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EDITORIAL

DISTANCE EDUCATION AND ACCOUNTABILITY

Education in the Third World has reached a new watershed. The system has been under serious attack for the past several decades. Both the quantity and quality of turnout 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 developing societies has also assumed high proportions.

It is within such a context that open learning or 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. The system of distance education is still in the exploratory stage and the magnitude, complexity and pressure of problems in the formal system of education has led more and more developing countries to turn to distance education. The multilevel needs of students, young and old alike, are mostly attracted to this system in search of improving their qualifications, acquiring professional skills and continuing their education from which they had to drop-out due to economic and cultural factors.

The openness of the system and its in-built multipurpose character opens very promising chances of success since the system has no restrictions or strings attached to it. However this openness increases the measure of accountability of such systems as compared to formal systems. Open education means open books and open radio and television programmes: open not only to the students, but to other professionals and the public at large. This means a far greater level of accountability on the part of course writers, programme producers and even tutors. In fact, the whole institution is accountable in a direct and open way. The process of self-discovery offered to students, applies
also to institutions themselves, therefore, for them too, open education is an exploration of new ideas and possibilities, but in a most public way. All this underlines the need for continuous institutional research. First, so that an institution can keep itself, its students, its professional associates and the public informed about the effectiveness of its offerings and methodologies. Secondly, so that it can more readily respond to needs and activate changes where these are seen to be necessary.

Dr. Ahmed Noor Khan
Editor
THE DEVELOPMENT OF DISTANCE TEACHING:
AN HISTORICAL PERSPECTIVE
BY
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1. Introduction: What is distance teaching?

The phrases 'distance teaching' and 'distance education', in English, are phrases of quite recent origin. When my own organisation, the International Extension College, came into being at the beginning of 1971 these phrases did not exist. We talked about 'correspondence education' to describe a method of teaching through printed materials, sent by post to students who studied them and sent back exercises to their tutors who in turn marked and returned them by post. We also talked about 'educational broadcasting', the use of radio or TV to teach both school and adult students. And we were just about to become familiar with the phrase 'open learning' which was being used to describe the way in which students of the new Open University were going to study, stressing the fact that they, the students, would mainly study when and where they chose. We ourselves used the term 'three-way teaching' to describe our own interests, stressing the fact that we were concerned with the comparatively recent combination of correspondence courses, broadcasting and occasional face-to-face tuition. Over the next few years, as international interest in these educational approaches grew, 'distance education' became the more common possibly because it provided a direct translation of the French 'tele-enseignement' and the German 'Fernstudium'. To my mind, a satisfactory definition of distance teaching - although no such phrases or their definitions are totally satisfactory—is any form of organised educational experience in which teaching and learning take place with the teachers at-a-distance from the learners for most of the time.

2. The historical development of distance teaching

The three elements, correspondence, broadcasting and occasional face-to-face tuition, which are the most common elements in what we have just defined as distance teaching, had developed almost entirely separately from each other

*An edited version of a lecture delivered at Allama Iqbal Open University during a U.K./ODA consultancy.
until about twenty years ago. We will look at their separate histories first and then at their three-way marriage in recent years.

2.a Correspondence education

As long as human beings have been able to read and write they have sent useful - sometimes educational - information to each other by means of letters; i.e. they have corresponded with each other (in some countries the phrase used for correspondence education is 'education by letter'). In the Christian tradition one of the earliest and most significant efforts at religious education were the letters of St.Paul. The Islamic tradition records that the Prophet himself passed on much of his teaching to followers who lived at-a-distance from him by letter. The modern story of organised correspondence education, however, begins in the middle decades of the nineteenth century.

As with so many of man's inventions, moreover, it began in several countries almost simultaneously. In Sweden, first Meuller in the 1830s, and then, more significantly, Hans Hermods in 1840 began to provide continuing education to students who had left their schools and moved to places where they could not continue their studies, by sending them lessons by letter and inviting them to do exercises at home and to send them to be marked by way of reply. In England, Isaac Pitman, at about the same time, followed a similar pattern. Both Pitman and Hermods started by teaching book-keeping and other commercial subjects and their efforts led to the creation of major educational institutions which still exist to this day. They also established a pattern of private correspondence colleges which predominated in Europe over a century and have done much throughout the world to spread the reputation of correspondence education, including its less attractive aspects.

In the USA the late nineteenth century saw the growth of university extension services departments, following the Morrill Act of 1873. This led, from the 1890s, to a number of American universities offering public correspondence education. One of the major stimulants to the development of this method of teaching in Sweden and the United States was the need to reach students
living in isolated places, far from the traditional schools or colleges offering the courses they wanted. This problem was even more dramatically experienced in Australia and New Zealand, countries with thinly scattered populations, spread over large areas. In the second decade of the twentieth century both these countries turned to correspondence education, in the public sector, to help to provide education to remote students. Their use of correspondence education has developed progressively over the decades until most states in Australia have public correspondence programmes at all levels of education and New Zealand is now well known both for its academic and its vocational and technical correspondence schools.

After the revolution in Russia in 1917 one of the top priorities of the revolutionary government was to increase education, from literacy to university levels, and to make it available across Soviet society. There, also, correspondence education was rapidly harnessed to the task of expansion. During the 1920s, correspondence courses were introduced into university degree studies and became widely used in both academic and technical courses. Similar developments also took place at lower levels and by 1963 nearly 2.4 million people in the USSR were studying through correspondence and evening tuition.

The urgent drive for educational expansion led to similar results in many third world countries soon after they achieved their independence. In India, during the 1950s, many universities opened correspondence course departments both at pre-degree and at degree level. Similarly in Africa many newly independent governments during the 1960s and 1970s used correspondence colleges to provide, first, remedial education at secondary level for teachers and civil servants who had been unable to obtain secondary qualifications when younger, and later, opportunities for primary school leavers who could not find places in secondary schools to pursue secondary-level courses.

Finally, in 1962 and 1959 respectively, two institutions set out to use correspondence education to provide vocational training at elementary level to farmers and to mechanics. In the Ivory Coast the Institute

Thus, in just over a century, correspondence education had come to be used in many continents, in various levels and subjects, for widely different categories of students.

2.5 Educational broadcasting

The first successful radio transmission of the human voice was in 1901. Eighteen years later, in 1919 the first educational broadcasts were transmitted in Wisconsin in the USA. From then on, throughout the decades of the 1920s and 1930s several countries, particularly in the UK, the USA, Australia and New Zealand carried out various experiments using radio for both schools broadcasts and adult education programmes. The former, aimed mainly directly into the classroom became an established pattern of educational enrichment and have spread into most countries in the world. The spread of the latter has been more tentative. In the 1920s and 1930s the BBC put as much emphasis on adult education as on school broadcasting, suggesting the idea of a "wireless university" in the 1920s and carrying out various experiments of radio series aimed at adult study-groups during the 1930s. From the second world war onwards, however, their priority was reversed and BBC Further Education Radio became a poor relation of their schools radio.

The idea of listening-groups, however (or study-groups who learned by listening to radio programmes and discussing them) spread to Canada and in 1939 the Canadian Broadcasting Corporation launched its Radio Farm Forum programme, in which a regular weekly radio programme was broadcast for organised groups of farmers who were also sent supporting printed material and were contacted by the agricultural extension service. This experiment proved an extremely effective and economic way of providing practical education to scattered farming communities. It lasted in Canada for nearly 25 years,
but equally important, it served as a model for similar developments in many parts of the third world.

In 1947 an Indian experiment in radio rural forums was launched, which, after a few years, attracted the attention and support of UNESCO. The programme survives to this day, and has spread throughout the sub-continent. Similarly, in Ghana, a radio rural forum programme was launched in 1964 and spread through most of Anglophone Africa during the following few years. In Francophone Africa in the late 1960s a slightly different model of radio clubs was developed, with greater emphasis on feedback and the collection of information from the villages for incorporation into the programmes.

