in examination shows a significant rise, from 55% in Spring 1993 to 86% in Autumn 1994. The pass percentage in examination fluctuates between 65% and 75% and shows neither an upward nor a downward trend. Both figures combined mean that more and more students are passing the examinations and the dropout at this stage is also decreasing. For the Reappear and the Again Reappear

examination the appearance percentage is much lower than for the Fresh examinations. The same is the case for the pass percentage in examination. It needs further investigation to find out why only few students avail their second and third chance to clear the course.

All courses show the above mentioned increasing trend in the pass percentage in assignments, with the exception of Garment Making II and English I and II. In comparison between the courses, it appears that the percentage in assignments of Garment Making I, II and General Home Economics remains low, so that relatively many students drop out in the first stage of these courses. However, those who continue show an average pattern in appearance and pass percentages in the examinations. For English I and II, Arithmetic and General Science, we get an average performance in assignments, with an occasional low pass percentage. The percentage of appearance in examination fluctuates for General Science and English II, whereas for English I and Arithmetic it is average. The pass percentages for General Science, English II and Arithmetic are average (about 70%), but for English I it is disappointingly low, that is 33%. The combined effect of these outcomes is that mainly English I is a major cause for dropout. The other courses, General Science, English II and Arithmetic score just below the average of all courses in terms of the number of students that finally clears the course.

The two courses that are offered to new students are Urdu and Pakistan Studies. For both courses, the pass percentage in assignments and the appearance percentage in examination is above 70%. But the pass percentage in examination show quite different trends. The pass percentages for Urdu remain high throughout the semesters (90% and above). For Pakistan Studies however, the figures are low; the cumulative pass percentage over three semesters is 41% only. The number of students who clear Pakistan Studies course remains below average and it does not show an increasing trend, like the other courses do. In 1996, the researchers plan to conduct a Completers and Dropout study, which will give a deeper insight into the causes of the figures of the result analysis study presented above.

Annex I LIST OF THE COURSES OF WOMEN'S SECONDARY EDUCATION PROGRAMME

Course Title	Course Code		Credit
1. Selling of Home Made Products	200	E**	Half
2. Islamiat	201	C*	Half
3. Pakistan Studies	202	C	Full
4. General Science	203	C	Full
5. Urdu for daily use	204	C	Full
6. Arabic	205	E	Full
7. Family Health and Care	206	E	Half
8. Functional English-I	207	C	Half
9. Garment Making-I	208	E	Half
10. General Home Economics	209	E	Full
11. Garment Making-II	210	E	Half
12. Poultry Farming	211	E	Half
13. Maintenance of Electrical Appliances	212	E	Half
14. Sindhi	213	C	Full
15. General Maths	214	C	Full
16. Education	215	E	Full
17. Food & Nutrition	217	E	Half
18. First Aid-I	218	E	Half
19. Home & Farm Operations	219	E	Full
20. First Aid-II	220	E	Half
21. Functional English-II	221	C	Half
22. Applied Food & Nutrition	222	E	Half

** E means elective, C means compulsory

Annex-II

STUDENTS OF SPRING 1993 SEMESTER

Course	Enrol-ment	Ass. Pass	Pra. Pass	App. ex	Ex. Pass	Re-appear	App. R.Aex	R.A. Pass	A.R.A	App. ARA	A.R.A Pass	Total Pass
201	26	15		10	8	7	1	0	7	3	3	11
202	46	30		18	12	18	12	3	14	6	1	16
203	77	48		19	12	36	12	5	32	4	4	21
204	19	8		7	7	1	0	0	1	1	1	8
206	55	25		19	15	10	3	3	5	2	2	20
207	108	63		60	16	47	18	10	34	5	3	29
208	738	356	355	398	218	138	42	25	113	24	19	262
209	30	13	9	13	8	5	1	1	4	0	0	9
210	58	35	34	26	20	15	2	2	13	0	0	22
213	0	0	0	0	0	0	0	0	0	0	0	0
214	743	448		366	262	186	56	36	148	32	27	325
221	784	463		262	195	268	84	43	233	58	45	283
TOTAL	2684	1510	398	1198	773	734	231	128	606	135	105	1006

Column 1. Course Code
Column 2. Enrolment in the Course
Column 3. Number of students who passed the assignments
Column 4. Number of students who passed the practical work
Column 5. Number of students who appeared in the exam.
Column 6. Number of students who passed the exam.
Column 7. Number of students who get a reappear chance
Column 8. Number of students who appear in the Reappear exam.
Column 9. Number of students who pass the Reappear exam.
Column 10. Number of students who get an Again Reappear chance
Column 11. Number of students who appear in the Again Reappear exam.
Column 12. Number of students who pass the Again Reappear exam.
Column 13. Total number of students who clear the course.

