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EDITORIAL

After crossing a time-space of less than a decade, we will be saying goodbye to a century called as an era of tremendous explosion of knowledge, specifically of science and technology. While welcoming the 21st century, would we feel fully satisfied with the massive mission of eradicating the gloominess of illiteracy from this "global village". While entering into the new arena of arduous challenges, could we people of Pakistan be proud of proclaiming that during the precedent period, we have adhered to the human rights of getting each and every person per-spiciously personified with the perception of knowledge and learning. While putting our feet on the threshold of another hundred-year-period, could we be sure enough that the common masses of the Third World have been able to adorn themselves with the glimmering rays of education and even to benefit much from the technological advancement which is ironically restricted to the Western World alone.

It is apprehended, the negative answer would certainly boggle the minds of the dwellers of developing countries generally called as "Low Hope Area" who are still engulfed with the grave problems of illiteracy, poverty, lack of proper health care, large population and even scarcity of clean drinking water. Frankly speaking, the unfortunate people of the Third World still live below the poverty line at the time when the era of explosion of knowledge has touched its peak.

The crisis in the coterie is only because of lack of knowledge and ignorance of letters. The high percentage of illiterate people in the developing countries is the major cause of unbounded problems. How grand the development schemes governments of the concerned countries devise, these eventually end in failure mostly for reasons
of mass illiteracy.

In such prevailing phenomenon where catastrophe, chaos and crisis, created by illiteracy, has shattered the whole society and thrown it into the darkened age _____ the remedy only lies not in the formal type of education, rather in distance learning system. By all means, the distance education has potential for contributing to a nation's development through this process of education and thus re-educating the masses as a whole. In order to prepare the people of the Third World to face the challenge of the new and knocking century, it will be a bounding duty of the governments to make the distance education system increasingly recognised as a significant form of education.

Keeping in view the challenges of the changing world, it is inevitable that the scope and media of distance education should be defined and even refined to cater to the needs of the millions of people for whom illiteracy is a major hardship in overcoming economic, social and environmental menace. There is no denying the fact that only because of distance learning, a real change in the economic fortunes and social setup of the society is expected to be occurred. In no way this significant process should be put aside and intentionally ignored by the champions of formal system of education. Such prejudice has to be prorogued since formal way of learning has not consistently run the show because of scared-face facilities and bulk of population, still growing day and night without any halt.

As such, it is high time that more and more developing countries must turn towards distance education so as to solve the alarming issue of illiteracy. Then, the deprived and debased nations of the Third World could be able to meet the pressing educational, economic and social needs in most effective and inspiring way.

To overcome the serious problems of illi-
teracy through distance education system, the Allama Iqbal Open University has been endeavouring devotedly and dedicately since its emergence. And this journal of the institution has always made worthwhile contributions to such progress. Through its thought-provoking essays, PJDE has undoubtedly kindled the lamp to lessen the gloominess of illiteracy, and as a result, made the distance education system more appealing, more attractive, more enormous and more emphatic. It is hoped, AIOU’s all-round efforts in the field will be encouraged widely and even acknowledged wholeheartedly.

Dr. Mahmudur Rahman
Editor
Introduction of New Technology
-Computer Assisted Instruction

by

*Lee Tae Wuk

INTRODUCTION

As the twentieth century comes to a close, information and technology are changing all areas of society. One of this century's most remarkable inventions is the computer. Its use and acceptance are evidenced by the current expansion of the computer market.

New directions are evident and are generating unfamiliar demands in terms of survival skills necessary for participation in an information-rich, computerized society. Such a trend is encouraging in the light of the 1983 report by the United States Commission on Excellence in Education, "A Nation at Risk", which called for significant strengthening of graduation requirements in the computer field for students at all levels. Because computers and computer-controlled equipments are penetrating every aspect of our lives-homes, factories, and schools, it is important for the people to be computer literate. "A Nation at Risk" has emphasized that knowledge, learning, information, and skilled intelligence are the new raw materials of international commerce and are today spreading throughout the world.

The computer has emerged to play a more important role in education. Conservative and slow-to-change-schools are adopting new technology and new educational methods more rapidly than teachers can learn to use them. Many schools have attempted to implement their own computer based instruction (CBI) schools system. CBI encompasses all aspects of instructional utilization of computers. Some of the functions of computers in schools in-

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clude: (1) learning about computers, or Computer literacy. (2) learning through computers, for example, computer assisted instruction (CAI); (3) learning with computers, such as problem solving; (4) support of learning using computers, such as computer managed instruction (CMI).

Computer assisted instruction (CAI) is a vital part of computer based instruction. Harrod and Ruggles (1983) described the meaning of CAI as "Instruction that is assisted or aided through the use of the computer" (P.3). Manion (1985) stated that CAI is composed of hardware and software components which are functionally integral in the CAI teaching-learning process. The term hardware refers to the computer machinery and related equipments. The second integral part of CAI is software. Software refers to the programmes, usually written in a computer language, that can be loaded onto the computer and run with or without modification. Of the two functionally integral components of CAI, software is the more critically important since it provides the actual instruction.

Within the last few years there has been a substantial increase in the number of computers being purchased by business centres, schools, and the general public. This has been partly attributed to the reduction in the cost of hardware and to the availability of a wide variety of software. The National Science Foundation (NSF) has calculated that elementary and secondary schools in the United States had 200,000 micro-computers in use in 1981, and have predicted that the number will increase to one million by 1985. Computers have exposed the power of a new technology to the field of education. Computer technology may dramatically transform a student’s experience in the classroom with science and math. Spurred by the great flexibility and availability of computers, educators have taken a renewed interest in computer assisted instruction.

The interest in CAI by educators is not new. Pressy’s teaching machine in the 1920s and Skinner’s programmed instruction in the 1950s were forerunners of CAI. CAI is probably the most
common educational application of the computer. Teachers assign students to use them for drills, practice exercises, tutorial sequences or for CAI dialogues. A CAI dialogue is achieved between the computer programme and the student when the responses derived from the programme are highly responsive to the questions, answers, and directives given by the students. As the dialogue advances, the goals and objectives established by the author or the curriculum material are relayed to the students.

CAI material has been prepared for many subjects, from accounting to zoology, and from preschool through continuing adult education. It has had many successes in the military and in industrial training, where the objectives are clear and where the low delivery costs and the saving of training time adds up to a considerable savings for the organization. CAI is also successful when the substance of instruction is suited to automated delivery, and the student is lacking important skills, background, or motivation for self-instruction via less expensive media.

Considerable attention has been given to providing a convenient programming language for the use of the authors of computer-based instructional material. However, obtaining a single, ideal language is a fiction. Different uses of the computer require different capabilities which are not conveniently provided within a single language and its associated processor.

An authoring system is a programme or set of programme which allows an instructional developer (the author) to create computer-based courseware without extensive programming. The author specifies the content to be taught and usually the instructional logic or strategy to be used. Authoring systems and languages allow educators to author CAI in a simpler manner than would generally be possible when using a computer language such as BASIC. These packages are complete in themselves, and they require a less extensive knowledge of computer hardware and data-handling than do traditional computer languages.
Main Subject

Historically, computer-assisted instruction has provided the foundation upon which authoring languages are built. The first identifiable authoring language, TIP (Translator for Interactive Programmes) was developed for an IBM 650 around 1960 and later evolved into the first version of the COURSEWRITER language. About the same time, the CATO (Compiler for Automatic Teaching Operations) language was developed at the University of Illinois for the PLATO (Programmed Logic for Automatic Teaching Operators) system. The programmes that were developed during this time were generally large ones and expensive in nature. Alpert (1970) stated that the PLATO system is considered to be one of the most successful computer programmes in the area of the biological sciences.

PLANIT (Programmed Language for Interactive Teaching) was developed at System Development Corporation about 1966. PILOT (Programmed Inquiry, Learning Or Teaching) was originally developed for an IBM 360 but subsequently developed for a number of mini and micro-computers.

By the end of the sixties, the first authoring system began to appear. VAULT (a Versatile Authoring Language for Teachers) was an authoring system written in PLI which produced the COURSEWRITER code for the IBM 1500 system. VAULT is significant because it introduced the important concept of separating the instructional logic from the content during the authoring process. This concept was carried even further in the TICIT (Time-shared, Interactive, Computer-Controlled, Information Television) system in which the instructional logic was built into the system and the author simply provided the content. The computers and systems were relatively complex during this time period. Large universities with extensive programming staffs were the primary developers of the early CAI programmes. At the University of California, Irvine, a three-year National Science Foundation project has been taking place in an attempt to determine the effectiveness of computers as an alternative to classroom instruction.
Three major types of CAI systems have been developed: macro-based, form-driven, and prompting. Macro-based system provides the author with a small number of high level commands which can be used to present text, process answers, or specify branching logic. In a form-driven authoring system, the author is provided with offline or online forms which prescribe the information needed to create a lesson or course. The third approach to authoring system, "prompting," involves the interactive development of courseware in response to prompts or questions generated by the system.

To summarize, the development of the CAI system was dependent upon authoring languages which facilitated the writing of instructional programme. Authoring languages gave rise to authoring systems which further streamlined the courseware development process by eliminating the programming step.

Since schools acquire more computers, as their power and capabilities are increased through improved technology, and as teachers learn to use them effectively, computers appear likely to play an increasingly important role in the future of school systems. Pratscher (1981) pointed out that the area of information technology has developed to a point where basic information tools, techniques, and facilities have advanced and can help to significantly improve education.

As teachers learn to operate computers, they must have access to high quality software in order to apply their newly-acquired skill effectively. The analogy can be made of the person who is taught to read, but then has little worthwhile reading material available. There is software available for nearly every course: In fact, there has been a proliferation of it in the last two or three years. However, the question of quality remains. As Lathrop and Goodson (1983) have noted: "Unfortunately, much of the courseware still being sold appears trivial in terms of this potential". (P.56) Frenzel (1982) says: "Although there is much software available now, there will always be teachers who cannot find software related to their subjects. And there are teachers who want to create
special language programmes". (P.35) Referring to computer courseware, Melmed (1982) expresses his agreement in this way: "Like film and audio production, there will always be opportunity for local development of courseware that is highly tailored to local interest". (P.311) Holmes (1982) summarizes some of the problems that can arise:

The required programmes are often not available on the desired make of hardware, and in-house conversion is usually impractical. Even when programmes are available for the most popular micros, they frequently turn out to be rather short and not appropriate as a basis for a substantial, continuing CAI facility.

In addition, the courseware inevitably has a methodical bias which may not suit a particular institution.

The problem is that it may have been originally devised for use with a given text. (P.12)

Three principal factors have driven the development of CAI. The first factor is ease of use or access to computers for instructional purposes. The second factor is the expense and time required to create computer based curriculum. The third factor is the mobility of courseware. Since sharing of courseware is the major argument for the cost/benefits of CBI, a great deal of emphasis has been placed on CAI programmes which are standardized across an institution.

There is considerable evidence to suggest that Computer Assisted Instruction (CAI) is effective for improving learner achievement and attitudes. Several authors have demonstrated that CAI is especially effective for high-achievers. Others have shown that drill and practice CAI also produces achievement gains in basic skill areas with low achievers as well.

Holden (1983), President of a Pennsylvania-based Industrial Training Group, predicted that the
future of technical training is in rapidly evolving high-tech applications such as robotics and computer-controlled equipments. He also sees enormous potential for CAI in those areas. A study which Holden undertook for AT & T in 1983 was designed to determine if CAI could be an effective training medium. The results showed that a group of trainees receiving CAI performed 25% better than trainees who did not receive CAI.

One of the key benefits of CAI may be its control over the type of interaction and the corresponding lack of teacher criticism. As Brophy (1981) noted, praise in the regular classroom is rarely used in a systematic way to reinforce desired behavior. Students may tend to feel demeaned when they are praised for correct responses on tasks they view as simplistic or trivial, such as encountered in simple drill and practice exercises. In effect, the controlled interaction available through CAI may minimize undesirable attitudinal effects caused by learner-teacher exchanges that are perceived as condescending.

The CAI method can be applied to a variety of educational strategies. Hartley (1972) has classified an educational method into two main categories. (Figure 1) The first category includes uses of the media to transmit information from the teacher to the learner in a one-way communication system. The other grouping comprises methods which function as a two-way communication system. A provision is made for student responses. This provision may be fixed or flexible. Flexible presentations include strategies which, in one way or another, arrange for the teaching sequence and content to be adjusted to the learner's progress, as indicated by his responses to questions, problems and other stimuli.
Communication System

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<td>Flexible</td>
<td>CAI</td>
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Presentation method

Figure 1. Educational Communication System and Presentation Method

Dean and Whitlock (1983) had stated that strategies reaction to learner feedback are known as adaptive or correctable systems. The computer, in which cybernetic principles are axiomatic to its design, is an ideal basis on which to develop adaptive teaching and studying methods.

Inhibitors to the use of computer system include high costs of delivery system and curriculum development, conflicts between individualized instruction and current educational practices, and commitment of most of the computing resources available in schools to instructional use for education about computers.

A group of engineers and educators in the Computer Based Education Research Laboratory at the University of Illinois, Urbana, designed a computing system (PLATO) especially for effective and efficient teaching. It is a large system which provides instructional computing to about 1,000 users, simultaneously, throughout the University and a number of other colleges and schools in Illinois. The design included notable advances in the technology for display and communication. The PLATO system is now marketed commercially by Control Data Corporation (CDC).
Stanford University operated a CAI system to distribute instructional computing to a number of centres throughout the country. A large-scale service operation was employed by using long-distance telephone communications, clusters of terminals, and some stand alone computer systems. The remote centers were usually associated with secondary school demonstration projects and special education institutions.

TICCIT (Time-shared, Interactive, Computer-Controlled, Informational Television) is a name given to systems developed by the Mitre Corporation in McLean, Virginia and now marketed by Hazeltine Corporation. The first version of an instructional system was designed especially for use in a small size college. This was a medium sized computer system which used video technology to obtain low cost operation for about 100 simultaneous users. The hardware and software design were coordinated with the development of instructional materials. These materials were carefully prepared according to rules of effective instruction by an instructional design team from Brigham Young University. The goal was to provide basic remedial instruction in mathematical and language skills for students at small size colleges.

Several studies on the effectiveness of CAI have been conducted using timeshared computer facilities at universities. In a meta-analysis of 59 evaluations of computer-based university instruction, Kulik et al. (1980) found that computer based instruction made small but significant contributions to student achievement, produced small positive effects on the attitudes of students, and reduced substantially the amount of time needed for instruction. They defined computer based instruction as instruction that used computers for tutoring, computer managed teaching, simulation, or programming. However, there is little study related to the effectiveness of CAI on student programming performance. Tsai and Pohl (1978) suggested that a CAI teaching/learning environment-either by itself or as a supplement to lecture instruction-is at least equal to and possibly is more effective than
the traditional lecture format for college students a computer programming language.