At the same time as the Indian Rural Forums experiment was launched, in 1947, a variant form was developed in Colombia also modelled on the Canadian forums, which was to spread during the next twenty-five years through Latin America and has become known as the Radiophonic Schools. The Colombian pattern has been aimed also at rural village farmers, but with a greater emphasis on the formal content of education (reading, writing and arithmetic) and on the development of a carefully structured curriculum for adults which in some countries has received recognition as an equivalent curriculum to that followed in primary schools.

A further derivative of the farm forum model has been the Radio Study Group (or Learning Group or Listening Group) campaigns launched in Tanzania between 1969 and 1975 in which short radio series are used as the focus for a short intensive and highly organised campaign in which as many government and local field workers as possible are enlisted to set up and support rural study groups. In Tanzania these have succeeded in reaching huge numbers of rural adults (2.5 to 3 million in the biggest campaigns). Similar campaigns were run in Botswana in 1973 and 1975 and, more recently, a series of co-operative education campaigns have used the same approach in Zambia, between 1982 and 1985.

Finally, in the 1970s and 1980s a new use of radio for direct schools broadcasting has been developed. This puts great emphasis on the interactive use of radio, in
which the programmes stimulate and demand immediate responses from the pupils. The pattern was first developed in Nicaragua in the Radio Mathematics project between 1974 and 1980 aimed at primary children; it has been further developed in Kenya with the Radio Language Arts Project at the same level, and a further experiment is being prepared, in Lesotho, on primary school science.

In much the same way television, almost as soon as it becomes a common medium of broadcasting in any country tends to be used for education. Its use for schools broadcasting in England, rest of Europe and America spread rapidly during the 1950s and 1960s. In fact many educational reformers in Britain and America saw it as the great hope for the equalisation of educational standards: put the best teachers on television, and pupils everywhere, in the remotest village or the most deprived ghetto, will have the chance to learn from them. As a result of this untried enthusiasm, a series of large-scale and expensive TV schools projects were launched in which the TV was supposed to take over the major teaching role, leaving the classroom teachers as supporters and tutors. The first of these was in Hagerstown, USA, in 1957. This was followed by the American Samoa project in 1964 and, before the results of the latter (which failed largely because of teacher opposition) were analysed similar schemes were launched through international aid consortia in El Salvador in 1969, in Niger in 1968 and in Cote d’Ivoire in 1980. While these have been able to demonstrate the pedagogical potential of TV, they have also proved to be extremely expensive both to establish and to run. As international assistance has dried up, they have in many cases been abandoned.

2.c Face-to-face tuition

This element is, by its nature, not distance teaching. However, as most distance teaching systems include some element of face-to-face tuition it is necessary to include a brief reference to the development of the various kinds of occasional face-to-face tuition which are most regularly incorporated into distance teaching systems. Apart from the traditional formal schools classrooms into which schools radio and television has
been broadcast, most patterns of face-to-face tuition are derived from various part-time adult education traditions. In particular in America and Britain the weekly evening class pattern has developed since the middle of the 19th century as a major form of adult education. Similarly short residential courses, varying from weekend courses, to one or two week vacation courses have become common in Britain in the period since the second world war, with special adult education residential centres set up by universities and local education authorities around the country. Finally, from Scandinavia, has come the pattern of longer (1 or 2 terms, or even 1 year) residential courses for adults, sometimes as part of a further education programme, sometimes offering remedial education, sometimes opening opportunities for mature-age entry to higher education. All three of these patterns have been taken up and further developed in various third world countries as part of their drive for adult education.

2.d Three-way teaching

As we have seen these three forms of adult education i.e., correspondence, broadcasting and face to face classes, developed largely independently of each other up until 1960. The major exceptions to this were the New Zealand experiment in combined radio and correspondence launched in 1937, the Australian Schools of the Air programme which combined correspondence schools with two-way radio, started in the 1920s and a later Rhodesian service. Also, in non-formal education, the Radio Farm Forum movement of the 1930s through to the 1970s which has already been described, combined radio, print and face-to-face. By 1960, however, there were movements in both the USA and Britain to attempt to harness the new media, especially television, to correspondence courses and occasional face to face in order to produce a more comprehensive, effective and far reaching part time education system. In the early 1960s the University of Wisconsin Extension Service in Madison USA, launched a programme of combined correspondence courses, supported by radio and TV.

At about the same time, in Britain, in 1963 the National Extension College was launched as a "pilot
project for an open university" which, for the first
time in Britain set out to combine correspondence
courses and radio and TV with occasional face-to-face
tuition. This helped significantly to stimulate the
movement which led to the establishment of the Open
University in Britain in 1969 which rapidly became the
biggest and probably internationally the best-known
distance-teaching institution. The Open University
model has been taken up in many countries, for example:

The Free University of Iran set up in 1973.
The Everyman University in Israel set up in 1974.
The Allama Iqbal Open University in Pakistan, set
up in 1974.
The Universidad Estatal a Distancia in Costa Rica,
set up in 1977.
The Universidad Nacional Abreita in Venzuela, set
up in 1977.
The Central Broadcasting and Television University
in China, set up in 1978.
The Sukhothai Thammathirat Open University in Thai-
land, set up in 1978.

At the time of writing, it seems as though a new wave
of Open Universities is beginning, in India, in south-
ern Africa and in several other parts of the world.

Parallel to the establishment of these Open Universi-
ties has been a spread of non-university distance
teaching institutions in the third world several of
them set up with the assistance of the International
Extension College, which itself grew out of the
National Extension College in 1971, and all attempting
to find the most appropriate multi-media combinations
to suit their needs and circumstances. Some examples
of these are:

The University of Nairobi Correspondence and Mass
Media Unit set up in 1968.
The Tanzanian National Correspondence Institution
set up in 1970.
The Mauritius College of the Air set up in 1972.
The Botswana Extension College set up in 1974.
The Lesotho Distance Teaching Centre set up in
1974.
The University of Lagos Correspondence and Open
Studies Unit set up in 1975.
The Namibian Extension Unit set up in Zambia in 1980.
The Sudan Extension Unit set up in 1984.

Thus, after decades of separate development, the various traditions of correspondence education, educational broadcasting and occasional face-to-face tuition came together in the 1960s and led to a huge international expansion making the 1970s and 1980s, the decades of distance teaching.

3. Distance teaching: multi-media for multi-purpose education

The examples quoted in the previous section show the variety of purposes to which distance teaching has been put at its various stages of development. In this section I will attempt to expand on this variety by picking out and exemplifying five major categories of distance-teaching programmes.

3.a University-level distance teaching

Adults seeking higher education on a part-time basis have become possibly the second largest audience for distance education. There are three major modes of provision. One is the separate, independent large-scale Open University model which we have already explored. The second, more common until the 1970s when the UKOU was set up, is the setting up of a distance teaching department within an existing university, offering parallel courses at-a-distance to those offered internally to full-time students and using the same staff, syllabuses and facilities. Important examples are the University of New England in Armidale, Australia, the University of Zambia, the Correspondence Departments of Indian universities and the COSIT of the University of Lagos, Nigeria. The third model is more common both in the USA and the USSR. Here many students take some of the university courses at-a-distance and then come into residence at the university for the rest of their programme.

3.b Secondary level distance teaching

As we have seen, there are two main streams of dis-
tance teaching at secondary school level. The first is the in-school broadcasting and in some cases correspondence programmes used as integral parts of the school curriculum, either as enrichers or expanders of the school programme. An interesting recent example of the latter is the use of correspondence courses as a way of allowing schools to offer a wider range of GCE 'A' level courses in British schools than economic cuts and shrinking numbers of students would otherwise allow. The second, and probably more important trend, is to use distance teaching to provide substitute secondary-level opportunities to out-of-school youth and adults. This has a very large following in many parts of the world among adults who were unable to complete school when they were young, and increasingly it is being used for the expanding number of young primary school leavers in the third world who cannot get places in the restricted number of secondary schools in their countries. The use of correspondence courses to offer adults a second chance to take educational qualifications they missed earlier has been the most common form of distance teaching. Most of the European and American commercial correspondence colleges fit into this category as do many of the more recent public correspondence institutions in Africa. Two of the most outstanding examples of distance teaching being used as a secondary school substitute for young adult school leavers are the Malawi Correspondence College and the Zambian National Correspondence College, both of which have set up a network of supervised study groups in order to provide more structure and support for their young students.