STUDENTS OF AUTUMN 1993 SEMESTER

Course	Enrol-ment	Ass. Pass	Pra. Pass	App. ex	Ex. Pass	Re-appear	App. R.Aex	R.A. Pass	A.R.A	App. ARA	A.R.A Pass	Total Pass
201	14	10		8	6	4	0	0	3	0	0	6
202	589	452		334	186	266	94	31	207	65	28	245
203	24	14		14	2	12	3	3	6	3	2	7
204	511	373		286	256	117	26	22	89	9	7	285
206	334	234		173	165	69	23	19	39	6	4	188
207	51	28		21	6	22	7	3	13	5	0	9
208	18	10	9	7	3	7	5	5	1	0	0	8
209	334	189	184	179	128	61	15	11	21	7	7	146
210	343	200	151	182	163	37	11	9	20	2	1	173
213	70	68		48	48	20	0	0	18	2	2	50
214	29	15		3	3	12	4	3	6	1	0	6
218	8	6		5	5	1	0	0	0	0	0	5
220	7	4		3	2	2	0	0	2	0	0	2
221	67	40		22	12	28	9	7	10	1	1	20
TOTAL	2403	1644	344	1287	986	658	197	113	435	101	52	1151

Column 1. Course Code
Column 2. Enrolment in the Course
Column 3. Number of students who passed the assignments
Column 4. Number of students who passed the practical work
Column 5. Number of students who appeared in the exam.
Column 6. Number of students who passed the exam.
Column 7. Number of students who get a reappear chance
Column 8. Number of students who appear in the Reappear exam.
Column 9. Number of students who pass the Reappear exam.
Column 10. Number of students who get an Again Reappear chance
Column 11. Number of students who appear in the Again Reappear exam.
Column 12. Number of students who pass the Again Reappear exam.
Column 13. Total number of students who clear the course.

STUDENTS OF SPRING 1994 SEMESTER

Course	Enrolment	Ass. Pass	Pra. Pass	App. ex	Ex. Pass	Reappear	App. Reap.	R.A. Pass	A.R.A
201	425	342		248	219	123	52	47	90
202	2502	1983		1671	624	1359	775	454	887
203	443	332		255	194	138	45	23	103
204	2351	1829		1451	1382	447	181	125	412
206	68	66		46	44	12	2	2	10
207	452	326		236	82	244	150	30	220
208	30	19	18	23	17	2	0	0	2
209	79	60	63	55	52	8	3	3	7
210	70	30	28	49	27	3	4	3	1
213	130	125		95	93	32	13	13	19
214	26	17		15	12	5	4	2	1
218	8	7		5	5	2	1	1	1
220	4	3		2	2	1	0	0	1
221	66	33		40	23	10	3	1	1
TOTAL	6668	5166	109	4195	2778	2388	1233	704	1761

Column 1. Course Code
Column 2. Enrolment in the Course
Column 3. Number of students who passed the assignments
Column 4. Number of students who passed the practical work
Column 5. Number of students who appeared in the exam.
Column 6. Number of students who passed the exam.
Column 7. Number of students who get a reappear chance
Column 8. Number of students who appear in the Reappear exam.
Column 9. Number of students who pass the Reappear exam.
Column 10. Number of students who get an Again Reappear chance

(Again Reappear results were not yet available at the time of study)

Book Review

OPEN AND DISTANCE LEARNING TODAY

Edited by

FRED LOCKWOOD
Pages 377; 1995,
Published by Routledge, 11 New Fetter Lane,
London, EC 4P 4EF.