Alpert and Bitzer (1970) have proposed using the computer in "adapting the selection and presentation of instructional material to the pace and style of individual students and in acquiring and processing data relating to the effectiveness of the teaching and learning processes". (P. 1583)

According to Bork (1981), there is a distinction between an active medium with students constantly interacting while learning, and a passive medium, with students reading or being told something but making no active contribution of their own. The typical passive mode is the lecture. In his conclusion, Bork stated that this active medium acts to increase student achievement. The CAI allows an individualization that is impossible or difficult to achieve with printed media or lectures. It also can be a creator of experiences. In higher education, the student has little direct experience relative to the material studied. The use of CAI would increase the amount of experience.

Instead of passive listeners of skills and knowledge, students can become active learners, exploring the content of the disciplines themselves using CAI.

Conclusion

The primary advantage of the computer in these continually developing areas is the interaction with the student. Artificial intelligence (AI) implications with voice input and output is the mind to vast possibilities. New developments coupled with the initial efforts, fire unimagined potential in the CAI field today.

There are numerous sources of various available computer uses in education. CAI has become a significant learning tool with many proven techniques. Studies to assess current and projected needs are not always encouraging, but they are generally optimistic. Within five years a "substantial" number of college entrants will have had a
placement test plus computer ability. "Chip books" will eventually be loaded into hand-held electronic devices, reducing today's massive storage requirements. Mathematics and science study at home and at school through television hookups will be commonplace. Expensive software must be developed, but the advent of the video-disc has simplified much of the technology required. A theory of inductive learning characterized as a heuristic search has been generated by using rules which perform specific operations. The application to AI in the learning environment greatly broadens the CAI base. Artificial intelligence is the most constructive current approach to CAI.

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Distance Education Through Multi-media

Wichit Srisa-an*

Introduction

A common educational problem of developing countries is the inequality of educational opportunity. This means that only a minority has the chance to study above the legally-required minimum level. To higher up of the educational ladder one goes, the fewer are the opportunities for further study. While the educational needs of the people grow increasingly greater, the capability of developing countries to meet these needs for higher education remains limited. This is because resources are limited, and these limited resources must be poured into other areas of the country's development. This causes the quantitative and qualitative development of the people in general to be out of harmony with the country's overall development even though, in fact, the quality of human resources is the most important factor in a country's development.

In developing countries, human resource development is of crucial importance. Such development not only increases the quantity of trained manpower in response to national needs, but it also improves the quality of life and work for people generally. As human resources are developed, rising expectations are engendered in the people generally. As human resources are developed, rising expectations are generated in the people for further education. But opportunities for education at the highest level are limited because resources are limited. Under these conditions of scarcity, inequality of educational opportunities naturally arises. Such inequality can be erased only by efforts to democratize education. Thus, various models and methods must be explored to make higher education

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truly education for the masses. But it is essential that these approaches be economical and efficient so as not to exceed limited resources.

In the past decades, many countries in Asia have extended the range of educational opportunities by adopting the open education system and setting up, for this purpose, higher educational institutions of distance teaching and learning. Pakistan’s Allama Iqbal Open University, Sri Lanka’s Open University, China’s Central Broadcasting and TV University, Australia’s Deakin University, Japan’s University of the Air, Korea’s Correspondence University, Indonesia’s Terbuka Open University, India’s Indira Gandhi National Open University, and Thailand’s Sukhothai Thammathirat Open University all these institutions of distance teaching, despite their individual characteristics, do indeed have one aim in common: to serve the needs of adults seeking to upgrade professional qualifications and/or to acquire a real understanding of the subjects chosen. At present, a large number of countries in the developing world, especially those in Asia, have expressed a great interest in providing higher education through distance teaching systems. It is to be expected that other distance teaching institutions will be established in many countries in the near future.

In the past, whenever there were extensive educational reforms, the causes usually cited were social changes, academic and technological advances, or even political influences. It is true that the aforementioned items might well have been the stimulus or impetus for the educational changes. However, if a more profound analysis is made, it will be found that the factor having the greatest influence on the changes and serving as an important basis for the use of new methods in the field of education has been "the conceptual factor" which administrators and educational personnel have adopted as their guiding principle.

One of the concepts which has most influenced the provision of education in the present age is the concept of lifelong education; and education is, of course, an important factor throughout one’s
life. It is a process and an activity which concerns people from birth to death. Education according to this concept must meet the needs of society and of individuals of all ages and categories. There must be models and methods of providing education which foster learning for both young people and adults - both formal and non-formal. The concept of lifelong education in the past decades has become a firm belief which has influenced education in various countries throughout the world.

If the concept of lifelong education is considered in its social aspect, it is generally accepted that today’s society is a learning society. By this I mean that for a person to adjust successfully and contentedly to a rapidly changing society such as today’s, he must ensure that his learning is constantly up-to-date. Continuous learning thus facilitates the leading of a successful life, and a member of society who wants to go ahead must make use of various types of education. Modern technology has become an important vehicle in providing lifelong educational activities. In the modern age there is thus a merging or coming together of the learning society and the technological society. Various social institutions, apart from educational institutions that impart knowledge to school-age children, have an important role to play in providing various types of education for young people and adults. The home, church, and many types of public and private agencies - including mass media institutions - have been simulated to play an ever-increasing role in improving the quality of life of the people.

Adopting the concept of lifelong education as a principle in providing education has resulted not only in the expansion of the scope and manner of such provision, but also in the development of many new educational methods. Of particular importance has been the establishment of open education using the distance teaching and learning system, which has been expanding rapidly in various countries throughout the world.
In general, the educational systems with which we are familiar usually can be characterized as "closed education"—closed in three senses, namely:

1. Limited student enrolment—that is, the number of students admitted is limited to those who can be accommodated in terms of the number of desks, teachers, buildings, and supplies. This is because the students must come to study in a specially designated place. Since there is a need to limit the number of students, this type of educational institution ordinarily looks for a selection process which will ensure the number of quality students that it can accommodate. This in turn leads to the condition of limited opportunity, and perhaps has an effect on the quality of educational opportunities if the selection process is not correct and appropriate.

2. Structural limitations—that is, the process and structure of this type of educational system is ordinarily fixed fairly rigidly. It is difficult to provide learning activities which will satisfy individual needs and allow for individual expression, and there is very little flexibility and facility in the entire educational process.

3. Limitations concerning the learning environment—that is, teaching and learning are ordinarily limited to the classroom or lecture hall. Thus the learning environment is usually limited to the confines of the educational establishment itself, with the relationship between the teacher and students in the classroom being the most important consideration.

Open education featuring a distance teaching and learning system, on the other hand, could be considered "expanded education" in that it seeks to expand educational opportunities fairly and to the greatest extent possible. This alleviates the problem of limitations regarding the process, structure, and learning environment. Instead of us-
ing a conventional classroom with a teacher as the centre of teaching and learning, open education emphasizes various types of educational media, which result from the application of advanced knowledge or technology to education. The intention is to have the students study to the fullest extent on their own without having to enter a conventional classroom. An important factor in open education at whatever level is instructional media, which is one component of educational technology.

In the past, there have been different experimental approaches to open education featuring various types of instructional media - both single media and mixed media. The first well-known approach was correspondence education, in which teaching materials were sent by mail directly to the student's home. It was believed that printed materials were the most efficient instructional medium. If the materials were well written and organized and appropriate techniques were employed, the student could study by himself with very little or indeed no direct assistance from the teacher. Correspondence education has thus been an important medium for expanding educational circles, extending learning opportunities, and destroying barriers to learning, there by making open education available to ever greater numbers of students.

With the advent of radio broadcasts, another medium was applied to the field of education. Radio broadcasts were used not only to supplement conventional classroom instruction, but as a medium in open education as well. Schools or educational institutions of the air were established which broadcast Radio lessons directly to the home. In some instances, Radio broadcasts were used in conjunction with correspondence education; in other cases the broadcasts were used as a single medium of instruction. An important development in the field of instructional media occurred when television was applied to education. Telecasts can be considered a highly effective instructional medium, for there are pictures as well as sound. The subsequent introduction of colour TV has further enhanced the effectiveness of this medium in many countries.
Research conducted both within and outside Thailand, concerning the effectiveness of different types of media, has indicated that each particular medium has its strong and weak points. The exclusive use of one medium is not likely to be completely effective. The use of the traditional classroom with regular interaction between the teacher and students is highly effective, but can be used to only a limited degree, and it may not be appropriate for certain age groups. Printed materials, while obviously nothing new, can still be an effective core medium for those who can read and write. Radio and television can effectively spark interest in the student, but the student must pay very close attention to the programmes and tune in on time or the lesson will simply pass him by. Of course, the programmes can always be taped for subsequent review at the learning speed of the particular individual, but this can be fairly expensive. Open education at present has thus turned to the use of mixed or multi-media, instead of the exclusive use of one single medium. That is, printed materials, electronic media such as cassette tapes and videocassettes, and Radio and television broadcasts have been combined in a mixed media system, which one medium serving as the core medium and the other media serving as supplementary media. This is done in order to make teaching and learning more effective and interesting. Thus we might say that the use of "multi-media" has been "multi-beneficial" in terms of increasing the prospects and the effectiveness of distance education.

Distance Teaching System

Distance teaching simply means that the students and teachers are at a distance from one another, with little opportunity for face-to-face contact. They are, however, able to have joint educational activities through the use of various instructional media geared to facilitate learning on the part of the students. The bulk of this learning arises from self-study, at times and places convenient to the students. Distance teaching thus involves the communication of knowledge, attitudes, and skills to learners in such a way as
to enable them to acquire and extend them into the conduct of their everyday lives. Since communicating the above-mentioned items is the prime objective, this communication must be as efficient and effective as possible within the constraints of existing resources. In general, the criteria for determining the efficiency and effectiveness of distance teaching involves analyzing the extent to which learners have achieved the learning objectives set by the curriculum or by themselves. Ideally, an effective distance teaching system should ensure that the students find the learning experiences simulating, interesting, enjoyable, and relevant to their aspirations and lifestyles. Thus, the effectiveness of distance education depends to a large extent on the quality of the instructional media and delivery systems.

The selection and development of instructional media, appropriate to the conditions of individual societies, is thus an important problem. Factors to be considered in media selection include the following:

1. **Availability**

   It is essential that the chosen instructional media and delivery systems be technologically practicable; that is, the technology to be used in the individual societies must have been adequately developed, and there must be sufficient manpower to make continued use of the technology.

2. **Accessibility**

   The instructional media and the delivery systems to be used must be accessible to both the distance teaching institution and the learners. For example, if television is chosen as an instructional medium, not only must there be appropriate and adequate air time, but also the students must have TV sets capable of picking up the programmes.
3. Acceptability

The instructional media must be accepted both by the teachers and the students. This concerns the aptitudes and attitudes of both groups with respect to certain types of media. If the teachers or students are not skilled in the use of particular medium, it is not likely to be very effective.

4. Validity

The instructional media must be appropriate for achieving the objectives of the learning materials. Care must be taken to choose media which are suitable for the content or subject matter one wishes to convey.

5. Economics

The instructional media must not be overly expensive. This will involve considerations of economics of scale and cost effectiveness.

Once development of distance teaching systems is undertaken in various countries based on the criteria just mentioned, then two major approaches can be followed, namely:

1. The Uni-Medium or Single Medium System This is the distance teaching system which has long been used in correspondence education. Printed materials will generally be used as the core medium, but this approach can involve the exclusive use of any single medium, such as radio or television broadcasts. The extra-mural studies programmes of various universities Australia which use printed materials exclusively are a good example of the Single Medium System.

2. The Multi-Media or Mixed Media System This is the distance teaching system developed later, most particularly in the period when electronic media came to be used more widely in the field of education. The multi-media system ordinarily employs one
medium as the main or core medium with other media playing a supplementary role in order to bring about a more interactive format. Printed materials or print media are generally used as the core medium, with electronic media such as radio, TV, audiocassettes, videotapes, etc., serving as supplementary media. Most of the open universities employ the multi-media system and feature printed materials as the core medium. This is true of the Open University in the U.K. and Sukhothai Thammathirat Open University in Thailand.

In fact, the development of instructional media for self-study in the form of mixing printed materials with other media actually occurred on a widespread scale even before the advent of the open universities. One well-known example of the mixed media approach is Linguaphone, which developed language lessons combining printed materials with records and, subsequently, tapes to teach language skills. Mixing of just these two media improved the effectiveness of language teaching and enabling students to study on their own. With advances in electronic technology, many different media could be mixed together and used in the transfer of knowledge. This led to an even more effective use of instructional media.

Regarding the media used for distance teaching and learning, a survey conducted by the International Centre for Distance Learning of the United Nations University found that many institutions used several different methods—correspondence, telephone, radio, TV, audio, video, study centre, and so on. As correspondence is by far the cheapest method of communicating at a distance, only 27 out of 468 programmes do not use correspondence as one of the methods. Of all the distance-learning institutions, 29 percent use only correspondence, particularly in Western Europe and North America.

The results indicate highly remarkable differences between regions. The telephone is used as a teaching method by more than a quarter of the programmes in North America, Western Europe, and
Australasia, but is hardly used in Africa, Asia, or South and Central America. Radio and television show a similar picture. Both are used worldwide to roughly the same extent, but whereas the use of radio greatly exceeds that of television in the developing world, television is much more popular than radio in North America. This almost certainly is due to the penetration of the media.

The cost of audio cassettes has fallen dramatically, and they now offer a real alternative to the printed word. Australasia has been quick to recognize this and to use: no fewer than 70 percent of their programmes use audio cassettes. Australasia is also leading the way in the use of video cassettes.

Another striking fact is the very low use made of any technique other than correspondence in Western Europe. This is probably because much of the distance-learning activity is done by conventional institutions which use only the cheapest methods. Thus radio and audio cassettes are the only other methods used widely.

Electronic media today have an increasingly important role in distance teaching/learning systems, especially those media which permit the development of interactive potentiality and allow students convenient control over their use.

The media which have attracted special attention in this respect are computers and, in particular, their application in Computer-Assisted Instruction (CAI).

In distance teaching/learning systems employing a multi-media approach, CAI is, therefore, one important medium that can contribute significantly to enhancing the effectiveness of distance education.

Since I myself have direct experience with the development of a distance teaching system which uses the mixed media approach and features printed materials as the core medium, I will emphasize this approach in my paper. It could be viewed as one
model of the use of printed materials in distance education.

The distance teaching system which I will present as a case study is the system developed at Sukhothai Thammathirat Open University, Thailand. It is a case of the development of a distance teaching system employing a mixed-media approach suitable for the conditions of a developing country. The "STOU PLAN" for Distance Teaching System, which is composed of 5 stages, can be concisely illustrated in the following chart.

The first stage in the development of the distance teaching system involves identifying the educational needs of the target groups through preliminary surveys and research. This enables us to know the needs of the general public as well as various individual groups. This information can then be used as a basis for the development of the following stage.