3.3 Teacher education at-a-distance

In most parts of the third world the demand for and commitment to the expansion of schools has led to a desperate shortage of trained teachers at all levels. Distance teaching techniques have been used widely and successfully to help to respond to this demand. In many countries its use has been predominantly to upgrade existing untrained or under-trained teachers. In Nigeria, Colombia and Pakistan university-level programmes have been used to upgrade secondary school teachers. Examples of primary school teacher in-
service upgrading programmes are found in Pakistan, Kenya, Uganda, Botswana and Swaziland. More recently distance teaching has been used to provide initial training to apprentice teachers recruited and put straight into schools as a way of enabling the spread of schools to take place immediately without waiting for teachers to receive pre-service training in college in the traditional way. This pattern has been used, for example, among Palestinian refugees in the Middle East in the UNRWA-UNESCO programme, and with Somalia refugees by the Institute of In-Service Teacher Training. It has also been used by Tanzania as a way of moving rapidly towards universal primary education.

3.4 Non-formal and basic adult education at-a-distance

Non-formal and basic education for adults in many parts of the world is aimed at an audience predominantly made up of illiterates. Distance teaching techniques which rely mainly on the printed word, as do most of the programmes listed in 3.a to 3.c, are of limited use in such circumstances. Therefore radio and study-group techniques have assumed leading roles in non-formal education. Radio farm forums, radiophonic schools and radio study-group campaigns have all been described above, and are important illustrations of this trend. Very recently, at the Allama Iqbal Open University of Pakistan a new and interesting variant on this model has been developed. There an experimental Functional Education Project for Rural Areas has used a combination of audio-cassettes, printed, but non-verbal, flipcharts and organised and supervised study groups to provide courses in basic practical functional education with evident success. In particular it has been able to use this combination with all-illiterate groups (including illiterate group-leaders). Elsewhere, notably in West Africa by INADES and in Venezuela by INCE, programmes of agricultural and mechanical education respectively have been built round simple and highly illustrated correspondence texts. These have been used either with individual students who have a basic though low level of literacy or through literate group-leaders.
3. e Distance teaching in the education of refugees

A final category of students of distance teaching courses crosses all these four levels of education, but is worth noting because of the relevance of the techniques to highly mobile and unstable communities. The number of refugees in the world, particularly in the third world, has grown rapidly in the last decade. Their access to educational opportunities is usually even more restricted than that of their fellows either in their country of origin or in their host communities. Distance education is being used to train refugee teachers in the middle East and in Somalia. It is being used systematically to provide secondary education among Namibian refugees in Angola and Zambia, South African refugees in Tanzania and Botswana, and Ethiopian and Eritrean refugees in the Sudan. Programmes of basic education for adult refugees are also being planned by the Namibian Extension Unit and the Sudan Extension Unit.

4. The future

As we have seen there has been a phenomenal growth in distance teaching projects worldwide during the last twenty years. There seem to be three main reasons for this growth:

- distance teaching offers an economic use of sparse educational resources to provide large numbers of students with chances to continue their education.

- distance teaching can reach students, where they are, however remote that may be, and therefore allows students to continue earning while learning.

- distance teaching is therefore, potentially, a great equaliser of educational opportunity.

These qualities make it highly likely that the expansion will continue. I believe such expansion is likely to take four main forms:

- refresher and in-service courses to professionals and technicians as a means of keeping them abreast of rapidly changing skills and technologies.
- initial and up-grading courses for apprentices in various vocations and professions, allowing people to be trained in the midst of practical experience rather than detached from it.

- second-chance courses at secondary and tertiary level for adults who never had the opportunity to take such courses earlier in their lives or who dropped out from such opportunities if they did; such courses will recognise that universal opportunity to education at any level is not enough: motivations and attitudes and even aptitudes change, hence the need for continuing education.

- basic and remedial education courses through which adults, particularly those who have had little or no formal education as children will be given access to it in later life.
INTRODUCTION

The recommendation to use Rekkedal's (1973) study as the starting point placed the project in the broader context of the problem of student drop-out (Woodley and Parlett 1983), which has generated a great deal of discussion and argument among distance educators. Typical of the interest in the low completion rates of many distance education students are relatively recent studies by Kember (1981), Shale (1982), Scales (1984), Roberts (1984), Thompson (1984) and the recent re-publication (in 1984) of the aforementioned Rekkedal study. A review of this latter study revealed the major conclusion that it was "quite likely that drop-out rates can be lowered by reducing turn-around time" (p. 250). In Rekkedal's study, turn-around time was defined as "the time from the moment the student mails in the home work assignment for a study unit until it is received by the student with the tutor's corrections and comments" (p. 232).

During the course of Rekkedal's study, turn-round time was manipulated experimentally so that one group of students, classified as the "Quick Group" had a median turn-round time of 5, 6 days, while the other group (the "Delayed Group") experienced a turn-round, which had as its median 8.3 days. The overall range of turn-around times in the experiment was between 2 days and "10 days or more". Obviously the nature of the assignments involved is a critical factor in determining turn-around time. Rekkedal's study was undertaken within the context of a basic course in mathematics, where one would assume that marking time may not be excessive. Further, the course was aimed at students with "very poor training" or those students who "feel that they are so unsure of their knowledge that they wish to repeat basic materials" (p 238). The extent to which such findings can be readily generalized to other distance education contexts (for example, those for undergraduate students in an accredited degree course) is somewhat problematic. Indeed this concern for the lack of generalizability of much of the research in distance education was one of the reasons for undertaking the current project. It seems likely that relat-

1. Refer at the end of the article.
ively weak students in an area like basic mathematics would perhaps be more dependent on a rapid turn-around time than more mature students studying a range of other disciplines who had experienced a successful high school education. Indeed it might be somewhat surprising were Rekkedal's results to be generally applicable to distance education given the apparently limited range of turn-around times evident in his study.

Without denigrating the value of Rekkedal's study, part of the problem of generalizing such research to other settings is the fact that the study is generally devoid of any theoretical underpinning. Several potentially useful models of student attrition have been developed since the time that Rekkedal's study was undertaken. Recent reviews of the literature (Terenzini and Pascarella, 1980; Tinto, 1975) have agreed on several generalizations emanating from research on students' attrition. First, it is clear that no single factor explains attrition in high education. Second, it is clear that the research on attrition would be better conducted using a theoretical model rather than a descriptive approach. Several theoretical models including those of Spady (1971), Tinto (1975) and Beam (1980) have been developed and have subsequently generated empirical work. The present study was based on Tinto's model which conceptualizes attrition as a product of the student's characteristics, abilities and goal commitments interacting with the institutional environment. This interaction is usually described in terms of the academic and social integration of students into the academic environment and social sub-structure of the institution. In short, integration produces students' commitment to the institution and a strengthened commitment to attaining his or her educational goals, whereas a lack of integration leads to withdrawal from the institution.

These theoretical notions of academic and social integration have obviously been inspired by concerns for traditional on-campus students rather than for those enrolled in distance education. In reviewing the limits of theory and practice in student attrition, Tinto (1982) defined academic and social interaction primarily in terms of contacts (both formal and informal) between faculty and students. He subsequently recommended that "institutions should encourage those contacts whenever and wherever possible". (Tinto 1982 p 697). This emphasis on optimizing social and academic
interactions between students and faculty appears to be worthy of investigation in the distance education arena.