It was in the seventies that a new vista was opened up in the old-aged domain of education through the creation of the *Open University* in United Kingdom. It was entirely a risk since open learning system has already created chaos in the educational circles. The devotees of formal education became hostile and observed this new trend with much scepticism. But lo and behold, a miracle emerged, and within a quarter of century, this very trend of open learning system spread dramatically all over the world. With rapid development, this way of learning is becoming impressive to a higher degree. New open universities are being planned in various countries of the Third World.

Keeping in view the significance of distance education system and its rapid growth the world over, it is impretive to have a look on all the pros and cons of this system. Since we have to surpass the twentieth century and to go ahead with full vigour in the new era, it is necessary to evaluate the experiences so far gained by eminent scholars of the said field. This effort will surely become a *lighthouse* for all and sundry.

It is good to know that this need of this *lighthouse* has come in a splendid way through publication of a noteworthy book *Open and Distance Learning Today*. It is a coherent and comprehensive collection of contributions from all leading names in the field. Based on eight chapters, this compilation gives much stimulus to those people interested in distance learning system. It covers a lot of topics essential for teachers, trainers and students. Ranging from *the student Experience, Course Design and Assessment* to *Learner Support and Management* and *Evaluation and Quality*, the book

becomes an asset for our specific circle. Under main headlines there appear a number of articles written by noted scholars of this learning system. All the trends and directions have been discussed logically and research procedure has been evaluated in length. Through this *sourcebook*, the concerned quarters will be capable of developing their own teaching and training materials.

Mr. Fred Lockwood deserves our sincere gratitude for editing such informative book on distance learning system which has become the need of the day.

In his *Preface* to this book, Sir John Daniel, Vice-Chancellor, The Open University, U.K has given his valuable views in the following way:

> *This is a handbook for successful revolutionaries. Between these covers the world's foremost experts have distilled the lessons of the first generation of open and distance learning. They give the keys to successful practices, they describe the wheels that do not need to be reinvented, and they show new ways of accessing knowledge and skills that can liberate millions of human beings.*

In the end, the reviewer would like to point out that in this 377-page book, there is a surprise omission of Allama Iqbal Open University of Pakistan which was established as early as in 1974. It may not be out of place to mention here that during two decades, AIOU has already showed ways of accessing knowledge and skills to millions of human beings in Pakistan and even abroad.

Dr. Mahmudur Rahman
Editor

Book Review

University Journal for Higher Studies
Journal of Social Sciences & Humanities

By

Dr. Mahmudur Rahman

Patron-in-Chief: Prof. Javaid Iqbal Syed
Editor: Prof. Farooq Solangi
Vol-I; No.1; Spring 1995
Pages 211; Price Pak. Rs.30/=; US $ 5
(For Students Rs.20/=)
Allama Iqbal Open University, Islamabad.

Education may not be restricted only to the prescribed curriculum of an institution. It definitely continues even outside the range of textbooks and relevant reading material. It is, indeed, the university journal which helps in fully development of students' mind, and enables them to be skilled in wide-ranging topics and varied subjects, needed frequently during their higher studies.

History reveals that all the noted universities of the subcontinent have had proper arrangements to publish journal of high standard on annual or six-monthly basis, fully loaded with scholastic writings. In this regard, example may be cited of *Ravi*, a reputed journal of Punjab University. Due to this trend, a sense of expressing ideas in appropriate form always emerged in the student community with the result that they came out with worthwhile pieces of literature, research and thought-provoking writings. It is entirely because of such university journal that in the long run, these students demonstrate their skill in the shape of sophisticated essays, and emerge as author of repute. The lamp of penmanship being lit through the pages of university journal, continues its flame throughout the life of noviciates. Thus, it may be said that the journal of an institution is quite necessary for mental development and enhancement of writing skills of the students. Its importance cannot be nullified at any stage.

Keeping this very concept of university journal in mind, I have thoroughly gone through the very first issue of *Journal of Social Sciences & Humanities*, published by the Department of Social Sciences, Allama Iqbal Open University, Islamabad.

This journal consists of ten articles and even carries a comment on book. All the dissertations have been written by noted figures of educational sphere, and research regime. The varied topics reveal the comprehensiveness of the journal. These scholastic articles are well-researched and thus broaden the mental horizon of the students as well the general readers.