The second stage is curriculum development, and the structure of the curriculum must be set up in such a way that it facilitates the use of distance teaching techniques. The academic structure in the "STOU PLAN" is based on the principle of course integration. That is, an attempt is made to integrate different academic areas into specific groupings or categories which will facilitate the student's ability to synthesize and apply the knowledge acquired and which will be easy to study on one's own. Course integration is thus primarily of an interdisciplinary nature. The establishment of the different schools has been carried out along the lines of career and professional development of the rather than being discipline-oriented in order to conform to the principle of course integration just mentioned. The curriculum is thus divided into "course blocks", each of which carries 6 semester credits. Four-year bachelor's degree programmes are composed of 22-24 course blocks or 132 to 144 semester credits. The reason that the "STOU PLAN" has set up the 6-credit course block exclusively rather than subdivide into smaller courses is based on two major principles, namely:
1. Academic principle - Setting up the course blocks in the manner just described, facilitates course integration; that is, it makes it easier to integrate course content in an inter-disciplinary fashion more completely than would be the case if smaller, less-encompassing courses were used. In terms of learning, this approach is appropriate for the distance education system since it enables the students to concentrate rather than diffuse their study efforts; for in any one semester, they will not have to study more than three blocks. The use of the course blocks allows us to oversee the standards and quality of the teaching/learning process to a fairly high degree. This is because the production and development of the course blocks is done by a course-production team. Academic standards are thus the responsibility of a group of academics rather than of individual instructors. Aside from this, the use of course blocks also facilitates the establishment of such supplementary media as radio, television, and special tutorial sessions. Particularly when there is a limited amount of time, it is easier to produce interesting programmes related to the course blocks than would be the case if numerous smaller courses were used. When the curriculum structure featuring this block system is considered solely from the academic viewpoint, four positive aspects can be identified, namely:

(1) It facilitates academic integration;
(2) It facilitates self-study;
(3) It improves the oversight of academic quality and standards; and
(4) It facilitates the use of supplementary media in systems based primarily on printed materials.

2. Administrative principle - The use of the course-block system reduces the complexity of administration, making it more economical and efficient. Students are able
easily to control their own study load, and the system is convenient with respect to registration, testing, and teaching. Students are able to register by mail, and examinations can be given in every province of the country on a single weekend. In addition, the course-block system helps avoid "academic monopoly" in which a single instructor is the sole authority on a particular subject. This is due to the fact that the course block has far more content and activities than could be produced by a single instructor on his own with a substantial teaching load. The course-block system also helps bring about an integrated approach to work, for the system demands that work be carried out as a team in the form of a course-production group. Each team has content specialists, an educational technologist, and an evaluation specialist who are jointly responsible for all phases of course production. This naturally results in integrated instructional materials and ensures that the educational system will be fully open, for it provides the opportunity for numerous specialists from outside the institutions to participate in the development of the materials. The excellence which exists in society is thereby utilized to the fullest extent. An additional benefit is that this working together as an academic team helps bring about a spirit of teamwork in administrative work as well, a great advantage for the overall administration of the University.

The third stage involves selecting and producing the teaching media packages. The "STOU PLAN" was chosen to make use of a mixed-media approach based on the five following criteria: availability, accessibility, acceptability, validity, and economics. Printed materials, are the main or core medium, and tapes, radio and television programme, and special tutorial sessions are the supplementary media. For each course block, the student is expected to
spend approximately 180 hours per semester studying the printed materials. (This amounts to roughly 12 hours per week for 15 weeks). He also listens to at least one 60-minute tape (For some course blocks, such as the English courses, the student will listen to as many as 15 tapes.), listens to fifteen 20-minute radio programmes, and views five 30-minute television programmes. He also has the opportunity to attend 10 hours of special tutorials held in local study centers located in each province. In producing teaching media packages according to the "STOU Plan", the first step is the production of the printed texts and work books. Then selected portions of the text are used as the basis for tapes, radio and TV shows, and tutorial-session work books. These latter media are considered as supplements to the printed materials - the core medium. The completed teaching package is thus in the form of a multi-media self-learning package.

The fourth stage involves establishing delivery systems in order to communicate knowledge to the students. The printed materials and accompanying tapes are sent by mail to student’s home, and radio and TV shows are aired at the same time throughout the country. The tutorial sessions are held on weekends in local study centers located in each province. CAI programme are provided at selected study centers and function as "electronic tutors" for such courses as science, mathematics, and statistics. The distance education system established according to the "STOU PLAN" is thus in the nature of home-based education.

The fifth stage is composed of evaluation and follow-up, which is of two types. The first evaluation of student’s learning through final examinations held each semester in the local study centers. A student must sit for the exam in the study center to which he has been assigned, and the exams are held at the same time throughout the country, ordinarily on weekends. The second type of evaluation is system evaluation, which is conducted in order to obtain feedback that can be used to improve the effectiveness of the curriculum and the teaching/learning process.
THE PRODUCTION AND USE OF PRINTED MATERIALS

In distance teaching systems using mixed media with printed materials as the core medium such as in the "STOU PLAN", the production of these materials is an important process and activity of the Distance Media Production System. This system can be graphically illustrated in the chart on page-29.

The production of printed materials for use in distance teaching can be carried out in various ways; for example, these materials might be in the form of conventional textbooks or lecture notes. The effectiveness of the printed materials in terms of helping the student to study on his own depends largely on the format and the way in which the content is presented. Thus special efforts were made to develop a format suitable for printed materials which were to be used specifically in distance teaching. One format in widespread use in distance education is the programmed textbook, which is adapted from programmed instruction. The production of this type of printed material aims at making the student an active learner. Thus materials of an interactive nature must be produced, and these include both a programmed text as well as an accompanying workbook. Students who use this type of printed material will master the content in small increments, in accord with their study time. They must complete various activities or exercises as part of learning the content of each unit, and they will receive periodic feedback to indicate the extent of the progress in their studies. Thus they experience a series of successes in their self-study, and this encourages them to progress further in their quest for knowledge.

In the block system of the "STOU PLAN", every block carries 6 semester credits. Each of these blocks has a programmed text and a work book which are divided into 15 units, each of which requires approximately 12 hours of study time per week. Each unit begins with a unit lesson plan which spells out clearly the topics, concepts, objectives, activities, and evaluation methods for the unit. Then follows the presentation of the actual content, which is broken down into sections. In
each section there are activities which the student must do in his workbook, and in each unit there is a pretest and a post-test complete with answer keys in order to give the student feedback.

From STOS's experience in developing these programmed texts for use in the university's distance teaching system, it appears that they have been quite successful and have accomplished their purpose. The methods of writing these texts is obviously more complex than that used for writing ordinary texts. However, if course writers are adequately trained before they commence their work, these academics from various fields can accomplish their task without undue difficulty.

CONCLUSION

In the development of distance teaching/learning systems employing a multi-media approach, the most important consideration concerns the blending or harmonizing of such media to permit distance education to become even more effective.

From the author's experience, the harmonizing of the print medium and the electronic media is of primary importance. The results of experiments conducted at Sukhothai Thammathirat Open University to date serve to confirm that the blending of printed materials and computer-aided instruction is a most interesting development, which promises to bring real benefits; and, if this process were to be extended and practised more widely, it would enhance considerably the effectiveness of distance education. Ultimately, on the basis of such information, it is conceivable that distance teaching will, more and more, come to rely on computers as the main instructional medium in the emerging Computer-Based Education (CBE).

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Distance Education and Future Prospects: the Asian scenario

by

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A PRELUDE

Education in the Asian countries has reached a new watershed. The system has been under serious attack for the past several decades. Both the quantity and quality of turn out at various levels have been bitterly disappointing. Systems have been under fire for restricting a child’s spirit, his spontaneity, creativity and sense of self. On the one hand most systems have been instrumental in denying and depriving all rights of schooling to more than 50% of their countries’ child population; on the other hand this has been because the systems have simply overrun their resources. The economic pressure for extending education to neglected or poorly served segments of the Asian population which remains deprived while the formal education is virtually fighting a losing battle has also assumed high proportions.

It is within such a context that distance education has taken roots. As an educational direction such a system holds considerable promise not because it will resolve all problems of providing educational opportunities to those denied, but because it may promote a serious regard for accountability and a questioning of our basic educational assumptions.

In the last two decades many countries have come to see distance education as a flexible and cost effective response to growing educational needs. Winning government support for popularising distance education primarily depends on responding to agreed national priorities. The most successful distance teaching universities, like United Kingdom Open University in Europe or Sukothai
Thammathirat Open University in Asia, enjoy the strongest political backing.

In the Asian context when the distance education is looked upon as a panacea for providing multi-level needs, heterogenous age group of people ranging from 16 to over 70 years roughly 2 million individuals are currently registered as distance learners. By the end of this decade another 2 to 5 million learners who have either dropped-out from education or could not continue because of adverse socio-economic conditions will be added to this population.

The developing nations are aware that lack of basic education causes wastage in superior talents in this age of high technology which has stressed the need and importance of capable intellectual skill. This realisation of the magnitude, complexity and pressure of problems is leading more and more Asian nations to turn to distance education for multi-level needs because these in the forefront have started cashing the crops. It becomes imperative, therefore, to explore whether distance education is an answer to the numerous challenges Asian countries are likely to encounter after only a decade in the twenty first century.

DISTANCE EDUCATION:
REALITY OR RHETORIC?

Despite efforts in the conventional system, educational thinkers and planners all over the world have been looking at non-conventional methods which allow them to reach a greater number people at affordable costs. One such methods involves the distance education techniques - a successor to the traditional correspondence course. It is only in the 20th century and perhaps in the last two decades that distance education had achieved international recognition. Consequently many have started advocating distance teaching as true alternative and a right successor to conventional systems.

Distance education, not only by correspondence but also by means of multimedia, is spreading above all in the Third World nations of Asia, Africa and
Latin America. More appropriately, it is widening the conventional education system keeping its content and structure but liberating it from the physical parameters of the co-presence of students and teachers and the class room. The clearly defined variables and boundaries are still not distinctly separated from the conventional system.

The task before this fast-emerging discipline is not to replace the traditional or conventional system but to reform rigidly dogmatic attitude by introducing the notion that there are viable alternatives. Incidentally, these alternatives hold to the values of the conventional system as steadfastly as the conventional system holds to them. However, the high cost, the over-crowding, lack of individual attention and overall lack of provision for formally getting education necessitates the development of distance teaching as a complementary system to the conventional one.

The increasing volume of research in distance education and the buoyancy of distance-teaching institutions are however reducing the inequalities of status between the conventional and distance learning system. The commonalities between the two have escalated a lively debate for the individuals and the institutions who are more active in distance education. The consensus is in favour of the later largely on the ground that it would be more pertinent to fill the role by expanding its membership and interest and improving the quality and effectiveness of its activities to channelise the growing burden on the conventional system.

The term "distance education" is not a recent innovation for it existed, though in crude form, as far back as 150 years in Sweden. Teaching was done in the early days "through the medium of the post" (Battch, 1980) on a small scale, a handicraft-type venture, which developed subsequently on a "Large scale enterprise in a more industrialised way" (Peters, 1973).

Holberg, treats it "a fairly new term" which "denotes the form of study not led by teachers... but supported by tutors and an organisation at a
distance from the student". The word correspondence education being associated with the written word, other media like radio, T.V., telephone, etc. Distance education, however, is defined and interpreted differently by Keegan, Baatch, Perraton and Dewart. There seems to be at least two different schools of thought on distance education, one stresses individual study and individual, and the other aims at parallelism with resident study face to face teaching as a regular element. Nonetheless, a confusion exists today in an average mind about the meaning and place of distance education within education as a whole and "whether it is identical to or to be differentiated from such areas as correspondence education, non-traditional education, off campus education and open learning" (Keegan, 1980).

EDUCATIONAL DIFFICIT AND ECONOMIC PRESSURE IN ASIAN NATIONS

The population explosion in the Asian countries running often higher than 3% yearly has upset the equilibrium of formal education. Various countries, therefore, have launched various plans to expand their education system to match the world of work, provide skill to a common man, remove illiteracy and make education a life-long continuous process. The socio-economic and political forces have all along been shifting the educational goals from being achieved. Since commitment to democratization, it is obvious that the traditional system cannot cope with this ever increasing demand and therefore it has become necessary to find effective alternate channels like non-formal education, continuing education or distance education which can fulfil socio-economic needs of the people and transform elitist education to the egalitarian one.

"The human capital theory holds that investment in the education and training of people is a sure route to national economic prosperity. This was the sign of the Politic-Economic zodiac under which the distance teaching universities were born and distance teaching universities...should have little to fear if they can remain attuned to the educational needs perceived by their governments
since the socio-economic pressures are mounting in the developing nations". Among the educated there is a need for continuing education to keep them abreast of their times. Semi-literate groups of population need awareness of culture and their basic human rights. Multitudes of non-literate need their rightful place and status as equally communicating members of their society.

Plans to improve the standard of living of all and to narrow inequalities have to look towards the distance education system in the present focus, which will achieve the maximum spread of knowledge and skills to the less privileged and under privileged sections of society. Viewed in this perspective the distance learning centres are becoming sensitive to the learning needs of the community and responding to the same through relevant learning programmes and tools.

CURRICULUM NEEDS:
FUTURE DIRECTIONS

Distance education thus has explored opportunities to help acquire leisure-skills, promote good health in all its aspects, provide increased meaning for life and an understanding of the diversity of customs and cultures at local, regional, national and international levels.

The target group in these countries are predominantly rural people, the lower middle class people living in the "low hope" areas are typical by low income, small fragmented land holding, low productivity, unemployment and under employment, poor nutrition. The young generation growing up in these conditions are exposed to education which are by no means sufficient to lead to an improvement in the numerous economic and social problems. For various considerations whether they are cost effectiveness, scale of numbers, non-availability or non-accessibility to formal institutions, distance education as an alternative mode has caught attention of educational planners for scaling down the literacy gap and socio-economic disparities. As an example, Pakistan has a number of very interesting programmes/projects presented through its Open
University. Some have been completed, others are continuing. These were Functional Education Project or Rural Areas (FEPRA) now merged into a programme and has assumed its new name as Basic Functional Education Programme (BFEP); Integrated Functional Education Project (IFEP); Rural Development Programme; Population Education; Women's Education; Integrated Functional Literacy (IFL) and Women's Matric Project.

To achieve the goal for providing multi-level needs of the people interesting skill-based courses have been developed and are offered to semi-literate, literate and illiterate population in every part of Pakistan by the Open University.

FUTURE PROSPECTS

There is an enviable trend gaining momentum for linking study and productive work together, like Russian Universities, which have attracted over 2.2 million or 40% of its university enrolments to distance education programmes with this objective.

China's declared priority is a massive programme of modernisation. Its Central China Televis-ion University prepares courses in English, electronics and mathematics for some half a million students which is hardly scratching the surface in relation to the needs of China's one billion people. Thus distance education system seems to play an important part in the modernisation of China.