Whereas the social and academic integration of on-campus students seems likely to be enhanced by regular attendance at lectures, tutorials and regular contacts with academic staff and other students, the integration of off-campus students can be seen to be dependent on the model of distance education used by a particular institution. Such models vary from those that are perhaps purely self-instructional entailing minimal interpersonal interaction with students to those institutions which attempt to maximize interpersonal interactions by either employing local tutors (who meet regularly with students) or by running weekend schools on a regular basis with attendance for students being compulsory. Other institutions make extensive use of telephone tutorials residential schools and the like. The extent of social and academic integration with an institution then seems likely to be largely dependent upon the model of distance education employed. In most distance education systems, such interactions are often optional, whereas it is compulsory for students to interact with faculty via work submitted for assessment. Thus, the number of assignments and the timing of assignments throughout a period of study could well be common significant aspects of integration when viewed from a distance education perspective.

In the present study, the notion of integration of students was investigated in light of the number and timing of required contact between the faculty and students. These required contacts were investigated in terms of the number of assignments submitted, the turn-round time on these assignments and the "feedback interval" between assignments, which was defined as the elapsed time (in days) between the receipt of feedback on consecutive assignments. Such required contacts were therefore examined in terms of the pace of interaction (turn-round time) and the density of feedback (feedback interval). Additionally, attempts were made to monitor the number of contacts between the student and the institution during the course of study. From Tinto's (1975, 1982) perspective, it could be argued that students who were exposed to regular, rapid contacts during their distance education experience might well be expected to exhibit persistence in their studies, compared to those whose contacts with the institution were perhaps somewhat sporadic and
rather slow.

This point of view must be regarded as somewhat truncated, since no allowance is made for the quality of interaction in determining the social and academic integration of students. It is acknowledged that the quality of interpersonal contact (and its interaction with various student characteristics c.f. Thompsonon, 1984) will have a significant impact on social and academic integration. At the same time however, any research project must be sensitive to logistical and practical constraints. The valid and reliable measurement of quality of interaction in the context of a cross-cultural multi-institutional study is at the present time impossible. Similarly the complete explanation of social and academic integration would inevitably demand a focus on learner characteristics such as level of previous education, age, sex, motivation, time available for study and so on.

Many distance education institutions, however, are not in a position to screen prospective students thoroughly and tend to operationalize admission policies based largely on a minimal acceptable level of previous education, rather than on other potentially important personal characteristics such as living and employment conditions which are inevitably outside the control of the institution. Add to this the tendency of many distance education institutions to endorse some form of open access policy for mature age students who may not have the required standard of previous education, and it becomes evident that a focus primarily on institutionally controllable variables is a defensible pragmatic approach to research. In short given the complexity of conducting a cross-cultural multi-institutional study. It seems reasonable to adopt an orientation towards research in which learners are regarded as relatively fixed inputs into the system, and improvement in the persistence of students is seen to be a function largely of institutionally manipulable variables.

The present project therefore concentrated on those aspects of special and academic integration which are primarily, under relatively ready institutional control, namely: turn-round time and feedback interval. Further data on these variables is often collected by distance education systems in the day-to-day monitoring of the efficiency of their operations thus facilitating data collection for the project. An effort was also made to collect other readily available data
on basic student characteristics, namely age and sex. An attempt to collect data on additional contacts was also made since such data are important from Tinto's (1975, 1982) theoretical perspective: though it was anticipated that not all participating institutions would be able to supply such information.

The manageability of the project was enhanced by focusing on the issue of student persistence at the level of a unit of study as Rekkedal (1973) had done. The scope of the empirical study was further delimited by the elimination of non-starters from the sample. The elimination of this group of students from the project meant that students included in the project were those who had sufficient motivation to forward at least one assignment during their course of study and excluded those who enrolled but did not appear to participate further in their studies. Given the well documented phenomenon of the first year drop-out an effort was made to focus on first year students in their initial contact with the distance education system where the drop-out phenomenon is accentuated. To further delimit contextual variables data were collected at the level of undergraduate studies, leading to a formally accredited award at the Bachelor degree level. As mentioned previously, however, such parameters are probably less significant than the model of distance education used by participating institutions in teaching the unit of study selected for perusal. A brief description of the major contextual variables including reference to the model of distance education, of each of the participating institutions follows:

ALLAMA IQBAL OPEN UNIVERSITY (AIOU)

The jurisdiction of AIOU extends to the whole of Pakistan: In effect, its campus is a national one. It provides facilities for the educational uplift of the masses including those who are unable to attend conventional institutions by bringing it to their door-steps. Its programmes offer a wide choice of courses at a variety of levels for the general public as well as for professional people.

The AIOU aims at providing them with an opportunity for further education through organizing the following learning activities: systematic study of correspondence texts by students at their homes; regular listening and viewing facilities for radio and television lessons at study centres;
contact with tutors at study centres and written assignments, final written examinations and practical work with special home experiment kits, etc.

Students in the AIOU sample were those studying the unit "Pakistan Studies", an elective in the Bachelor of Arts degree. While data were supplied on 1411 students, data on only 674 students were coded and subsequently analysed due to resource constraints. Such a sample was regarded as sufficiently representative of AIOU's operations to warrant its valid inclusion in the project. Of the 664 students for whom data on age were available, the majority were in the range of 20-35 years, 530 being male and 134 female. 10 students did not mention sex.

Darling Downs Institute of Advanced Education (DDIAE)

Since its foundation in 1967, the Institute has developed as a comprehensive multi-level, regional college of advanced education offering courses in Engineering, Education, Applied Science, Arts and Business Studies. Courses are offered which lead to awards of Associate Diploma, Diploma, Bachelor's Degree and Graduate Diploma. While it emphasises its commitment to the community of the Darling Downs, the Institute enrolls its students from all areas of Queensland and beyond. Through its extensive distance education courses, the Institute has offered opportunities for higher education to many persons whose personal or vocational circumstances do not permit them to enrol as on-campus students. Since 1982 the proportion of the Institute's total student body (approx 6,000) studying at a distance has been just over 50%.

The Institute operates a dual-mode teaching system with academic staff members being responsible for teaching the same unit of study to both off-campus and on-campus students. In the distance education mode, the teaching staff make extensive use of telephone tutorials, which link the main campus with several of the Institute's 15 study centres located throughout Queensland. These study centres are supported by 20 regional liaison officers, who play an important role in facilitating communication between students and the Institute. Unlike some institutions, which appoint tutorial staff to fulfil an academic role in these regional centres, the regional liaison officers act as administrative support officers, assisting with the organisation
of telephone tutorials, conducting evaluative telephone surveys, enhancing communication and maintaining a booking sheet for the Institute's computer-managed learning (CML) system.

The CML system is based on the use of microcomputers in the Institute's study centre (Barker, White and Taylor, 1985). The unit of study selected for scrutiny in the present project was a foundation unit. Introduction to law in the Bachelor of Business degree. This unit is one of over 40 units which makes use of the CML system. During the semester students are required to complete 7 CML tests on contract law. In using the microcomputer, students receive immediate diagnostic feedback on their performance on the tests with turn-round time being effectively reduced to a few seconds. Those students who cannot gain easy access to the microcomputers are required to submit computer-marked answer sheets, which are processed on campus, with students ultimately receiving diagnostic feedback in the form of a letter printed by the computer. Institutional response-time for such letters is usually no more than 2 days. Students enrolled in this unit may therefore experience somewhat different instructional treatments, which may be accentuated by their choice to attend an optional 5 days residential school held at the main campus during the mid-semester break for on-campus students. Apart from these variations in treatment, students receive a self-instructional package specially prepared by a unit team consisting of a subject matter specialist, an instructional designer and an education officer. The package for the law unit in question consists of a study book, a book of readings, a computer-managed learning booklet, and an audiotape containing an introduction to that unit as well as answers to the self-assessment questions which are embedded in the study book.

The students enrolled in the unit were primarily resident in Queensland. Most of the 241 students who embarked on the unit were male (165), with 76 female completing the total. The mean age of these student was 29.3 years, though it is worth noting that 39 students were aged 21 years or under, while 24 students were aged 40 years or over. The youngest student was 17 years and the eldest 51 years.