Prof. Riaz Ahmed, a noted scholar, having written a lot on Quaid-i-Azam, has just come out with his paper *Quaid-i-Azam's Role in the London Round Table Conferences 1930-31*. This is of much importance for those who are studying history in the perspective of Pakistan Movement. Dr. Latif Virk, Director Academics, UGC, is other distinguished contributor who has given us a comprehensive article on *Scholarship for Research* to read and even to ponder over. There appear two articles on well-known Sindhi poet Shah Latif Bhitai. One deals with his mysticism while the other describes in length the religio-political conditions prevailing in the period of poet Latif. Dr. Ashraf Chaudhri has written his scholastic article on Allama Iqbal's ego and calls it as *central plank of Iqbal's philosophy of life*. This gives much light on the issue duly described by other experts on Iqbaliyat. Article on *Gautams Budha: a Brief Study* has been competently written and highlights some hidden aspects of this spiritaul leader of the East. Even Prof. Solangi's well researched article *British Govt. Practical Policies and their Impact on the Muslim of Subcontinent* throws much light on the subject.

This journal as a whole is an excellent presentation in the realm of research. These efforts are highly commendable and are a great source of enlightment. The essays are undoubtedly full of striking thoughts. They broaden the vision and enhance the knowledge.

Dr. Mahmudur Rahman
Editor

BOOK REVIEW

PORTRAITISTS OF THE TIME

SURATGARAN-I-ASR (Portraitists of the time);

By

Dr. Atash Durrani,

Pages: 176; Price: Rs.40/=,
Publisher: Maktaba Meri Library, Lahore.

Life sketch has been defined by the litterature as specified form of art applied mainly to extraordinary individuals and distinguished dignitaries who have kept before them lofty ideals, and sustained to live up to them. Such personalities appear to be the true representatives of their people in one or other aspect of national life. As such, this art is not an opportunity for penegyric or invective, rather is a living presentation of facts explaining the thoughts and actions of persons in order to depict their strength and stimulation, executions and achievements. Thus, the life sketches of great luminaries of our society become a dynamic source of inspiration for all and sundry.

For this specific art, usually a descriptive format is used and the expression generally depicts the doctrine of fiction. But the book under review is a unique one since the learned writer has adopted throughout such a style which comes under the purview of *Interview*.

As we all know, this form is recognised in larger sense merely meeting of persons face to face. It is commonly conferred with for the purpose of seeking statements from someone having a social, political, educational or literary status, and is meant for publication in newspaper or journal.

This reality comes true since Dr. Durrani had taken all such interviews

with a view to publication while he was solemnly attached to journalism during seventies. Based on twelve luminaries of the land (including one of Nepal origin) and published in various newspapers and journals of Pakistan, these interviews were highly acclaimed since the noted author has written them in very attractive as well as suspensive style. Though he had a chance of meeting with different personalities having varied nature and distinctive ideas, but the tone and tempo of Dr. Durrani's description has remained even and equally balanced throughout.

Dr. Atash Durrani has very aptly elaborated the thoughts and achievements of those famous persons who by all means are the milestones of the road leading to progress, property and popularity. Each and every sketch appears of relatively even and polished surface, free from perceptible projections, indentations and roughness. During interview, all the questions put ahead were not only relevant to the concerned personality but also presented a straight forward and candid style. During the process, Dr. Durrani had set aside the shyness and questioned about the subjects with full vigour and volition.

Amidst the distinguished figures portraited in this book, mentioned may be made of Khan Wali Khan, Nawabzada Nasrullah Khan, Maulana Abul Aala Maudoodi, Malik Wazir Ali and Dr. Ahmad Mohiuddin. It is interesting to note that the last named person gave a lengthy interview to Dr. Durrani in the premises of Allama Iqbal Open University as its Vice-Chancellor. In response to thought-provoking questions of the interviewer, the Vice-Chancellor of the University elaborated the significance of distance education. During the course of meeting, what he said is worth-mentioning here:

> "The philosophy of life-long education is the basis of Open University. There are a number of people who could not be enrolled in formal type of institutions due to their constraints and preoccupations. Yet, they all have a longing to learn and get higher education. Furthermore, they are inclined to be benefitted with the process of education throughout their life. In this way, AIOU is following the instruction of Islam which goes on to say:
>
> *Get education from the lap of mother upto the grave".*

Undoubtedly the book under review reveals the high quality of penmanship of the author who has introduced a unique way of pen-portraiting. It is hoped, Dr. Durrani may continue to contribute such thought-provoking interview-based sketches to literary journals. It is essential to inspire young ones, and let them follow the path of prominent personalities.