The Japan University of the Air was established after fourteen years of planning. The Sukothai Thammatherat Open University of Thailand and the new Hong Kong Open College of the University of East Asia, the off Campus programme of the University Sains Malaysia, the Universitas Terbuka of Indonesia (Open University) all seem to make major contributions to the expansion of opportunities for post secondary education, particularly in applied disciplines.

The University of the South Pacific is doing remarkable work of teaching highly scattered popul-
ation through a second language (English). This University is highly dependent on satellite communication.

India shares some of Australia’s problems which till recently had some 18 conventional universities running correspondence programmes when Indira Gandhi National Open University was established in 1985.

The University provides higher education to a large segment of the population by coordinating and standardizing distance education system. The primary motive is to relate education to the needs of employment and unlock opportunities for upgrading knowledge and skill. The University has introduced courses in the field of Management Rural Development Computer Sciences and Distance Teaching.

Korea Air and Correspondence University has also the same goal of providing opportunities of higher education to high school graduate dropouts. Improvement of academic and professional qualities of the people in the professional fields also forms a part of its goals. The output of KACU has been remarkable when it has produced 57691 graduates by 1986.

Pakistan’s Allama Iqbal Open University, one of the pioneer Open Universities in Asia offers multilevel and multipurpose courses from Matric to M.Phil and Ph.D. levels. The University has however managed to concentrate on subjects of national importance like teacher training, farming, home economics and electronics, technical and vocational courses instead of reproducing the traditional colonial curriculum.

Sri Lanka Open University which joined the family of Asian Open Universities in 1978 initially concentrated on Diploma and Certificate courses in Mathematics, Science, electronics and Telecommunication Technology has greatly increased its sphere to accommodate all segments of society.

Nepal is an obvious place for the development of distance education because one-third of the
districts are in remote areas. Teacher training is provided by radio to untrained rural primary school teachers. The future plan is to train lower secondary teachers. Bangladesh is actively moving forward to establish an Open University for which they have done the spade work in collaboration with Pakistan and India. Currently the Bangladesh Institute of Distance Education (BIDE) is looking after the interest of teacher training programme. The BIDE has started B.Ed. programme for in-service teachers through distance teaching in cooperation with Rajshahi University.

The abbreviated analysis reveals the important future of distance education in the Asian context. There are three common trends that are surfacing beneath the regional differences:

There is a continuing problem of access to post secondary education particularly in rural areas and those who are employed.

There is a challenge for adults who missed a first chance at education or who require new skills and knowledge to cope with a changing environment.

There is the need to teach new subjects computer science, electronics, and technology to huge number of people.

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EXPANDING THE SCOPE OF DISTANCE EDUCATION CURRICULUM IN DEVELOPING COUNTRIES IN THE 21ST CENTURY

by

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INTRODUCTION

Distance education has come of age. From its humble beginning of teaching vocational skills at a distance, it has moved into the sphere of providing education that is almost parallel to that of the formal education system.

Indeed, distance education in developing countries has proved itself to be the final answer to the inadequacies and failures inherent in the formal system of education. One clear result of this utility is that those who never expected to acquire relevant credentials now have them.

The potentiality of distance education to provide answers to numerous problems or challenges facing man today is capable of expansion. When expanded, man could be helped to self-actualize. In this paper, we propose to examine the said challenges facing the developing countries and, to some extent, the developed ones and how the curriculum for distance education could be expanded to cope with them. The guiding assumption is that the distance education curriculum could move beyond its present pre-occupation with the acquisition of credentials to equally embrace non-credential pursuits. This spells out the need for a wider educational base. (Krishnan, 1987)

The pattern of procedure is, first of all, to take on the challenges and see how they have

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induced new concerns for adult education. The last component then takes on the proposed expanded scope of the distance education curriculum for developing countries.

THE CHALLENGES

We are living in a world of perpetual flux, a phenomenon Heraclitus had taken to be denoting complex challenges man contends with on a near regular basis.

The world is today faced with immense economic debacles typified by rapidly declining economic fortunes, swelling national debts, incomprehensible inflation, massive unemployment (even of trained manpower), low general productivity and, consequently, unappreciable returns to Gross Domestic Product (GDP) and Gross National Product (GNP) amidst spiralling population growth.

The economic shortfalls have in turn induced social problems of immense magnitude. The world is today contending with such social problems as high crime rates, destitution, prostitution, drug abuse and trafficking, racial strife, poverty, diseases, vandalism and outward manifestations of negative attitudes. (Lovett et al, 1983) These social problems are further confounded by political instability. This is even more so for developing countries.

Socio-economic problems have become copious albatross for many leaderships. Indeed, many political leaders have been brought virtually to their knees. Renowned socio-economic theories have not actually rescued these leaders from the throes of the menacing pangs of the problems. If anything, the problems have put in complete abeyance all the supposedly good intentions of these leaders. But much more challenging, however, is the twist the problems have brought into the provision for formal and non-formal education. In our context, we are much more concerned with adult and non-formal education.
of which have been around for quite a while now. Even then, we cannot run away from taking a cursory look at a few especially as these new frontiers will provide the background against which we shall be making tentative judgements about the appropriate coverage of the distance education curriculum in the next century.

Peace education is one of the foremost new frontiers which invites attention to the 'creation' of a world community where human relations are largely based on peaceful and non-violent relationships and where people can live in equality without fear of domination on account of any known factor. (Dijkstra, 1987 and Osorio, 1987) Dijkstra (1987) has warned that it must not be narrowly conceived to mean disarmament education or nuclear education nor should it be conceived as an academic concept dealing simply with theoretical and intellectual issues. Rather, we are urged to conceive of peace education or education for peace as an action-infused activity dealing with anthropological and social issues of conflict in human society. (Dijkstra, 1987 and Osorio, 1987) Peace education, in many respects, features a curriculum content that is based on conflict-resolution through non-violent means and a broad objective of changing non-peaceful relationships at personal, community, national and international levels into peaceful relationships. When fully operational, there is always a tendency for people to co-operate to achieve social goals and for them to abhor violence in its physical, psychological and structural forms.

While there are attempts to educate the world’s citizenry for peace, adult and non-formal education has found itself being asked to serve as a machinery for inducing popular participation by the people in activities aimed at freeing them from socio-economic, cultural and political subjugation. That kind of subjugation, often expressed in exploitation, social injustice, contracting economy and poverty, has often pauperized the masses. The popular education deriving strength from Paulo Freire’s conscientization has, therefore, sought to organize trade unions, women’s
groups, cooperatives, farmers, young people, agricultural unions, community coordinators, amongst others, into movements aimed at improving the lot of the majority presumably held to ransom by the powerful and rich minority. (Cadena, 1984, Yamaguchi, 1986 and Oliver, 1987) The application of popular education in Latin America, Japan, Northern Ireland and among other places has been useful in delineating its components as shown in the Figure 1 below:

![Figure 1](image)

**Components of Popular Education**

**Popular Education**

(through popular movements such as trade unions, womens, groups, cooperatives, farmers, young people)

<table>
<thead>
<tr>
<th>Civic Education</th>
<th>Political Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>(thinking and discussion for individual understanding)</td>
<td>(Practice or action-by learning for participation in political life).</td>
</tr>
</tbody>
</table>

Source: Oliver, L.P. (1987)

Popular education might not have gained widespread application or acceptance just as consciencization from which it seems to derive much strength ostensibly because it speaks a 'revolutionary' or 'reformist' language which is capable of raising suspicion. Pre-retirement education seeks 'to increase in the community at large the importance of considering retirement issues and of listening, reading about, discussing and reflecting upon those issues'. (Lumbard, 1985) Addressed to the needs of an audience whose age range is 50 to 65 years as in the case of the United Kingdom, pre-retirement education is wholly directed at providing clients with better life management skills as such that they would not feel that the gaps between employment and early retirement are not excruciating enough to make the retiree almost lose an appreciable and positive self-concept. As Lumbard (1985) noted, the fundamentals here include survival, security, social acceptability,
self-respect and self-fulfilment all of which should contribute to a stable home circumstance, friends, absorbing interests, adequate financial security, satisfactory health, a sound philosophy of life and, barring other unforeseen circumstances, longevity. Right now the terrain of pre-retirement education has shifted from shorter term programme of say one week to longer term ones wherein each person is assisted to build up a Catalogue of Relevant Activity shown in Figure 2.

The point has been made that the Catalogue of Relevant Activity is aimed at laying a solid foundation for retirement. On retirement, the foundation is further consolidated. Retirement education, in other words, is specially designed to build upon the gains of pre-retirement education by offering retirees an opportunity for intellectual pursuits, spiritual growth and physical relaxation, especially as revealed in the case of the Federal Republic of Germany. (Volker, 1988) The goal in both segments is to make life more meaningful to those who enlist in the programme provided.

In response to the need to make life more meaningful and rewarding, adult education has moved into the provision of consumer education. Excruciating prices of consumer goods has induced the entry of consumer education for men and women. But the latter feel more aggrieved ostensibly because they double not only as consumers but as mothers, child educators, home-makers and wage earners. They argue that they have become important targets of exploitation by manufacturers and advertisers and, perhaps more importantly, women have been viewed as sex objects. Said the Consumers Association of Penang (1986):

"This view of the modern women as a sex object is unprecedented in human history, because it is only in our age and time that the mass media, with technology at its disposal, has so pervasively and insidiously turned them into commodities. This process is linked to a market economy where women are used as sex objects to sell products."
## Catalogue of Relevant Activity

<table>
<thead>
<tr>
<th>EACH PERSON</th>
<th>As an individual or in a pair</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As a member of a small group</td>
</tr>
<tr>
<td></td>
<td>As a member of large group</td>
</tr>
<tr>
<td></td>
<td>As a member of society</td>
</tr>
<tr>
<td>HAS NEEDS</td>
<td>To gain moral support</td>
</tr>
<tr>
<td>WHICH HE ALL</td>
<td>To gain awareness</td>
</tr>
<tr>
<td>OTHERS MUST</td>
<td>To set goals and plan</td>
</tr>
<tr>
<td>ASSESS</td>
<td>To gain relevant information and advise</td>
</tr>
<tr>
<td></td>
<td>To grow in confidence and make decisions</td>
</tr>
<tr>
<td></td>
<td>To reflect, clarify ideas, evolve personal philosophies.</td>
</tr>
<tr>
<td>FOR WHICH</td>
<td>Family</td>
</tr>
<tr>
<td>VARIOUS PEOPLE</td>
<td>Friends</td>
</tr>
<tr>
<td></td>
<td>Colleagues</td>
</tr>
<tr>
<td></td>
<td>Others sharing experience</td>
</tr>
<tr>
<td></td>
<td>PRE Providers</td>
</tr>
<tr>
<td></td>
<td>Experts</td>
</tr>
<tr>
<td>PROVIDE</td>
<td>For thinking</td>
</tr>
<tr>
<td>VARIOUS OPPORTUNITIES</td>
<td>For talking</td>
</tr>
<tr>
<td></td>
<td>For listening</td>
</tr>
<tr>
<td></td>
<td>For seeing</td>
</tr>
<tr>
<td></td>
<td>For becoming more aware</td>
</tr>
<tr>
<td></td>
<td>For developing managing skills.</td>
</tr>
<tr>
<td>BY VARIOUS MEANS</td>
<td>Contemplation</td>
</tr>
<tr>
<td></td>
<td>Question and answer</td>
</tr>
<tr>
<td></td>
<td>Discussions</td>
</tr>
<tr>
<td></td>
<td>Counselling</td>
</tr>
<tr>
<td></td>
<td>Talks and lectures</td>
</tr>
<tr>
<td></td>
<td>Case studies</td>
</tr>
<tr>
<td></td>
<td>Via the media</td>
</tr>
</tbody>
</table>

The point being made is that humanity, especially women, is being assaulted commercially and it is only the intelligent, rational and practical articulation of the people that can free them. Adult education has been responding to that need. See, for example, the Consumers Association of Penang (CAP), Malaysian NGO, that tries so hard to protect consumers from business malpractices and by taking on the issues of basic needs, rational use of resources, environmental pollution, culture and lifestyles. The goal sought after in consumer education reflect, in part, the desire of people to protect their income.

The response to economic changes takes the form of mounting training programmes for rural and urban small-scale entrepreneurs. Such training is normally aimed at providing the rural poor or middle class urban poor some practical skills which should help in renovating rapidly deteriorating economies. Some of the more common skills provided for include automobile mechanical skills, auto-electrical skills, wood-work, electrical installation, plumbing, shoe-making, horology, blacksmithing, goldsmithing; animal husbandry (including poultry) and a host of other small-scale businesses that generally go under the label of Income Generating Projects (IGP). In some countries, for example, Nigeria, there is a form of pre-training, in-training and post-training motivational reinforcement in cash and kind. In Nigeria, a structure for the management of such training exist and goes by name of the national Directorate of employment (NDE) that is legally rooted and funded by the Federal Government. It is common to find many programme stepped up by subjects like principles and practices of management, business mathematics, accounting, costing, storekeeping and purchasing, marketing, project design and so on and so forth. (Bogaert, 1983; Samlowski, 1983; Hansen, 1983; Oduaran, 1988 and King, 1988). In responding the way it has done, adult education manifests itself as a machinery for combining theory with practice as well as sharpening the self-reliance capacity of the people.
One area in which self-reliance has equally been focussed in the response is women’s education. Such has been the attention this pattern of adult education provision gets that some people are beginning to ask ‘why women?’ The avalanche of justifications for the emphasis on women are found in their exploitation over the years, their subjugation and in their marginalisation in socio-economic and political national pursuits. The remedy has often been provided in the established fields of socio-economic and political actions expressed in consciousness raising via education, health, agriculture, home economics and income-generating projects for women. (Stromquist, 1986; Bernard, 1986; Volkshochschule Berlin, 1986 and Sney, 1986) In the process, women are increasingly breaking into such areas as welding and carpentry which had been dominated by men for so long. (Antrobus and Rogers, 1983) The sum effect is that women are now getting a fair hearing in the circles of policy makers.

If women are getting some attention, the new frontier of adult physical education has not been so fortunate. Before now, adult physical education is taken for granted. It may not be long before adult physical education which has been defined by Ojeme (1988) as that aspect of adult education dealing with the education or re-education of the adult using rationally selected movement experiences and related knowledge so as to be able to live fuller lives continue to get some attention. Nigeria experimented with it but could not go further for no known official reason.

Experiments are on to determine how much useful education could be given to offenders while serving their prison terms. While offenders in prisons in the developed world could come out of such a confinement with practical skills and, possibly, credentials, many prisoners in the developing world are not yet so opportuned. Indeed, Enuku (1987) has stated in his report that most prisons in Nigeria have no organized educaational programme. If adult education is to respond effectively to the challenges of confinement it
must now enlist among its professionals many more advocates.

The emergence of new frontiers in adult education is not just important for what it is. It is even more important in terms of inducement of an expanded curriculum for distance education. We must now address that issue.