THE OPEN LEARNING INSTITUTE OF BRITISH COLUMBIA (OLI)

Since its establishment in 1978, OLI has become a well-developed organisation providing programmes in adult basic
education in career-technical-vocational areas, in continuing education and leading to undergraeduate degrees in arts and sciences. OLI's distance education system caters for the needs of British Columbia's population of approximately two and a half million spread over an area of almost 370,000 square miles. In a province of this size, OLI had to face the difficulty of the limited extent to which face-to-face contact between tutors and students would be viable. Tutors were therefore provided with an Institute telephone which facilitated contact with students, who were able to make contact without charge. Additionally, the Institute established an advisory service, whereby advice is provided to students in various parts of the province on a variety of matters, including programme planning, registration, financial aid and problems (not specifically academic) related to their interaction with the Institute.

From a teaching-learning perspective, the instructional packages forwarded to students are as self-contained as possible, and endorse principles of self-instruction. Nevertheless an important point of contact between students and tutors is written comments on submitted assignments. Additionally, in cooperation with Simon Fraser University, OLI devised a scheme for providing a reasonably extensive library service to distance students. The students in the sample (drawn from a range of undergraduate courses) therefore had access to a useful range of support systems. Due to the extensive decentralised nature of these services, however, it was not logistically feasible to monitor the number of additional contacts students had with officers of the Institute. Similarly, no data were available on the age or sex of students included in the sample.

TASMANIAN STATE INSTITUTE OF TECHNOLOGY (TSIT)

Formerly established in 1968 as the Tasmanian College of Advanced Education, TSIT is a multi-disciplinary college located in Launceston, with study centres at Burnie, Hobart and Devonport. The external studies programme covers an extensive range of Associate Diploma, Bachelor's Degree and graduate Diploma courses, including those in Education, Applied Science, Business Studies, Computing and Arts. While it concentrates its efforts on Tasmanian residents, under special circumstances, exceptions are made for students living in other Australian states.

The Institute operates a dual mode teaching system with
academic staff teaching the unit to both on-campus and external students. The three study centres are permanently staffed by full-time academic staff who conduct regular tutorials of two hours' duration every four weeks throughout the year. These tutorials are, however, optional. Some students depend solely on the self-instructional study guides and audio-cassette tapes that constitute the core of the instructional package which is mailed to them. Written feedback on submitted assignments is a significant aspect of the distance education experience of the student.

Students in the TSIT sample were those studying the unit "Introduction to Accounting", a foundation unit of the Bachelor of Business degree. Of the 131 students, 82 were male and 49 female. The mean age of these students was 28 years; of these, 24 were aged 21 years or younger, while 11 were aged 40 year or more. The youngest students was 18 years and the oldest 50 years. Complete data on turn round time, feedback interval and additional contacts were available for the TSIT sample.

UNIVERSITY OF THE SOUTH PACIFIC (USP)

Since its establishment in 1968 (Interim Council 1967), USP has developed a sophisticated support system for its extension students scattered over more than one million square kilometers of the South Pacific Ocean. USP has well established extension centres in the following nine countries: Cook Islands, Fiji Islands, Kiribati, Niue, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa. The staff at each centre normally consists of a centre director, a lecturer, a secretary and a satellite operator. In Nauru, however, the Director of Education assists in administering extension study courses. The region served by USP has an estimated 60 cultures with about 300 languages. English, the language of instruction, is normally the second or even the third language for most of the students.

By using various means of communication, including printed study materials and audiotapes sent through the mail, and a radio satellite network for two-way communication between centres, USP has been able to bridge the gap between distance students and the institution. Regular written communication between the institution and many students is nevertheless logistically restricted by the great distances involved. Thus the submission of regular assignments cannot
constitute a major aspect of many courses, which must be primarily based on self-instructional principles. The range of courses offered is extensive, including introductory and foundation programmes, vocationally oriented programmes and degree programmes. The subjects in the USP sample were drawn from the Bachelor of Education programme, specifically from the unit: "Human Development". Due to obvious logistical problems, it was not possible to gather data on additional contact between students and the institution. Nor was it possible to collect data on the age and sex of the students. Further, the limited number of assignment submissions meant that the treatment of the feedback interval data was somewhat restricted.

COLLECTION AND TREATMENT OF DATA

As well as these important inter-institutional variations, attention must be drawn to the point that students do not experience equivalent distance education treatment even when enrolled in the same unit of study at a particular institution. Certainly, staff of most institutions would no doubt endorse a philosophy based on all students receiving equitable treatment. Nevertheless, due to the vagaries of mail systems, geographical locations and the demands made on academic staff marking large numbers of assignments, it is inevitable that students receive different treatments, especially in regard to turn-round time and feedback interval.

Furthermore, students will not make the same use of the system. For instance, some students will prefer to work independently without making additional demands for support on the institution, and will submit assignments and attend examinations without making further requests for assistance by letter or telephone. In this sense their distance education experience could be quite different from those of students who seek regular additional contacts with institutional personnel.

The extent to which students experience different distance education treatment in terms of turn-round time, feedback interval and additional contacts may or may not have a significant influence on the persistence of students. It seems reasonable to argue that there may be a number of highly motivated students with high need-achievement, who are likely to persevere with their studies irrespective of their treatment by the institution. Such students will be likely to complete the basic task requirements of a unit of
study. On the other hand it seems that turn-round time and feedback interval could well be significant aspects of the distance education experience for those students, who may not be so motivated or confident in their ability to succeed, as in the case of Rekkedal's (1973) study.

In summary, efforts were made to examine the relationships between persistence at the unit level and factors associated with social and academic integration (turn-round time, feedback interval and the number of additional contacts between student and institution beyond those demanded by the submission of assignments). The influence of the age and sex of students was also examined. Analysis of data from each separate institution was undertaken in an effort to investigate potential common trends emanating from each institution relative to a particular model of distance education and in a specific context. Should any common trend emerge across contexts, then it would seem likely that such a trend could be acknowledged as an empirically derived, generalizable principle upon which distance education could be based.

Following communication with the institutional project leaders, during the latter months of 1983, data were collected primarily during first semester of 1984. The two data collection formats for the project (Appendix A) were designed to focus on required contacts related to written assignments (Form A) and additional contacts (Form B) respectively. Form A focused on the dates of assignments receipt and despatch (institutional response time) and the typical mail service response time for students in various geographical locations, enabling computation of turn-round time, which was defined as the elapsed time (in days) from mailing an assignment to receiving the corrected assignment. This focus on the pattern of assignment receipt and despatch also allowed for computation of the feedback interval, which was defined as the elapsed time (in days) between the receipt of feedback on consecutive written assignments. Form B focused on additional contacts which simply described the number of contacts between the student and the institution (whether student initiated or institution initiated) which occurred in addition to those demanded by assessment requirements in a given period. Apart from these three aforementioned independent variables, the dependent variable under scrutiny was persistence, measured simply in terms of whether a student completed all the required assignments for the selected unit of study.
All participating institutions provided data on turn-round time and feedback interval respectively. As anticipated, two of the participating institutions (Open Learning Institute and University of the South Pacific) were unable to collect data on additional contacts due to their styles of operations. The standard data collection formats were returned to the project coordinators, who completed the data analysis phase of the project using the computing resources of the Darling Down Institute of Advanced Education. Using the SPSS software package (Nie et al, 1975) descriptive statistics were computed for each of the four major variables. Relationships between these variables were investigated in terms of cross-tabulated data and an appropriate test of statistical significance (chi-square). An overview of descriptive statistics at the institutional level is presented prior to the presentation of results from a multi-institutional perspective.

Results

An overview of the major descriptive statistics for each of the five participating institutions is presented in Tables 1 to 5 respectively.