Dr. Mahmudur Rahman
Editor

DATA BANK
STATISTICAL GLIMPSES OF
ALLAMA IQBAL OPEN UNIVERSITY
ISLAMABAD

BY

ABDUS SATTAR KHAN*

PROGRAMME/LEVEL-WISE AND GENDER-WISE COURSE ENROLMENT WITH RESPECTIVE NUMBER OF COURSES DURING THE SEMESTER SPRING, 1996.

Sr. No.	Programme/Level	No.of Courses	Semester Spring 1996		
			M	F	T
1.	Functional (Non-Credit) Courses	8	243	164	407
2.	Women's Education(Matric)	21	112	8389	8501
3.	Intermediate	47	21354	16501	37855
4.	B.A/B.B.A/B.Com	65	30452	10818	41270
5.	MA (EPM)	8	427	159	586
6.	M.Sc Pakistan Studies	13	281	180	461
7.	M.Sc Economics	4	325	47	372
8.	M.B.A	28	4204	669	4873
9.	Post Graduate Diploma/ Certificate of Management	7	53	4	57
10.	Diploma in Teaching of English as Foreign Language (TEFL)	2	271	99	370
11.	M.A TEFL	2	90	54	144
12.	Diploma in Computer Application	8	2805	319	3124
13.	Diploma in Computer Maintenance	8	114	-	114
14.	M.Ed (Diploma in (Special Education)	14	764	338	1102
15.	B.Ed	4	35125	23601	58726
16.	Certificate in Teaching(CT)	1	4550	8752	13302
17.	PTC	1	9640	21581	31221
18.	PTOC (New)	1	6338	3404	9742
19.	ATTC	1	905	821	1726
20.	M.Phil Iqbaliat	2	54	23	77
21.	M.Phil Islamiyat	2	39	3	42
22.	M.Phil Urdu	2	61	47	108
23.	M.Phil Education	12	189	73	262
	Total	261	118396	96046	214442

*Research & Evaluation Centre, Allama Iqbal Open University, Islamabad.

PROGRAMME/LEVEL-WISE NUMBER OF BOOKS PRINTED DURING SPRING, 1996 SEMESTER

Sr. No.	Programme/Level	Semester Spring 1996
1	Women's Education (Matric)	7820
2	Intermediate	157587
3	B.A/B.B.A/B.Com	126516
4	M.A. (EPM)	71069
5	M.Sc Pakistan Studies	6924
6	Master of Business Administration (MBA)	12288
7	B.Ed	92085
8	CT	84883
9	PTC	27000
10	New Primary Teacher Orientation Course (PTOC)	60029
11	Arabic Teacher's Training Course (ATTC)	1997
12	M.Phil Iqbaliyat	450
	Total	648648

PROVINCE-WISE STATISTICS OF TUTORS AND STUDY CENTRES FOR AUTUMN, 1995 SEMESTER

PROVINCE	SEMESTER AUTUMN, 1995	
	TUTORS	STUDY CENTRES
N.W.F.P.	784	204
BALUCHISTAN	60	40
SINDH	811	279
PUNJAB	4469	415
FEDERAL AREA (ISLAMABAD)	309	15
AZAD JAMMU & KASHMIR	237	53
NORTHERN AREA	101	14
TOTAL	6771	1020

RADIO/T.V PROGRAMMES PRESENTED IN SPRING, 1996 SEMESTER

Programmes	Spring 1996
RADIO	189
T.V	82

RADIO/TV PRODUCTION AND AUDIO/VIDEO CASSETTES SALE DURING JANUARY TO JUNE, 1996.

TITLES	QUANTITY
Total T.V Programme Production	5
Total Radio Broadcast Programme	26
Total Radio Non-Broadcast Programme	2
Total Sale Audio Cassettes	247
Total Sale Video Cassettes	22

STAFFING POSITION AS ON 30/06/96

	Academic Staff	Administrative & other staff	Region	Total
17 and above	91	84	24	199
16 and below	-	760	200	960
Total	91	844	224	1159