PROPOSED EXPANDED DISTANCE EDUCATION CURRICULUM

Distance education, as it is presently provided in many countries in the world, has remained tied to the acquisition of credentials. Consequently, the curriculum has continued to concentrate more on courses that should have been provided in formal school settings were things to remain equal. Consequently, too, it is rare to find well articulated non-credential programmes coming through the medium of distance education.

A typical distance education curriculum in many developing countries would feature concerns depicted in figure 3 below:

![Figure-3](image-url)

TRADITIONAL DISTANCE EDUCATION CURRICULUM
From the above figure 3 you would notice that programmers in the area have remained screwed to credential-based courses may be in response to the demands made by clients.

Much as we have remained tied to those concerns it is being proposed in this discussion that the challenges and changes developing countries will be facing in the next century should be pungent enough to call for a shift in, and, indeed, an expansion of the curriculum for distance education. The imagined 21st century distance education curriculum is represented diagrammatically in Figure 4 thus:

**Figure-4**

The Expanded Distance Education Curriculum

[Diagram showing expanded distance education curriculum including Basic Education, Sec/Vo-Tech Education, Tertiary Education, Profession Education, Non-Formal Education, and A New World.]
What we have presented above may not be a novelty to many developed countries. But this is not quite so far many developing countries.

We had hinted somewhere else in the preceding discussion that emphasis in many of the developing countries in the provision of distance education is yet on the acquisition of credentials. The challenges and changes we had highlighted mean that providers in the developing countries must now break out of their traditional restricted shelf.

It may be true that some of them like Pakistan, Korea, Tanzania and Nigeria have begun to experiment with radio and television programmes aimed at educating the people in better farming methods and better health. The experience in Nigeria, however, reveals that such programmes have not been originated from any known distance education institution. The effect is that nobody really monitors the extent of utilization of ideas passed through the media in the identified areas to take just one example.

It is being proposed here that our new world in the 21st century might be better for it if in addition to our present narrow provision we reach out to some other complimentary areas.

Specifically, the expanded curriculum for distance education would include, among other things, the following:

1. Transformative Literacy
2. Socio-economic and political conscientization
3. Pre-retirement education
4. Retirement Education
5. Longevity
6. Consumers' education
7. Income-generating education
8. Re-training
9. Peace education
10. Environmental education

All ten items out of the lot have been discussed elaborately in this paper and other literature. Attractive as these items are, it may be imagined that many obstacles could block their inclusion in the educational packages of distance education institutions.

IMPEDEMENTS TO EXPANSION

The suggested expansion might not easily come on because of several obstacles. Prominent among these impediments are their supposed low economic returns. Many providers may think that the issues covered by the suggested expanded curriculum are too general in nature to attract clients. If cost-effectiveness of programmes is a tacit concern in the distance institutions they may remain unattracted by this proposal because the generality of the intended audience may not have been sensitized enough.

Another possible impediment to the proposed expansion is the existence of different forms of dictatorships in many developing countries. Expanded programmes in the area of conscientization, especially in socio-economic and political spheres, is likely to meet with strong resistance. Such programmes may be seen as anti-government and, therefore, "inimical" to good governance. Such resistance ought not to prevent us from continuing the pursuit of our goals as most of our work in the direction of conscientizing the people will remain personal and, therefore, private at least at the beginning. Indeed, we would more than have achieved our goals if at the end we secure the introduction or consolidation of democratic institutions beginning with the grass-roots development movements.
Again, the present media being used for the delivery of several distance education programmes may be grossly inadequate. For example, the broadcast media alone (Khan, 1988) would be highly inadequate and audio-visual cassettes and contact sessions would be invigorated. Indeed, study circles of the Brazillian type may emerge. These again may be circumscribed by immense government monitoring. At that time, distance education managers are likely to be faced with the challenges of expert programming that is devoid of suspicion of purposes.

Finally, the usual problems tied to the infrastructures of distance education are likely to remain ever more insinuous. These again would continue to be surmounted by the dint of our stronger determination to make our programmes more relevant to our societies.

CONCLUSION

The 21st century is bound to come up with intensified drives for programmes that are capable of solving problems carried over into it from this century, that is the 20th century. The present formal and non-formal education delivery strategies may become grossly inadequate. In the non-formal education sector, in particular, the distance education curriculum would required an expansion as already highlighted in this discussion. Such an expansion would induce impediments which must not remain insurmountable for a faster development of the developing countries.

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FACTORS DETERENT TO NON-FORMAL EDUCATION IN PAKISTAN: SOME PROBLEMS & SUGGESTIONS

by

Dr. Muhammad Rashid

INTRODUCTION

The developing countries consider educational programmes vital for their economic development and political independence. Development requires participation by all people—men and women, young and old, either directly through their daily work or indirectly through their economic and social groups. However, full participation of the population cannot be achieved unless people have acquired the skills and knowledge needed for such participation. The acquisition of skills and knowledge depends entirely on the educational system, which in turn is a reflection of the state of development of the country concerned. The existing formal system of education in developing countries obviously cannot cope with the demands of education for all. In order to extend educational opportunities to all adults, wherever they are placed in the system, the nations have to look for alternative means. Non-formal education apparently appears to be an answer to this growing need.

NON-FORMAL EDUCATION AND ITS ACTUAL ROLE IN PAKISTAN

Non-formal education is simply an organised activity with educational purposes carried on outside the highly structured framework of a formal education system. It is a deliberate process of communicating ideas and developing skills in adult and out of school youth which will help them increase agricultural production, qualify them for, or increase their performance in, positions in government, industry and commerce, attain higher health
standards, participate more intelligently in civic, economic and political groups, and achieve other personal and social goals.

Coombs and Ahmed, (1974 P.8) have clearly defined the concept of non-formal education as follows:

"..... any organised, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children. Thus defined, non-formal education includes, for example, agricultural extension and farmer training programmes, adult literacy programmes, occupational skill training given outside the formal system, youth clubs with substantial educational purposes and various community programmes of instruction in health, nutrition, family planning cooperation, and the like."

Pakistan is amongst the countries of the world which have 84.6% rates of illiteracy (Ministry of Education, Pakistan, 1979, P.26). Such a high rate of illiteracy has hampered the overall progress of the country. Unfortunately, there is little provision in the formal system of education of Pakistan for imparting knowledge and skills to adults.

As such the basic aim of non-formal education is to make education and training opportunities available to all the people of Pakistan so as to make them more productive and useful members of society.

Some prominent non-formal educational programmes in Pakistan are briefly described below:

1. The Pakistan Broadcasting Corporation is currently offering daily radio programmes, supported by mobile units in some of the provinces for information and training of farmers. The Agricultural Information Services Punjab and Agriculture Departments of other three provinces develop and
present farm broadcast programmes using radio as a medium for training of farmers. In these programmes discussions on different problems of farming are recorded and offered for broadcast.

2. A number of agriculture and rural development agencies are conducting non-formal education programmes like; (i) In-service training for agriculture extension for workers and farmers. These are limited programmes consisting of short courses and informal seminars held in selected community centres on crop production, extension, use of pesticides etc. (ii) The Farm Guide Movement which provides group training for pre-released service-men, school and college students, progresive farmers and cooperative farmers. (iii) The short training courses for local government officials. Pakistan Rural Development Academy at Peshawar carries out training through seminars, conferences, conventions and group meetings. (iv) There are short courses offered by the Tando Jam Agriculture College for Farmers, some in food preparation, insecticides, tractor driving and horticulture.

3. Provincial departments of labour, polytechnics, technical training centres, trade training centres and vocational institutes provide some special programmes for in-service apprenticeship.

4. There are some handicraft development training centres. In the provinces of Punjab and Sind, Small Industries and Handicrafts Corporations produce several handicrafts, carpet, poultry, cutlery and ceramics like such other centres. These centres provide training to workers and artisans.

5. The Family Planning Association of Pakistan and Provincial Planning Boards are actively
engaged in educating masses on planned parenthood values.

Besides these programmes, a host of other government and non-government departments and agencies organize non-formal education programmes suited to their needs and according to their areas of specializations. They include rural development programmes, YMCA training programmes, fishing training programmes, Pakistan armed services programmes, adult education and literacy programmes, programmes for rural youth, Integrated Functional Education programme by Allama Iqbal Open University etc. The National Educational Policy (1978), while recognising the need of imparting suitable skills for the rural population entrusted to Allama Iqbal Open University with the task of organising non-formal education with the job of meeting this formidable challenge in the shape of organised Radio/TV programmes, special booklets and reading material for adults and mobile operational units in the rural areas.

SPECIFIC PROGRAMMES THROUGH NON-FORMAL EDUCATION

In this regard, focus is upon the Non-Formal Education programmes that were offered to enable the adults to upgrade their existing skills or to acquire new skills in order that they may change employment, supplement their income through secondary occupations or, in the case of the unemployed, find employment. Indeed, the majority of skill oriented programmes for adults in Pakistan have focussed on agricultural extension. The other programmes have emphasised the development of modern technical skills in order to meet the needs of a rapidly developing manufacturing sector. Now it is worthwhile to consider the types of training programmes to underscore the role each has played.

1. Agricultural programmes: The majority of skills training programmes in the rural areas of Pakistan have concentrated on providing agricultural extension services. Such programmes are offered to work with individual "Model" farmers, attempt to develop cooperatives, or seek to cultivate
new areas through settlement schemes. Agricultural information is either provided by extension agents or through the use of mass media, or through a combination of both. The development and orientation of agricultural extension programme is now under serious reconsideration.

2. Informal sector: Most government and private training efforts have been oriented towards improving the managerial skills of entrepreneurs. A few programmes have sought to develop cooperatives but the majority of training efforts have been directed towards individual entrepreneurs. Industrial extension services provide training and consultant services to help businessmen develop book-keeping and accounting system, obtain loans, and deal with government regulations. Training in technical skills such as masonry or carpentry is provided as part of large scale training efforts directed to develop technical sector. Not all informal sector operations require the full-time participation. Often entrepreneurs supplement their earnings from other sources or provide temporary employment until a better job can be found. The idea behind this training is that the rural families in Pakistan may produce and sell goods to supplement their farm earnings, while urban wage earners or the un-employed may engage in informal activities on a part-time basis as first step towards developing their own business.

3. Handicrafts: There is no clear demarcation between handicrafts and the informal sector, but the handicrafts in Pakistan may be defined as encompassing those areas in which traditional crafts or goods based on modified traditional designs are produced for sale in the local economy or for export abroad. Government of Pakistan has felt that such programmes are excellent way to introduce gradual change in traditional
societies. Women can also increase their participation in economic activities. Other advantages for launching such type of programmes are that handicrafts provide an opportunity for farmers to supplement their incomes and that training in handicrafts skills generally does not require literacy.

4. Modern skills training programmes: Skills training designed to meet needs in the industrialized sector in Pakistan is provided through vocational training institutions, employer-sponsored on-the-job training, programmes which offer apprenticeships in modern industries, correspondence courses, classes at stationary or mobile skills centres or through a combination of all these approaches. Many of the large-scale programmes are financed primarily through contributions or taxes from modern industries and provide training in production, maintenance and repair techniques in accordance with the needs of those industries. Some programmes supplement technical skills training with basic education.

FACTORS DETERANT TO NON-FORMAL EDUCATION IN PAKISTAN

Though the types of training offered within the different sectors of the economy vary greatly, many problems associated with each type of programme are shared. Most important of these are the inability to reach the participants for whom the programme is designed, the exclusion of entire groups from participation and the lack of support mechanism for implementing training programmes to motivate adults to participate in the programmes for their own development.

The following sections discuss some issues and factors related to the non-formal education:

1. Scope of programme: The degree to which a programme should combine technical skills training with training in other areas is
one of the main issues concerning programme development and only a realistic combination of the two can achieve the desired results.

Programmes which require literacy and previous skills training may aggravate problems of selectivity. Focusing on technical aspects of skills training does little to help individuals develop the adaptability or the management skills essential to economic success and self-employment. In addition, such programmes also neglect the need to help employees develop confidence and the ability to deal with unjust practices on the part of employers or to examine ways in which they may treat future employees.

Supporters of skills programmes, however, maintain that the narrow focus of such programmes is essential if economic productivity is to be rapidly increased. They argue that the other needs of individuals can be met through a complementary system of adult education centres which provide training in literacy and numeracy skills as well as offer opportunities for cultural development.

2. Tendency to exclude women in agricultural programmes:

There is a tendency in many agricultural programmes to widen rather than lessen income desparities between farmer; the exclusion of women from many agricultural programmes even though they may be primary agricultural producers; the experience that many cooperatives tend to protect existing social structures rather than enabling all to actively participate.

3. Another problem is the high cost of capital intensive agriculture that relies on mechanization and costly inputs such as fertilizer, and leads to labour displace-
ment; the development of cash crops that could meet the nutritional needs of the population; and the failure of many extension agents to serve as credible sources of information for farmers.

4. Besides, the non-formal programmes do not fit in well with the realities such as the place of small farmer as well as various social and economic structures. These are the factors leading to the failure of agricultural schemes.

The factors which prevent the non-formal from playing its important role in the programmes of handicrafts are that the skills training programmes have not been linked with a market for goods, the certain crafts associated with particular classes within the community, and there are problems in forming and developing co-operatives. These are but a few of the difficulties encountered by handicrafts programmes. And, though handicrafts programmes are often cited as one of the best means of improving the economic role of women, many handicrafts programmes only perpetuate existing inequalities. Too often women serve only as producers while training efforts are directed towards men who assume managerial roles within the co-operative. Yet, in programmes where women are trained not only as producers but as managers, handicrafts programmes may indeed play an important role in upgrading the status of women.

7. The planners of the skills training programmes have lack of knowledge about how adults learn. This is a major constraint in developing such programmes. Most research has dealt with adults who are products of compulsory school systems in western societies. In contrast, little research has been done on the learning characteristics of adults in developing societies who may be illiterate or who have had only a couple of years of schooling.
As a result, many adult learning programmes have simply expanded the traditions of the formal classroom to include the adult sphere.

8. The selection and training of trainers has received little attention in the literature. Too often trainers are selected on the basis of their knowledge about specific content areas rather than on their ability to communicate with their audiences or their sensitivity to cultural and social issues.

Yet, if programmes are to be concerned with all aspects of development, there is need to consider the ways in which courses for extension workers and trainers influence their attitudes towards participants and the manner in which they (planners) will conduct their own courses.

Suggestions for boosting non-formal education in Pakistan

In order to make the non-formal education programmes successful and effective, there is need to be sure that various problems involved in the use of non-formal education are resolved.

1. Incentives for inducing larger supply and demand for non-formal education

Any non-formal programme with incentives increase its demand. The target audience will take more interest in the programmes. For example, the P.T.O.C. of Allama Iqbal Open University was launched without any incentive which resulted into high dropout rate. Later on, an incentive of one increment and a credit of Intermediate level was added to the course and the enrolment gone up. Hence incentives are essential for the success of any non-formal education programme.
2. Shortage of physical facilities and instructors

Physical facilities and instructors for non-formal education programme are backbone in the system. Without these it is not possible to run any non-formal education programme effectively. All such needs should be kept in mind while planning for non-formal education. Effort should also be made to provide training the instructors.