<table>
<thead>
<tr>
<th>INSTITUTION: Allama Iqbal Open University (AIOU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE: Bachelor of Arts</td>
</tr>
<tr>
<td>UNIT OF STUDY: Pakistan Studies</td>
</tr>
<tr>
<td>NUMBER OF STUDENTS: 674 COMPLETION RATE: 90.7%</td>
</tr>
<tr>
<td>NUMBER OF ASSIGNMENTS TO BE SUBMITTED: 4</td>
</tr>
<tr>
<td>AVERAGE TURN-ROUND TIME: 7.9 days (8 days)</td>
</tr>
<tr>
<td>AVERAGE FEEDBACK INTERVAL: 26.2 days (26 days)</td>
</tr>
<tr>
<td>AVERAGE NUMBER OF ADDITIONAL CONTACTS: 5.6</td>
</tr>
</tbody>
</table>

Table 1: Overview of descriptive statistics for the Allama Iqbal Open University

<table>
<thead>
<tr>
<th>INSTITUTION: Darling Downs Institute of Advanced Education (DDIAE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE: Bachelor of Business</td>
</tr>
<tr>
<td>UNIT OF STUDY: Introduction to Law</td>
</tr>
<tr>
<td>NUMBER OF STUDENTS: 241 COMPLETION RATE: 53.5%</td>
</tr>
<tr>
<td>NUMBER OF ASSIGNMENTS TO BE SUBMITTED: 10</td>
</tr>
<tr>
<td>AVERAGE TURN-ROUND TIME: 13.7 days (14 days)</td>
</tr>
<tr>
<td>AVERAGE FEEDBACK INTERVAL: 14.1 days (14 days)</td>
</tr>
<tr>
<td>AVERAGE NUMBER OF ADDITIONAL CONTACTS: 8.8</td>
</tr>
</tbody>
</table>

Table 2: Overview of descriptive statistics for the Darling Downs Institute of Advanced Education
### Table 3: Overview of descriptive statistics for the Open Learning Institute

<table>
<thead>
<tr>
<th>INSTITUTION:</th>
<th>Open Learning Institute (OLI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE:</td>
<td>Undergraduate Level</td>
</tr>
<tr>
<td>UNIT OF STUDY:</td>
<td>Variety of Courses</td>
</tr>
<tr>
<td>NUMBER OF STUDENTS:</td>
<td>202</td>
</tr>
<tr>
<td>COMPLETION RATE:</td>
<td>32.2%</td>
</tr>
<tr>
<td>NUMBER OF ASSIGNMENTS TO BE SUBMITTED:</td>
<td>5</td>
</tr>
<tr>
<td>AVERAGE TURN-ROUND TIME:</td>
<td>13.0 days (13 days)</td>
</tr>
<tr>
<td>AVERAGE FEEDBACK INTERVAL:</td>
<td>24.6 days (25 days)</td>
</tr>
<tr>
<td>AVERAGE NUMBER OF ADDITIONAL CONTRACTS:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Table 4: Overview of descriptive statistics for the Tasmanian State Institute of Technology

<table>
<thead>
<tr>
<th>INSTITUTION:</th>
<th>Tasmanian State Institute of Technology (TSIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE:</td>
<td>Bachelor of Business</td>
</tr>
<tr>
<td>UNIT OF STUDY:</td>
<td>Introduction to Accounting</td>
</tr>
<tr>
<td>NUMBER OF STUDENTS:</td>
<td>131</td>
</tr>
<tr>
<td>COMPLETION RATE:</td>
<td>45.8%</td>
</tr>
<tr>
<td>NUMBER OF ASSIGNMENTS TO BE SUBMITTED:</td>
<td>5</td>
</tr>
<tr>
<td>AVERAGE TURN-ROUND TIME:</td>
<td>25.4 days (25 days)</td>
</tr>
<tr>
<td>AVERAGE FEEDBACK INTERVAL:</td>
<td>24.3 days (24 days)</td>
</tr>
<tr>
<td>AVERAGE NUMBER OF ADDITIONAL CONTRACTS:</td>
<td>11.8</td>
</tr>
</tbody>
</table>

### Table 5: Overview of descriptive statistics for the University of the South Pacific

<table>
<thead>
<tr>
<th>INSTITUTION:</th>
<th>University of the South Pacific (USP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE:</td>
<td>Bachelor of Education</td>
</tr>
<tr>
<td>UNIT OF STUDY:</td>
<td>Human Development</td>
</tr>
<tr>
<td>NUMBER OF STUDENTS:</td>
<td>144</td>
</tr>
<tr>
<td>COMPLETION RATE:</td>
<td>43.8%</td>
</tr>
<tr>
<td>NUMBER OF ASSIGNMENTS TO BE SUBMITTED:</td>
<td>2</td>
</tr>
<tr>
<td>AVERAGE TURN-ROUND TIME:</td>
<td>24.1 days (24 days)</td>
</tr>
<tr>
<td>AVERAGE FEEDBACK INTERVAL:</td>
<td>30.4 days (30 days)</td>
</tr>
<tr>
<td>AVERAGE NUMBER OF ADDITIONAL CONTRACTS:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

An overview of descriptive statistics from a multi-institutional perspective on each of the three major independent variables (turn-round time, feedback interval, additional contacts) and the dependent variable (persistence) is presented in Tables 6, 7, 8 and 9 respectively.
<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>NUMBER OF ASSIGNMENTS SET</th>
<th>AVERAGE TURN-ROUND TIME</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MEAN</td>
<td>MODE</td>
</tr>
<tr>
<td>AIOU</td>
<td>4</td>
<td>7.9</td>
<td>1.0</td>
</tr>
<tr>
<td>DDIAE</td>
<td>10</td>
<td>13.7</td>
<td>20.0</td>
</tr>
<tr>
<td>OLI</td>
<td>5</td>
<td>13.0</td>
<td>11.0</td>
</tr>
<tr>
<td>TSIT</td>
<td>5</td>
<td>25.4</td>
<td>21.0</td>
</tr>
<tr>
<td>USP</td>
<td>2</td>
<td>24.1</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Table 6: Average turn-round time from a multi-institutional perspective.

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>NUMBER OF ASSIGNMENTS SET</th>
<th>AVERAGE FEEDBACK INTERVAL</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MEAN</td>
<td>MODE</td>
</tr>
<tr>
<td>AIOU</td>
<td>4</td>
<td>26.2</td>
<td>27.3</td>
</tr>
<tr>
<td>DDIAE</td>
<td>10</td>
<td>14.1</td>
<td>8.2</td>
</tr>
<tr>
<td>OLI</td>
<td>5</td>
<td>24.6</td>
<td>19.5</td>
</tr>
<tr>
<td>TCAE</td>
<td>5</td>
<td>24.3</td>
<td>21.0</td>
</tr>
<tr>
<td>USP</td>
<td>2</td>
<td>30.4</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Table 7: Average feedback interval from a multi-institutional perspective.

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>NUMBER OF ASSIGNMENTS SET</th>
<th>ADDITIONAL CONTACTS</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MEAN</td>
<td>MODE</td>
</tr>
<tr>
<td>AIOU</td>
<td>4</td>
<td>5.6</td>
<td>0.0</td>
</tr>
<tr>
<td>DDIAE</td>
<td>10</td>
<td>8.8</td>
<td>7.0</td>
</tr>
<tr>
<td>OLI</td>
<td>5</td>
<td>NO DATA AVAILABLE</td>
<td></td>
</tr>
<tr>
<td>TSIT</td>
<td>5</td>
<td>11.8</td>
<td>13.0</td>
</tr>
<tr>
<td>USP</td>
<td>2</td>
<td>NO DATA AVAILABLE</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Average number of additional contacts from a multi-institutional perspective.
Table 9: Completion rate from a multi-institutional perspective.

Relationships between the dependent variable (persistence) and each of the three major independent variable (turn-round time, feedback interval and additional contacts) from a multi-institutional perspective is presented in Table 10, 11 and 12 respectively. The cross-tabulated data are presented in 2x2 tables with persistence represented in terms of incomplete student vis-a-vis complete students and the independent variables represented as high or low in terms of a median split. It should be noted that data were not available for all students on all variables, thus in certain circumstances the number of cases included in the following tables are somewhat less than the number of cases used to compute the descriptive statistics.

Table 10: Relationship between persistence and turn-round time from a multi-institutional perspective.
### Table 11: Relationship between persistence and feedback interval from a multi-institutional perspective.