3. Demand for secondary education

People need education in order to get employment or to get better income. The formal system cannot cope with the demand. Hence there is need of non-formal education in order to cater the need of the masses.

The reasons why traditional (formal) institutions have been unable to meet all the demand for educations to the growing labour-market demand for continual vocational training. Moreover, some policy makers and many would be students, in particular adults, now insist that it should be possible to undertake studies on a part-time or recurrent basis instead of full-time attendance at a traditional institution for concentrated studies over three or four years. Likewise, an increasing societal commitment to equal education opportunity has forced many countries to look for new paths to educational achievement.

Although in many developing countries it has already become an indispensable element in the overall provision of education, non-formal education still often occupies an ambiguous position in relation to formal education, on the one hand, and informal learning on the other. However, non-formal education concern should be to satisfy
immediate and, commonly, quite fundamental learning needs, such as how to read, how to care for young children. This distinguishes it from the concept of 'out-of-school education' which denotes "all education carried on outside the formal school and higher education system, except vocational training".

With the demand of secondary education, some skills training programmes should be offered by non-formal approach.

4. Strengthening Links with Development

Non-formal education programmes must be designed in a way that they should strengthen the national development of the country. Most of the non-formal education programmes are without keeping in mind, its impact on the national development. All the programmes designed for non-formal education must meet the minimum essential learning needs of the population. Such programmes will invariably have the impact on national development. Hence efforts should be made to make non-formal education as an integral part of the educational system.

5. Relevance

In Pakistan, the vast majority of people earn their livelihood from agriculture, rural development is far more than this and should have a far wider basis than agricultural development. The basis should be the needs and aspirations of the community, only a small part of their day is spent in agricultural activities; rural development is not agricultural development but includes it.

The narrow concentration on agricultural skills for youths and men has its drawbacks. Agricultural schools/universities
have programme successful, the relevant needs of the population must be taken care of.

6. Identifying Features of Non-Formal Education

The essential features of non-formal education are normally not identified while planning for non-formal education. It should be planned in a way that it must be seen as national service and considered to be an integral part of national development.

7. Equivalence

The equivalisation of degrees and certificates is a problem. Before planning a non-formal education programme, the equivalence of degree/certificate must be negotiated with other institutions.

8. Supervision

Other important problem involved in non-formal education programme is supervision. If the programme is not supervised properly it will ultimately result into the failure of the programme. Hence, while planning for non-formal education care should be taken to ensure the supervision of the programme.

9. Financing of Non-Formal Education

Financing of non-formal education is problem of great significance. Non-formal education costs vary enormously from one programme to another. However, there are many cost-saving possibilities in comparison to those of formal education and that there is virtue not in low costs per set, but only when low costs are accompanied by effective results. The main issue concerning finance is how to keep the costs as low as possible while keeping programme effectiveness high.
The main and unconventional sources and how best to deploy whatever resources are available to non-formal education as a whole.

In addition to the above mentioned problems and issues in the use of non-formal education, there are other problems like evaluation, person-centred development, appropriateness, and integrated development to be taken care of to make the programme at success.

Conclusion

The experience of the various types of skills training programmes in Pakistan has revealed the importance of viewing development in social as well as in economic terms. The desire for increased efficiency and productivity to help satisfy basic human needs of the poor majority cannot be separated from the rights of persons to understand and shape their own roles in the entire social context.

The interplay of these two themes, economic and social quantitative and qualitative development is related to all areas of programme planning. The types of training which a programme will offer and to whom, whether or not a programme will provide narrowly defined or comprehensive skills training; work with groups or individuals; participants or experts as trainers, operate through centralized or decentralized agencies, develop training workshops or combine training with production; foster participant involvement in planning and decision making or rely on regional, national or international experts, are factors that influence the effectiveness of programmes in the social and economic realms.

All aspects of non-formal education planning must address the issues surrounding programme scope, participation and exclusion, pedagogy, and the training of trainers.
References


3. COOMBS P.H., Prosser, & Ahmed, (1973), New Paths to Learning for rural children and youth, USA, JCED, UNESCO.


8. Govt. of Pakistan (1979-a), National Education Policy and implementation programmes, Islamabad.


WINDOW ON DISTANCE-LEARNING INSTITUTION

UNIVERSITY OF THE AIR, JAPAN

by

MASOODA CHAUDHRY

DISTANCE EDUCATION IN JAPAN

Distance education has been developed in Japan with a view to provide access to education for those who cannot afford it in terms of the traditional mode of schooling. The media of instruction employed in distance education include printed materials, broadcasting, face-to-face instructions and a mixture of these media as per the regulations and the operational policies of the specific institution involved. There are formal distance education institutions which offer high school diplomas and college degrees as well as nonformal educational courses for training in various vocational skills. College correspondence courses, the University of the Air, and high school correspondence courses shall be dealt with in this section.

The further expansion of distance education in Japan is relative to the possibility of how much it can serve the educational needs of its people. The strategies adopted to make full use of modern technology in distance education ought to be considered with a view to meeting the students' needs. Discussion of this subject is based upon reflection on both the positive and negative experiences of the University of the Air.

There are no distance education institutions at the elementary and junior high school levels because nine years of compulsory education covers 100 per cent of the age group. Nonetheless, a number of non-government agencies and institutions participate in spheres of distance education, such as the enrichment of school education by TV programmes, implementation of social education at a distance, and the combination of broadcasting with social education.
The impact of the media on the improvement of college teaching and their use for the expansion of the outreach of the college into society have been the policy issues for the past decade. In this regard, experimental programmes have been undertaken by a dozen colleges and local broadcasting stations with government sponsorship.

College Correspondence Courses

After the end of World War II, democratization was the key for reconstruction of the nation. Equal access to education was strongly promoted as the primary theme of postwar educational reform. Hardship in maintaining a livelihood, shortage of campus facilities in the defeated nation, and widespread desire to learn among aspiring yet poverty-stricken youth gave great impetus in providing non-traditional opportunities for education. Thus, in 1947 the government decided to incorporate correspondence education into the school education system by introducing into the Basic Education Law and the School Education Law provisions for the establishment of correspondence education.

College correspondence courses were intended to provide access to college education to working youth who could not afford to attend traditional college on fulltime basis. College correspondence courses were established as degree courses by traditional colleges as affiliate operations. Partly due to financial and partly because of academic considerations, they share the facilities and academic personnel of the daytime college so that operational costs may remain minimal.

The academic curricula of correspondence courses are practically the same as those for traditional colleges, as Correspondence College Courses Standards have been set by the Government almost identical with College Course Standards. The Government has given support to college correspondence courses in the form of: (i) making a special postage rate for correspondence education mailings; (ii) giving their students railway fares; (iii) reduction of income taxes for working students; (iv) access to the national scholarship
system; (v) conveniences for those who attend schooling; and (vi) institutional aid.

University of the Air

The major theme behind the establishment of the University of the Air was threefold: increasing demands for higher educational opportunities, opportunity to return to school and improvement of higher education.

First, using the medium of broadcasting for educational purposes means that the opportunity for higher education can be extended to many people. Accompanied by advances in economic development in Japan, the 1960s onward saw an unusual increase in the number of people wanting to enter institutions of higher education. Facilities of higher education, including universities, were enlarged for this purpose, but a university that makes use of broadcasting is the most effective answer to this demand.

Second, with the development of the technological society, the average person in society needs to learn more of the specialized knowledge of the new age. It is difficult for adults who must perform both social and professional obligations to receive a college education because of problems caused by time limitations. Education via radio and television can remove this obstacle and offer people the opportunity to study once again. A broadcast university also provides the opportunity for higher education to those who have had to abandon going to university for geographical or economic reasons.

Third, in Japan, the traditional structure of higher education has been for individual faculty members to lecture to students on the basis of the results of their own research, and there is reciprocity and mutual cooperation both among members of a specific faculty and between universities. Because of this, through the cooperation of many public and private universities, it has been possible for the University of the Air to produce broadcast materials (contents of lectures), and printed
materials (textbooks) on the basis of results of the latest research and the most recent educational technology. It is expected that this will bring the opportunity for improvement in both content and methodology in education.

Also, if the transfer of credits with other universities can be realized, it is expected that it will propel Japan's system of higher education towards becoming more flexible.

The University of the Air opened its doors in April, 1985, with the following aims:

(i) To provide working people and housewives the chance of life-long university level education;

(ii) To provide an innovative and flexible system of university level education which is open to all high school graduates; and

(iii) To cooperate with other universities in making full use of the latest knowledge and newest educational technology in offering a system of higher education which meets contemporary needs.

In doing so, the University aims to contribute to further improving on university level the educational system in Japan by strengthening cooperation with existing universities, promoting transfer of credits, deepening relations with other universities, encouraging faculty exchange, disseminating broadcast materials, etc.

The University offers a total of 270 courses (786 credits). The courses have been divided into three Fundamental Subjects (study of which is intended to give students an overall view of their chosen area of study and to teach them how to recognize and look for solutions to academic problems); Basic Subjects (study of which should provide students the necessary knowledge and study skills
to enable them to go into their chosers area of study in greater depth); Foreign Language Courses; Health Education Courses; Specialized Subjects; and Interdisciplinary Subjects. Of these, 40 courses will be accompanied by schooling at the Study Centres.

The students of the University of the Air are classified into four categories. They are: (i) regular students who enrol with the intention of graduating from the University of the Air; (ii) non-degree students who enrol for one year and take three or more courses in a particular area; (iii) non-degree students who enrol for one semester for a particular course; and (iv) special students who enrol on provisional basis without having the necessary qualifications to enter the University and, after finishing 16 credits for the course selected from among the Basic and Fundamental Subjects, may transfer as regular students. (In Japan, those who have not at least graduated from senior high school are not able to enter a college or university).

System of Study

The system of study at the University of the Air comprises lectures broadcast over radio or television, textbooks, guidance by correspondence and, in some cases, face-to-face instructions at Study Centres.

During the 15 weeks of each semester, two credit course broadcast 15 lectures (once a week, 45 minutes each), and four credit course broadcast 30 lectures (twice a week, 45 minutes each). Each course is broadcast on either radio or television. The lectures are rebroadcast, but in cases where a lecture is missed, students may go to the Study Centres to watch and/or listen to the lecture in the tape library.

Course & Media Production

The academic content of the broadcast lectures is the responsibility of the professors in charge, but their production is carried out under the lead-
ership of programme directors who are on the staff of either the University of the Air or the National Institute of Multimedia Education. Though some programmes are shot on site, at laboratories or at other locations, programme production is mostly done at the studios of the National Institute of Multimedia Education located on the same campus. The University of the Air Foundation is granted UHF Channel 16 and FM 71.1, which has its own broadcasting station and airs the broadcast lectures from 6 a.m. to 12 midnight every day throughout the year.

Course Management

All courses broadcast are accompanied by textbooks, and the lectures and textbooks should be studied together. A textbook for a twocredit course is about 100 pages long.

The responsibility of writing textbooks is assumed by the professors in charge, and printing and delivery are handled by the University of the Air Promotion Foundation.

After eight, weeks of the semester, students are tested or asked to submit papers, which are evaluated on the basis of the results. Marking is the responsibility of the professor in charge while mailing is handled by the staff of the University.

Classroom instructions are carried out at Study Centres. In order to graduate, regular students must complete at least 20 credits of Study Centre classes. Each class lasts for 2 hours and 15 minutes and students receive one credit by attending 5 classes for one course during a semester.

Assessment/Evaluation

Evaluation of the students is done course-by-course on the basis of guidance by correspondence and examinations which are the basis of credit. Course examinations are given at each of the Study Centres at the end of the semester. Those who have passed the Guidance Correspondence, are permitted to take an examination to determine if they have to
receive credit for the course. Students are evaluated by the professor in charge of the subject and, if they receive a sufficiently high grade, they are declared successful. Credit is then given for the subject.

Management & Administration

The University of the Air was established by the University of the Air Foundation, which is a semi-governmental special corporation established by an enactment of the Diet. The government supervises the affairs of the University of the Air Foundation and of the University which it established. This includes supervision or the approval of the content of the broadcasts and of financial affairs and accounts. However, the government does not directly supervise the University of the Air itself.

Every year the University of the Air Foundation presents its plans of operations and budget to the Ministry of Education, Science and Culture and the Ministry of Posts and Communication in order to get their approval. It must also get their approval for settlement of any questions involved.

The Minister of Education, Science and Culture appoints the Chairman of the Board of Directors of the University of the Air Foundation. The Chairman of the Board of Directors appoints the other Director, with the approval of the Minister of Education, Science and Culture. The appointment of the President of the University of the Air is made by the Minister of Education, Science and Culture upon the nomination of the Directors as based upon the decision of the Faculty Council. The President of the University of the Air becomes a Director of the University of the Air Foundation.

The University of the Air has a President, two Vice-Presidents, 28 Professors, 23 Associate Professors and about 450 visiting Professors, visiting Associate Professors and part-time Lecturers. In addition, there are six Study Centres which have been set up for schooling, academic counselling,
library use and examinations, and these centres also have educational personnel.

At the level of university operations, there are a Faculty Assembly and a Faculty Council, which discuss research and personnel matters. In addition, there are within the University an Educational Affairs Committee, Study Centre Committee, Student Affairs Committee, Library Committee, Curriculum Committee and committees in each academic discipline.

To manage the administrative affairs of both the University of the Air and the University of the Air Foundation, a secretariat was established. It includes the Director General of the Secretariat, a General Affairs Department, an Academic Department, a Broadcast Department and a Production Department.

The University of the Air Foundation has established the University of the Air, including the Study Centres, and the television and radio broadcasting station. The majority of the funding for operations is supplied from the treasury of the Japanese Government.

Estimated income is based on governmental subjects, capital from the national treasury, students enrolment and registration fees (business income), and from donations to the Endowment for the Promotion of Higher Education and profits on investments made by the University of the Air Foundation (External income).

Estimated expenditures are based upon salaries for the employees, running operations for the University of the Air Foundation, including the University of the Air and the broadcasting station expenses for building maintenance, students recruitment, the preparation of textbooks and broadcast lectures for faculty research, for academic counselling, for university equipment, for operating expenses of transmission stations, for student support at Study Centres and for Centres buildings.

The University of the Air works in cooperation with both public and private universities. The full-
time faculty, with the assistance of visiting professors, associate professors and part-time instructors, produces broadcast materials and textbooks and carries out schooling.

Conclusion

It is believed that the University of the Air will certainly have great influence on the improvement of education, especially higher education in Japan. Specific areas where influence is expected include mutual transfer of credits, promotion of mutual cooperation, the open nature of lectures, as with those broadcast over the University of the Air integration of academic disciplines, influence towards the improvement of the content of lectures at other universities and influence promoting flexibility within the system of higher education itself.
SPECIAL FEATURES

BOOK REVIEW

Monthly "Payami" (An Urdu edition of Unesco Courier)
Chief Editor: Dr. Shaukat Ali Siddiqi (Vice-Chancellor)
Supervisor Editor: Prof. Javed Iqbal Syed (Dean)
Member Editorial Board: Dr. M. Rahman, S.A. Siraj, Suleman Malik, Mateen-ud-Din
Pages 34; Price Rs.20/= Published by Allama Iqbal Open University, Sector H-8, Islamabad, Pakistan.

The Unesco Courier is certainly a unique venture in journalism, literature and fine arts. It was about forty-four years ago that the United Nations Educational, Scientific and Cultural Organisation (UNESCO) started publishing a monthly magazine Unesco Courier in English, French and Spanish languages from its headquarters, Paris. Thereafter, the organisation arranged to bring out Courier's edition in 36 noted languages of the world such as Russian, Chinese, Greek, German, Italian, Arabic, Persian, Turkish, Hindi and Bengali, which are sold out in 120 countries. Even Urdu, the national language of Pakistan is honoured to be included in the long list of 36 international languages. This world-fame journal is also brought out in braille for the benefit of blind people.

It is entirely a non-profit magazine produced to serve an international public. Its mission is to help its readers to keep abreast of world issues by reporting on them in a way that takes into account the broad spectrum of attitudes and opinions that characterize humanity today.

There is no denying that Unesco Courier is entirely devoted to develop intellectual cooperation in the fields of culture, education, science
and communication. Its vital aim is to promote universal values and let the people of this global village to enjoy prosperity, knowledge and wisdom. This is the journal which brings together the intellectual and creative people from all the regions. Through Courier, the Unesco generalizes basic education, higher studies, protection of the environment and encouragement of the freedom of creativity. This Paris-based magazine presents thoughtful essays on oceans, atmosphere, space, water-courses, deserts, ecology, geography, archaeology, etc. It publishes articles of very high standard on contemporary arts, music, painting, child-play, literature, etc.

It may be a good news for the people of Pakistan that this unique source of universal information is now available through Payami, an Urdu edition of Unesco Courier, Paris, and being published regularly by Allama Iqbal Open University, Islamabad. This Urdu edition is presented in highly sophisticated style of printing. The standard of its publication is so much attractive that at Paris headquarters, it has been frankly admitted by the high-ups of Unesco:

"Among 36 global editions of Courier, there appear only three which are published in most decent way. The Urdu edition stands third in the rank."

While writing a letter of appreciation to the Vice-Chancellor, AIOU and Chief Editor, Payami, Dr. Jamil Jalibi, a well-known scholar and Chairman, National Language Authority, Government of Pakistan, has said:

"I am highly pleased to see all the issues of Payami. Undoubtedly this Urdu magazine has attained an international status."

Through the publication of Payami, Allama Iqbal Open University is playing a gigantic role in promoting education and culture and thus enriching the national language of Pakistan. The translated version of thought-provoking articles written by
world-fame scholars, appears to be a treasure for the general readers and the students alike.

So far, AIOU has published more than a dozen issues of Payami while some of which are entitled as Cities Under Stress, The Quest for Utopia, A World of Music, Perceptions of Time, People at Play, Map and Map-Makers, children in Danger, Environment and Development and Challenge to Democracy.

It is hoped, this Urdu edition of Unesco Courier will get a good response from all concerned quarters.

Dr. Mahmudur Rahman
Director,
Daftari Urdu for
Federal Government
Officers, AIOU.
NEWS & VIEWS
by
IQBAL HUSSAIN
RESEARCH ASSOCIATE

Like the past years, the Allama Iqbal Open University generated several activities during the calendar year 1992. Activity abounds on the campus attracted dignitaries of international repute, scholars and experts from within the country and abroad. The University arranged for Seminars, Simposia and Workshops on different themes which attracted the interest of educationists and policy makers. A brief account of activities will specifically highlight what happen during the period under review.

Development of the University Campus/Premises

The execution of the Master Plan for the University’s main campus at Islamabad has been in rapid progress. As the Master Plan envisaged many building-like-premises for IET, Library, printing mailing and storage facilities, Faculty of Education, residences for the University staff have been constructed before 1992. During the period under review, two more faculty blocks for Faculty of Basic & Applied Sciences and Faculty of Social Sciences & Humanities have been constructed and brought into use. Consistant with the expansion and development of physical facilities for the University’s academic activities, construction of an other block has been commenced.

Giving equal attention to the eventual provi- sion of properly-planned and equipped permanent premises for the University’s Regional Offices after construction of Regional Campus at Lahore the designs for Mirpur Office have been, completed and construction work will nearly be initiated. Even the design work on the Regional Campus at Karachi has also commenced. In addition, the University has required plots of land for the Regional Offices at Gilgit, Dera Ismail Khan and Multan. Efforts are also under way to secure suitably located plots in other towns.
CONSULTANCIES

An an innovative institution, the University has always been ready to take advantage of the advice of consultants.

"The Overseas Development Administration (ODA) of Great Britain continuous to provide input of consultants across a wide range of subject and professional areas. Long-term consultants Mr. Alec Fleming and Mr. F.L Cook contained to work and help in Planning and Development of the University. Since 1983 to date, Mr. Alec Fleming has been providing service in many professional areas like, Distance Teaching Methods, course programme structure, Development of Regional Services etc, while F.L Cook from 1984 to date has been helping in the field of Educational Technology. Mrs. R.A. Mc Ginley was also here with work for the development of Department of English/English Language (KELT) from January 1987 to February 1992.

Apart from the above long term consultancies, the ODA (UK) and other foreign countries as Netherlands and Norway provide valuable short term consultancy services to the University. A brief account of the visits during the calendar year 1992 is given on next page.
<table>
<thead>
<tr>
<th>Date of Visit</th>
<th>Name of Consultant</th>
<th>Consultancy area/subject</th>
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<tr>
<td>13th February, 1992</td>
<td>Ms. An Haaland (NORAD)</td>
<td>Senior Tutor Workshop for Micro Teaching</td>
</tr>
<tr>
<td>15th April, 1992</td>
<td>Mrs. W.F.C Hellemann (Netherlands)</td>
<td>Project Proposal for bridging period of Women Matric Project</td>
</tr>
<tr>
<td>27th April, 1992</td>
<td>Ms. An Haaland (NORAD)</td>
<td>Finalization of Work Plan for Pilot Phase of PTOC</td>
</tr>
<tr>
<td>1st May, 1992</td>
<td>Miss J. Leese (ODA)</td>
<td>Consultancy inputs to IET Engineering</td>
</tr>
<tr>
<td>7th July, 1992</td>
<td>Ms J. Field (ODA)</td>
<td>AIOU project control</td>
</tr>
<tr>
<td>18th August, 1992</td>
<td>Mr. Roger Budd Charles Wallacetranst UK</td>
<td>Consultancy Services to Special Education Project for Visually Handicapped and Hearing Impaired</td>
</tr>
<tr>
<td>18th August, 1992</td>
<td>Mr. Peter Johnson Charles Wallacetranst UK</td>
<td>Consultancy Services to Special Education Project Visually Handicapped and Hearing Impaired</td>
</tr>
<tr>
<td>4th September, 1992</td>
<td>Mr. W. Watson (ODA)</td>
<td>Consultant in Print Management</td>
</tr>
<tr>
<td>4th September, 1992</td>
<td>Mr. R. Blance (ODA)</td>
<td>Consultant in Print Costing</td>
</tr>
<tr>
<td>13th September, 1992</td>
<td>Mrs. W.F.C Hellemann (Netherlands)</td>
<td>Project proposal for bridging period of Women Matric Project.</td>
</tr>
<tr>
<td>14th September, 1992</td>
<td>Mr. M. Davide (ODA)</td>
<td>Consultancy inputs regarding Financial Matter of the University.</td>
</tr>
<tr>
<td>20th September, 1992</td>
<td>Mr. A. Beattie (ODA)</td>
<td>Consultant in community health</td>
</tr>
</tbody>
</table>
10th October, 1992 To bradley IEC Cambridge (Netherlands)
Materials Development

12th October, 1992 Mr. H. Kulo (NORAD) Consultancy inputs Local and External

6th November, 1992 i) Mrs. M. Robson Consultant in Special Education Project for Hearing-Impairment
ii) Miss J. Garrett (ODA)

18th December, 1992 Ms. Ann Haaland (NORAD) Pretesting of PTOC course material/allied material, Tutorial.

25th December, 1992 Ms. Dalia Sinius Micro Teaching and Student Workshop-1

Four Senior UK Consultants at world’s second oldest Open University

The UK’s support to AIOU is now in its fourth phase and the project is managed on behalf of the ODA by the British council.

As part of the ODA’s support to AIOU 4 person linked consultancy, professor James Hough, Mr. Michael Davidge, Dr. David Smith and Mr. Michael Iles visited from the 25 February upto 20 March 1992. These consultancies formed the most comprehensive and detailed overview of crucial/various aspects of the management of AIOU since the joint Government of Pakistan/ODA Evaluation Mission carried out in February, 1989.

As part of these consultancies, the British Council and AIOU arranged for professor James Hough to give a public lecture on 8 March 1992 on Educational Cost Benefit Analysis. This is the management tool favoured by the World Bank and others for quantifying the costs benefits of important proposed changes to an educational system before they are implemented. Professor Hough clearly identified how over a persons career income rises markedly according to the highest level of education achieved by individuals, an average.
He also demonstrated that investment in education could have very high economic rates of return and particularly so in primary distance education. He ended with a plea for up to date and more comprehensive cost benefit analysis to be undertaken of Pakistan's education system.

Federal Minister of Education, Syed Pakhar Imam graced the occasion as Chief Guest. In his vote of thanks he spoke in detail and with convocation of the need for such studies to be undertaken by the educationists, economists from universities and think tanks. He wondered why the responsibility for such studies was often left to government and he firmly indicated that the new education policy would give some particular emphasis to women's education, a sector of particular importance it constraints an economic and social development were to be eased in Pakistan. Professor Hough's lecture was introduced by Mr. Les Philips, Director of the British Council in Pakistan and by Dr. W.M. Zaki, Vice-Chancellor of Allama Iqbal Open University.

Vice-Chancellor Bangladesh visited AIOU

Dr. M. Shamsher Ali, Vice-Chancellor, Bangladesh Open University, a nuclear physicist of international repute visited AIOU on 31st October, 1992. Besides familiarizing himself with the programmes of the University. Dr. Ali's visit was also aimed at working out a programme of collaboration between AIOU and Bangladesh Open University.

WORKSHOPS/SEMINARS

Workshop on Technical and Vocational Education

AIOU held an International Workshop on Technical and Vocational Education from April 11 to 15 in collaboration with the common wealth of learning Canada. Experts from Canada, UK, Australia, Newzealand, Sri-Lanka, India, Bangladesh and the host country Pakistan participated as resource persons: Mr. M. Ijaz-ul-
Haq, Federal Minister for Labour and Manpower was the Chief Guest at inaugural ceremony, while the Federal Minister for Education Syed Fakhar Imam chaired the concluding ceremony.

The aim of the workshop was to explore possibilities of imparting training in the field of Technical & Vocational Education through distance education to a wider range of population including women and working people.

The identification of programmes in area of Technical & Vocational Education and sharing the experiences and expertise in designing the institutional material for the courses was also aimed at the end.

Workshop of Arabic Teachers

More than a month-long workshop of Arabic Teachers Training Course has started at the AIOU Campus w.e.f. 1st August, 1992. Middle School Arabic Teachers from Azad Kashmir, NWFP and all the districts of Rawalpindi division participated in the workshop. Specialist Teachers from Saudi Arabia and Egypt provided training to the participants.

Closing Ceremony of Special Education Workshop

It should be remembered that handicapped persons are human beings like us and are entitled to enjoy equal opportunities and rights like normal children. They also need to live with dignity and respect. This was stated by Mr. Les Phillips, Director, British Council as Chief Guest in the closing ceremony of the National Workshop for the Teachers of visually impaired children in the Allama Iqbal Open University held on 30th August, 1992.

Mr. Phillips also remarked that education is Universally accepted as the most effective and powerful source of social change and a prime factor for overall development of a society. This recognition of the vital role of education does
not allow us to ignore the 10% of the total population suffering from various kinds of disabilities.

He said that the pioneer work of providing training to the teachers of handicapped children by Allama Iqbal Open University in collaboration with the Directorate General of Special Education is highly commendable.

Earlier in his Welcoming address, the Vice-Chancellor Dr. W.M. Zaki observed that there is not a single institution in the country which could provide training to the teachers for special education except Allama Iqbal Open University which is operating in the field with the collaboration of the Directorate General of Special Education and British Council. He hoped this valuable cooperation will continue. He also informed that AIOU is preparing programmes for the training of teachers for mentally retarded, physically disabled children as well as for hearing impaired children.

New PTOC Project

Allama Iqbal Open University, in collaboration with the Government of Norway (NORAD) conducted a week long first workshop on 15th of February, 1992 of Senior Tutors from all over Pakistan. The Vice-Chancellor, AIOU, W.M. Zaki was the chief guest at this occasion.

Under the project, AIOU will train 42000 in-service primary teachers from the whole country, be nominated by the provincial education departments.

The University has started the training programme with pilot phase of 500 male and female teachers belonging to urban and rural areas of Rawalpindi/Islamabad. Duration of the course is 6 months for every cycle and the project will run 5 cycles.

The project of New PTOC is part of Government programme of updating the knowledge and teaching
methodologies of inservice primary school teachers.

The AIOU PTC programme is also operative in the whole country. The study centres established for PTC programme will be utilized and further strengthened by providing library facilities.

STAFF DEVELOPMENT

Scholarships for Higher Studies:

- Mr. Abdul Rashid Malik, Research Associate proceeded for Ph.D (Economics) studies in China under cultural Exchange programme on 1st September 1992.

- Mr. Hamid Khan Niazi, Lecturer after selection for Ph.D studies under COT scholarship joined the university in UK from 25th September 1992.

- Mr. Abdul Hafeez, Assistant Professor proceeded for M.A (TESOL) to UK under KELT/TC scheme for one year w.e.f. 25/9/1992.

- Mr. Muhammad Yousaf Sheikh, Lecturer proceeded for higher studies (Ph.D) to Japan under cultural scholarship scheme on 30th September 1992.
### STAFF TRAINING ABROAD

ODA (UK) and some other countries i.e. Netherlands and Germany provided training to the following staff members of the university during 1992.