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>PERSISTENCE</th>
<th>FEEDBACK INTERVAL</th>
<th>( x^2 )</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIOU</td>
<td>Incomplete</td>
<td>39</td>
<td>21</td>
<td>4.94</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>281</td>
<td>282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DDIAE</td>
<td>Incomplete</td>
<td>26</td>
<td>59</td>
<td>53.83</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>61</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OLI</td>
<td>Incomplete</td>
<td>73</td>
<td>59</td>
<td>1.50</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>26</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSIT</td>
<td>Incomplete</td>
<td>34</td>
<td>37</td>
<td>9.99</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>45</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USP</td>
<td>Incomplete</td>
<td>Insufficient data for meaningful computation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>Insufficient data for meaningful computation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 12: Relationship between persistence and additional contacts from a multi-institutional perspective.

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>PERSISTENCE</th>
<th>ADDITIONAL CONTACTS</th>
<th>( x^2 )</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIOU</td>
<td>Incomplete</td>
<td>43</td>
<td>20</td>
<td>7.96</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>303</td>
<td>308</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DDIAE</td>
<td>Incomplete</td>
<td>68</td>
<td>19</td>
<td>11.38</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>72</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OLI</td>
<td>Incomplete</td>
<td>NO DATA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td>NO DATA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSIT</td>
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**Discussion**

The results relevant to the examination of the relationship between turn-round time and persistence (Table 10) demons-
trate no consistent trend even though the DDIAE data are consistent with Rekkedal's (1973) conclusion that low turn-round time is likely to increase persistence \( (X^2 = 31.64 \text{ df } = 1. \ p = 0.000) \). Of the 82 students who failed to complete requirements, 55 of these experienced high turn-round time whereas of the 110 students who succeeded in completing requirements only 29 experienced a high turn-round, while 81 students had low turn-round time. This pattern of results could be reasonably interpreted as pointing to the potential efficacy of turn-round time in influencing persistence. In the other four institutional contexts, however, there is no such indication of a significant statistical relationship, although the data for TSIT were tending to be compatible with those of DDIAE, with 44 of the 70 students who failed to complete requirements experiencing high turn-round time, which could well have had a deleterious effect on student persistence. In the three other institutional contexts, however, no such patterns emerged: rather, the results could be reasonably interpreted as being indicative of no salient relationship between turn-round time and persistence.

A similar pattern of inter-institutional contextual variations was evident in the consideration of the relationship between persistence and feedback interval (Table 11). The DDIAE data are consonant with Tinto's (1975) model which would tend to support the notion that regular feedback is likely to enhance persistence \( (X^2 = 53.83. \text{ df } = 1. \ p = 0.000) \). Of the 85 students who failed to complete requirements, 59 experienced relatively delayed feedback (high feedback intervals) whereas of the 68 students who fulfilled requirements only 7 experienced delayed feedback while 61 experienced relatively rapid feedback. A similar pattern of results was evident in the TSIT data \( (X^2 = 9.99. \text{ df } = 1. \ p = .002) \) with 45 of the 60 successful students experiencing relatively rapid feedback. The pattern of results for the remaining two institutions for which sufficient data were available, AIOU and OLI respectively, was not generally supportive of any significant relationship between persistence and feedback interval. Thus, results from the latter two institutions were not compatible with Tinto's (1975) rationale.

The data available on the relationship between persistence and number of additional contacts need to be interpreted with some caution, since students who do not complete requirements may drop-out sufficiently early in the semester.
to limit contacts with the institution compared to those students who remain active throughout the total period of the course. The fact that results for all institutions (Table 12) appear to be consistent with Tinto's (1975) rationale (that increased contacts would likely enhance integration and subsequent persistence) should therefore be treated with some caution. The aforementioned body of students who might be expected to persist largely irrespective of additional contacts with the institution (other than those demanded) could also complicate the interpretation of these results. In the case of AIOU and DDIAE, the relatively small number of high contact students, who eventually failed to persist, however, is generally supportive of Tinto's perspective. Further analysis of data revealed no clear pattern with regard to whether these contacts were student initiated or institution-initiated. The actual number of contacts was apparently more important than the source of initiation.

Conclusion

The most obvious conclusion that can be drawn from the project is that one should be extremely cautious in generalizing the results of research studies across institutional contexts. There was enough variation outcome to suggest that the specific institutional contacts in which a study is undertaken has a major influence on relationships between the variables under investigation. While some results were consistent with the conclusions drawn from Rekkedal's (1973) early experimental study on turn-round time and while some results were consonant with inferences drawn from the extrapolation of Tinto's (1975) model to the distance education arena there was certainly no consistent empirical evidence that could suggest a generalizable principle upon which distance education systems could be based.

The importance of the immediate institutional context in action-research projects is not surprising, however, since each institution inevitably responds to a variety of local influences and comes up with a practical operational system, dependent on its own unique circumstances. More often than not, certain over-riding practical, economic, social or political factors tend to determine to a significant extent the basic features of the model of distance education used by a particular institution. The use of pre-active meta-analysis (Taylor and White, 1983) to generate cross-institutional comparisons, however, has the advantage of highlight-
ing such contextual influences, and while no consistent pattern of results emerged, some practical issues, apparently worthy of consideration, did emerge from the project.

With regard to the relationship between turn-round time and persistence, the support for Rekkedal's (1973) findings in the DDIAE context suggested that some students may have been disadvantaged by relatively tardy return of assignments. A component of this difference in turn-round time among students is the geographical location of students, with mail-service response times varying between 2 and 6 days in the case of DDIAE students. This range is no doubt greater in the case of institutions like USP, where students are spread over a vast geographical area. Despite this inequitable distance education experience of students, there does not appear to be any effort to sort assignments by geographical region so that turn-round time might be optimised for students disadvantaged by living long distances from the institution. Some form of colour coding of assignment covers, could minimize the need for additional resources to support this initiative, were it to be pursued in the interests of providing equitable distance education experiences for all students.

An alternative approach would be for institutions to provide markers in regional centres so that turn-round time could be minimized for all students. If a component of this marking could be handled by micro-computers in regional study centres (as in the case of DDIAE) such minimisation of turn-round time could be facilitated with potentially positive results for all students. The use of micro-computers in this way is obviously somewhat dependent on the type of subject - matter and the instructional objectives of the unit of study. Further, the use of such technology also has major resource implications, and is ultimately dependent on the feasibility of the support systems available in particular contexts.

The DDIAE experience of using micro-computer based, computer managed learning initiatives to increase contacts with students and to provide students with performance-related feedback was no doubt important in generating the support for Tinto's (1975) model, which highlighted the likely significance of generating regular interaction to enhance the integration of students with the institution. The TSIT data were supportive of this trend also and in this context such interaction was entirely interpersonal. The DDIAE experience,
however, suggests that integration of students could well be supported by machine-mediated (computer-based) interaction as well as by interpersonal contacts. It should be noted that rational use of a computer-managed learning system can provide for relatively personal, diagnostic-prescriptive feedback, which can amplify productive student institution contacts without being too dependent on the availability of teaching staff. Once again, the feasibility of such initiatives has major resource implications, which will be relative to particular contextual constraints. The apparent importance of the interval between contacts related to assignment submission and return appears to be worthy of further investigation. As mentioned previously, however, such research should try to incorporate measures of the quality, as well as the quantity, of feedback.

Such a consideration is also relevant to the examination of the relationship between persistence of students and additional contacts over and above those demanded to meet the requirements associated with completing a unit of study. While some caution is required in drawing conclusions from the results of this aspect of the project, one obvious practical consideration is whether institutions should monitor the number of additional contacts with students, and subsequently make an effort to contact those students who are not seeking additional advice in case they are in danger of dropping out. Overall, though, this approach may not make the best use of available resources, since it was evident from the data that a significant proportion of students managed to meet requirements without seeking much additional contact with the institution. Such an outcome highlights the need for an approach to research based on considerations of aptitude-treatment-interaction.