<table>
<thead>
<tr>
<th>Name and Designation</th>
<th>Subject/Facility</th>
<th>Country/Duration</th>
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<tbody>
<tr>
<td>Mr. Pervaiz Khawaja ARD, Hyderabad</td>
<td>Training attachment UKOU</td>
<td>U.K. (4 weeks)</td>
</tr>
<tr>
<td>Syed Abdul Siraj Lecturer</td>
<td>London University/ IEC course in Distance Education</td>
<td>U.K. (4 months)</td>
</tr>
<tr>
<td>Mr. Mahmood Awan Assistant Professor</td>
<td>London University/ IEC Course in Distance Education</td>
<td>U.K. (4 months)</td>
</tr>
<tr>
<td>Mrs. Arifa Selman Course Production Coordinator</td>
<td>Training in Course Production &amp; Academic Planning UKOU</td>
<td>U.K. (3 weeks)</td>
</tr>
<tr>
<td>Ms. Riffat Ayesha Project Coordinator</td>
<td>Women Matric Project for Rural Females through distance learning</td>
<td>Netherland &amp; U.K. (3 weeks)</td>
</tr>
<tr>
<td>Dr. M. Aslam Asghar Dean, Basic &amp; Applied Sciences</td>
<td>UK Training attachment</td>
<td>U.K. (12 days)</td>
</tr>
<tr>
<td>Dr. M.S.K Shibli Dean, Social Sciences</td>
<td>UK Training Attachment</td>
<td>U.K. (12 days)</td>
</tr>
<tr>
<td>Dr. M. Athar Khan Dean, Education and Humanities</td>
<td>UK Training Attachment</td>
<td>U.K. (12 days)</td>
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<tr>
<td>Name and Designation</td>
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<tr>
<td>Mr. Mukhtar Hussain Talpur, Producer</td>
<td>Regional Workshop on Distance Education</td>
<td>Kuala Lumpur, Malaysia (3 weeks)</td>
</tr>
<tr>
<td>Mr. Asjad Hussain Bukhari Asstt. Librarian</td>
<td>Training session for Librarian working in Islamic Libraries</td>
<td>Damascus, Syria (3 weeks)</td>
</tr>
<tr>
<td>Name and Designation</td>
<td>Subject</td>
<td>Place and Duration of Training</td>
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<tr>
<td>Dr. (Miss) Qudsia Riffat</td>
<td>Commonwealth of Learning Round Table Conference on Teacher Education</td>
<td>Vancouver Canada (one week)</td>
</tr>
<tr>
<td>Mrs. Razia Abbas Director, BUESP</td>
<td>1992-Launching Conference for Distance Education Johanneshburg South Africa (3 weeks)</td>
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<tr>
<td>Mr. Muhammad Din Asstt. Professor</td>
<td>Dialogue of partners and International Workshop and devoted book Programme</td>
<td>Baltimore More U.S.A. (3 days)</td>
</tr>
</tbody>
</table>

Participation of Staff Members in National Seminars/Workshops/Conferences/Symposia/Course Training:

<table>
<thead>
<tr>
<th>Name and Designation</th>
<th>Subject</th>
<th>Place and Duration of Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Altaf Hussain Memon Research Assistant</td>
<td>Course on Micro-Computer Programming</td>
<td>Islamabad (one month)</td>
</tr>
<tr>
<td>Mr. Hanif-Ud-Din Accountant</td>
<td>Course on Micro-Computer Programming</td>
<td>Islamabad (One month)</td>
</tr>
<tr>
<td>Mrs. Rashida Pervez Asstt. Professor</td>
<td>Course on Micro-Computer Programming</td>
<td>Islamabad (One month)</td>
</tr>
<tr>
<td>Mr. Waqar Ahmed Sheikh Selection Grade Assistant</td>
<td>In-Service Training Course for maintenance/repair of Micro-Computers conducted by UGC</td>
<td>Faisalabad (One week)</td>
</tr>
<tr>
<td>Dr. M.A. Bukhari Professor</td>
<td>Course on computer Orientation for Middle Management</td>
<td>Islamabad (One week)</td>
</tr>
</tbody>
</table>
Mr. Nisar Ahmed Aziz, Lecturer
Course on Computer Orientation for Middle Management
Islamabad (One week)

Mr. Saeed Ahmed Awan, Asstt. Director
Course on Computer Orientation for Middle Management
Islamabad (One week)

Dr. Ghulam Rasul Ch., RD, Lahore
National Youth Leadership Workshop
Lahore (3 days)

Syed Hussain Shah DRD, Peshawar
Sports Organization Training Course DPEs
Peshawar (2 weeks)

Mr. Ghulam Haider Bhurgri Deputy Director
Computer Orientation course for senior Management
Islamabad (One week)

Dr. Parveen Liaqat Associate Professor
National Workshop on the role of Women in Higher Education
Islamabad (3 days)

Mrs. Arif Selman C.P.C.
Course on "Database for Micro Computers"
Islamabad (One week)

Mrs. Itrat B. Hassan
Course on Spread-Sheet Analysis
Islamabad (One week)

Asstt. System Programme

Syed Abdul Siraj Lecturer
First National Conference on Education of Mass Communication in Pakistan
Karachi (3 days)
Appointment of Vice-Chancellor

On the retirement of Dr. W.M. Zaki, Dr. Shaukat Ali Siddiqui, a Senior Professor has assumed the office of the Vice-Chancellor of the University on 21st October, 1992 in addition to his own duties as Professor of Education in pursuance of the Ministry of Education's Notification No.F.5-8/92-UE-1, dated 20th October, 1992.

Retirements

The following academic staff members were retired from AIOU services during the year 1992. Their meritorious services were highly recognised by the academics and scholars in and outside the University.

1. Dr. W.M. Zaki, Vice-Chancellor, Allama Iqbal Open University, retired from services in October, 1992.


3. Professor Dr. I.N. Hassan, Dean Faculty of Basic Sciences, AIOU, retired on 21st June, 1992.

4. Professor Dr. Abdul Qayyum, Director, Planning and Development, AIOU, retired by the end of year 1992.

FLOWERS EXHIBITION PRIZE FOR AIOU

The Department of Agricultural Sciences, as usual, won the first position with many prizes including three cycles for its horticultural staff in Spring Flowers Exhibition held under the auspices of Islamabad Horticultural Society in Rose and Jasmine Garden in March 1992.

The said department once again won the first prize (in small organization) and many prizes including cycles and cash for the horticultural staff in chrysanthemum Exhibition held under the
Islamabad Horticultural Society in November 1992. The Vice-Chancellor Dr. W.M. Zaki and the Head of Agricultural Sciences Department, Dr. S.A. Shirazi congratulated the horticultural staff and hoped that the position will be maintained in future too.
# DATA BANK

**STATISTICAL GLIMPSES OF ALLAMA IQBAL OPEN UNIVERSITY**

by

Waqar Ahmed Siddiqi

## PROGRAMME/LEVEL-WISE AND GENDER-WIDE COURSE ENROLMENT WITH RESPECTIVE NUMBER OF COURSES DURING THE YEAR 1992

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Programme/Level</th>
<th>No. of Courses</th>
<th>Semester</th>
<th>Spring 1992</th>
<th>Autumn 1992</th>
<th>Total (1992)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>1</td>
<td>Functional (Non-Credit) Courses</td>
<td>3</td>
<td>111</td>
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<td>-</td>
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<tr>
<td>2</td>
<td>Women's Education (Matric)</td>
<td>19</td>
<td>-</td>
<td>2401</td>
<td>2401</td>
<td>-</td>
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<td>Intermediate</td>
<td>44</td>
<td>11177</td>
<td>8240</td>
<td>19417</td>
<td>8744</td>
</tr>
<tr>
<td>4</td>
<td>B.A/B.B.A/B.Com</td>
<td>63</td>
<td>14517</td>
<td>4777</td>
<td>19294</td>
<td>11871</td>
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<tr>
<td>5</td>
<td>M.A (EPM)</td>
<td>10</td>
<td>344</td>
<td>122</td>
<td>466</td>
<td>370</td>
</tr>
<tr>
<td>6</td>
<td>M.Sc (Pak. Studies)</td>
<td>14</td>
<td>48</td>
<td>21</td>
<td>69</td>
<td>1303</td>
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<tr>
<td>7</td>
<td>M.B.A.</td>
<td>17</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>1857</td>
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<tr>
<td>8</td>
<td>Teaching of English as Foreign Language (TEFL)</td>
<td>4</td>
<td>282</td>
<td>157</td>
<td>439</td>
<td>207</td>
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<tr>
<td>9</td>
<td>M.Ed (Diploma in Special Education)</td>
<td>10</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td>183</td>
</tr>
<tr>
<td>10</td>
<td>B.Ed</td>
<td>11</td>
<td>29594</td>
<td>9225</td>
<td>38819</td>
<td>12829</td>
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<tr>
<td>11</td>
<td>PTC</td>
<td>12</td>
<td>6908</td>
<td>5015</td>
<td>14003</td>
<td>6541</td>
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<tr>
<td>12</td>
<td>CT</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3687</td>
</tr>
<tr>
<td>13</td>
<td>ATTC</td>
<td>1</td>
<td>436</td>
<td>90</td>
<td>526</td>
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<tr>
<td>14</td>
<td>M.Phil Iqbaliyat</td>
<td>4</td>
<td>66</td>
<td>36</td>
<td>102</td>
<td>149</td>
</tr>
<tr>
<td>15</td>
<td>M.Phil Islamiat</td>
<td>4</td>
<td>98</td>
<td>23</td>
<td>121</td>
<td>158</td>
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<tr>
<td>16</td>
<td>M.Phil Urdu</td>
<td>4</td>
<td>72</td>
<td>13</td>
<td>85</td>
<td>72</td>
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<tr>
<td>17</td>
<td>M.Phil Education</td>
<td>6</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>46</td>
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<tr>
<td>18</td>
<td>Diploma programmes in Computer Applications</td>
<td>8</td>
<td>4867</td>
<td>336</td>
<td>5203</td>
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<td>Total</td>
<td></td>
<td>243</td>
<td>70816</td>
<td>30579</td>
<td>101395</td>
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</tbody>
</table>
### Programme/Level-Wise and Semester-Wise Number of Books Printed During the Year 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Functional (Non-Credit Courses)</td>
<td>-</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>2.</td>
<td>Women's Education (Matric)</td>
<td>-</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>3.</td>
<td>Intermediate</td>
<td>25288</td>
<td>45605</td>
<td>70893</td>
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<td>4.</td>
<td>B.A/B.B.A/B.Com</td>
<td>33166</td>
<td>18091</td>
<td>51257</td>
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<tr>
<td>6.</td>
<td>Teaching of English as Foreign Language (TEFL)</td>
<td>13944</td>
<td>-</td>
<td>13944</td>
</tr>
<tr>
<td>7.</td>
<td>B.Ed</td>
<td>108907</td>
<td>10425</td>
<td>119332</td>
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<td>8.</td>
<td>PTC</td>
<td>-</td>
<td>21835</td>
<td>21835</td>
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<td>9.</td>
<td>CT</td>
<td>-</td>
<td>1996</td>
<td>1996</td>
</tr>
<tr>
<td>10.</td>
<td>M.Phil Iqbaliat</td>
<td>-</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>11.</td>
<td>M.Phil Islamiat</td>
<td>-</td>
<td>500</td>
<td>500</td>
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<td></td>
<td><strong>Total:</strong></td>
<td><strong>181305</strong></td>
<td><strong>102951</strong></td>
<td><strong>284256</strong></td>
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</tbody>
</table>

### Province-Wise Statistics of Tutors and Study Centres for Spring 1992 Semester

<table>
<thead>
<tr>
<th>Province</th>
<th>Tutors</th>
<th>Study Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.W.F.P.</td>
<td>173</td>
<td>19</td>
</tr>
<tr>
<td>Baluchistan</td>
<td>42</td>
<td>13</td>
</tr>
<tr>
<td>Sindh</td>
<td>273</td>
<td>59</td>
</tr>
<tr>
<td>Punjab</td>
<td>1005</td>
<td>73</td>
</tr>
<tr>
<td>Federal Area (Islamabad)</td>
<td>294</td>
<td>6</td>
</tr>
<tr>
<td>Azad Jammu &amp; Kashmir</td>
<td>54</td>
<td>8</td>
</tr>
<tr>
<td>Northern Areas</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1876</strong></td>
<td><strong>190</strong></td>
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</table>
RADIO/T.V. PROGRAMMES PRESENTED IN SPRING AND AUTUMN 1992 SEMESTER

<table>
<thead>
<tr>
<th></th>
<th>SPRING</th>
<th>AUTUMN</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>PROGRAMMES</td>
<td>1992</td>
<td>1992</td>
<td></td>
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<tr>
<td>Radio</td>
<td>153</td>
<td>139</td>
<td>292</td>
</tr>
<tr>
<td>T.V.</td>
<td>19</td>
<td>30</td>
<td>49</td>
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</table>

RADIO/T.V PRODUCTION AND AUDIO/VIDEO CASSETTES SALE DURING THE YEAR 1992

<table>
<thead>
<tr>
<th>TITLES</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TV Programmes Production</td>
<td>28</td>
</tr>
<tr>
<td>Total Radio Broadcast programmes</td>
<td>56</td>
</tr>
<tr>
<td>Total Radio Non-Broadcast programmes</td>
<td>9</td>
</tr>
<tr>
<td>Total Sale audio cassettes</td>
<td>728</td>
</tr>
<tr>
<td>Total Sale video cassettes</td>
<td>172</td>
</tr>
</tbody>
</table>

STAFFING POSITION AS ON 31/12/1992

<table>
<thead>
<tr>
<th></th>
<th>Academic staff</th>
<th>Administrative &amp; other staff</th>
<th>Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp; above</td>
<td>90</td>
<td>102</td>
<td>29</td>
<td>221</td>
</tr>
<tr>
<td>&amp; below</td>
<td>-</td>
<td>631</td>
<td>193</td>
<td>824</td>
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<tr>
<td>Total:</td>
<td>90</td>
<td>733</td>
<td>222</td>
<td>1045</td>
</tr>
</tbody>
</table>
Reader's Views

This is to record our sincere thanks for sending us a complimentary copy of the "Pakistan Journal of Distance Education", which is very useful to us. As desired by you, we are publicising you invitation for writing article on Open Universities.

Hoping that we shall not be deprived of your help in building up of good International Library in the interest of our Professors, students, Library members and all interested readers use. Once again we than you very much for your cooperation.

Iran

Dr. Mahmud Macizacch
Chancellor-Tafi-Open University

The receipt of your letter along with a copy of Pakistan Journal of Distance Education (PJDE) are gratefully acknowledged. We have found that the information and data provided in it would of considerable value to students and researchers. It has been passed on to the main library for the advantage of the faculty members and students.

Peshawar (Pakistan)

Prof. S. Mussarat Shah
Dean, Faculty of Engineering

I acknowledge with thanks the receipt of Journal of Distance Education. It is quite useful not only for me but for our Teachers and students. This copy is also being sent to the library, Shah Abdul Latif University, Khairpur for general reading.

Khairpur (Pakistan)

Prof. Abdul Hameed Memon
Vice Chancellor