While the present project, largely for logistical reasons, concentrated on variables that were manipulable by the institution, and tended to regard students as relatively fixed inputs, there is potentially more value in endeavouring to classify students in some way and to subsequently evaluate their reaction to a particular distance education treatment. This type of research, commonly referred to as aptitude-treatment-interaction (Cronbach and Snow, 1977), is based on the persuasive rationale that instructional treatments are differentially effective due to variations in learner aptitude. It seems likely, however, that such an approach would be more likely to be productive at the level of a single institution rather than in a cross-cultural multi-institu-
tional setting, since aptitude-treatment-interaction findings tend to be problematic in that they are difficult to measure and relatively unstable (Sherman, 1985).

In retrospect, it seems reasonable to argue that a variety of approaches to research in distance education is desirable. There is clearly some value in conducting cross-cultural multi-institutional studies, if only to highlight the caution required in generalizing the results of research studies across institutional contexts. Such studies, however, tend to be somewhat determined by the practical constraints imposed by conducting research across widely different systems and settings - especially when such research is conducted at a distance. It appears that more control over empirical investigations could obviously be engendered by allocating limited resources to the conduct of research at the level of a single institution. Such research seems likely to provide information that is primarily useful to the institution concerned, rather than to be readily generalizable across settings. Nevertheless, both types of research appear to be capable of crystallising practical issues which confront decision makers working in distance education settings. Both types of research, however, must be conducted within the complex context of ongoing distance education systems, usually operating under significant resource constraints. From this perspective, it seems unlikely that decisions about distance education will have the benefit of a clearly established empirical rational for some years to come. Decision makers will have to continue to allocate resources on the basis of less than complete information. There is no doubt, however, that benefits can accrue from contacts among distance education institutions facing similar problems under different contextual constraints. Indeed, although the logistics of conducting a cross-cultural multi-institutional research project at a distance tended to somewhat limit the potential value of the outcomes, there can be no doubting the value of increased inter-institutional contact and associated insights into the complexity of the distance education arenas that emanated from the project. Such outcomes are entirely consistent with the objectives of the International Council for Distance Education.
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I was last here in 1976 and in 1977 and it is good to meet again many friends remembered from that time. In those days you were building your regional services and you had seven Regional Directors in post. I visited all of them in their regional centres and we held a residential seminar here in Islamabad to which Dr. Zaman, then Vice-Chancellor, and other senior colleagues contributed. Since then the Regional Services have grown, as has the University as a whole. It has many more students and more courses; it has a new audio-visual centre; it has a computer; it has more regional centres and more tutors. Things are changing - not the personal qualities of my freinds; they are the same - but the jobs they do and the framework within which you and they work is changing.

It is change about which I shall speak and, in particular, about change in Universities. I think that the subject will interest you because you will each have an opinion about change. Broadly speaking you will view change as a good thing if you are trying to initiate it and something of a threat if you are on the receiving end. If you are the instigator - who is trying to develop some new proposal or some new way of doing things - you may find it difficult to understand why some other fellows do not immediately fall in with your idea: and if you are the 'other fellows' you will not find it easy to see why things could not remain as they are.

I should like to begin by looking at an organization or a situation where things remain as they are. All may not be well with the organization as it stands or with the situation as it stands, but no change is taking place.

* An address given at Allama Iqbal Open University during an ODA consultancy in November, 1985 on Regional Management and student counselling services.
The Driving Forces for change may be external, as for instance:

- new technologies in agriculture or industry;
- changing expectations of people in relation to work, education, well-being;
- communications revolution (Islamabad is only a radio switch away from the remotest village);
- influences from other countries;
- government policies.

We have to try to assess their effect upon the organization. Will they have a strong and fairly immediate effect, a medium or low effect or on effect at all? Listing the driving forces and putting weights to them aids the analysis. One does not want change for change's sake or to have too much too soon or to change the wrong thing or to merely tinker when the pressures demand more fundamental changes.

The forces may be internal to the organization and we could find examples in:

- a lively and adaptable work force;
- good research departments;
- particular areas of expertise (e.g. distance teaching);
- good contacts with other institutions and a good nationwide network;
- opportunities for market-testing new products.

This latter group may be called 'Assets for Change' and most organizations can usually identify many such assets that they can build upon and use in changing for the better.

The Restraining Forces can be any number. Here are some examples:

- Reluctance to be engaged in new and unfamiliar activities, or to manage people with new skills.
- Reluctance to work in new ways. A low tolerance of change.
- Fear of losing something of value.
Misunderstanding of the change and its implications. A belief that the change does not make sense for the organization.

It is not my intention to suggest that all driving forces are good and should responded to. They should be analysed to assess their possible effect on the environment in which we operate. Neither do I suggest that all Restraining Forces are bad and should be overcome. Attempts should be made to overcome them when they are based on fear, a sense of inadequacy or prejudice. But when they are based on a reasoned and sincerely held belief that a particular change does not make sense for the organization then they should be carefully examined and not pushed aside.

Change occurs when we add to the Driving Forces or reduce the Restraining Forces—most of which turn out to be the attitudes of people.

Thus it is attitudes of people which are central to the question of change. It is people, their attitudes and expectations which create a climate conducive to change. Now it would be difficult for me to talk about attitudes and the climate of change in universities in Pakistan although I suppose that it would be fair to say that an open university such as yours has already demonstrated its responsiveness to many of the forces for change about which I have spoken. Instead I will say something about change and universities in the United Kingdom and in particular I will tell how we in the Open University are trying to maintain the climate for change. There may well be something in this for you because, like us, you see obvious needs in your society to which you could respond; like us, you are trying to develop an effective open learning system and make the best use of new technologies in communication; and, like us, you are having to work within budgets which have been reduced. It is always more difficult to encourage development in an organization when times are hard but perhaps it is then more important to do so.

The Driving Forces for Change in the UK which have an impact upon universities are:

- new technologies, especially the development of the microprocessor, robots and polymers;
- reductions in the level of government funding for universities - the distribution of the available funds by the UGC resulted in some universities suffering more than others;

- changing expectations of people in relation to work, leisure, education;

- trends towards two or three distinct careers in a working lifetime;

- a growing view (on the part of government at least) that university education should be utilitarian rather than follow the liberal tradition. There is an emphasis on value for money throughout the education system.

Universities have responded in a number of ways:

First many universities have had to reduce staff through early retirements.

Departments threatened with closure have sought to find new activities; some have offered part-time, degree courses.

Salford (a technological university with a strong record of meeting industrial needs) suffered badly in the grant allocations, but under a dynamic Vice-Chancellor set about raising funds from industry in its local area. It gained sponsorship for its students and more research contracts; it set up an industry park, it persuaded industry to join in the dual appointment of 'working professors' and now gains about one third of its revenue from its own entrepreneurial efforts. It has been said that nearly every head of department was turned into a sales executive.

Similar initiatives - but less spectacular, have been developed in some other universities, but I would not wish you to believe that the British universities have been turned onto their heads. There is still a large element of conservatism and reluctance to recognise much need for change. Not all academics see that their particular discipline or research interest is likely to be affected by changes in economic activity or the social upheavals which
are upon us. Some of them may be right, of course, but I think that the impact of change in western society is so strong that few organizations can afford to stand aloof.

The Open University in the UK - as an innovative institution whose philosophy has been to offer a second chance to adults who had missed out in the conventional system; as an institution which has emphasised the quality of its pedagogic presentation and which has used a multi-media approach to its teaching — attracted in 1970 some very committed and well qualified and imaginative staff. It was a young staff and an enthusiastic one. Academics were drawn together in course teams to design and write the courses; other groups discussed the production and distribution; yet others the business of recruiting tutors and organizing the regional networks. All was communication, liaison, purpose, self sacrifice and trust: the ideal climate for such an organization to develop. We developed frameworks and committee structures and an administration. All academic staff were members of the Senate and our administrative colleagues worked with us to solve problems. Of course we were also evolving a bureaucracy, but no one castigated the administration as 'bureaucratic': it was sympathetic to the common purpose and worked to provide flexibility in systems and budgets where flexibility was needed. Thus it was that we succeeded, perhaps beyond our wildest expectations, and our success became so well recognised that our first Vice-Chancellor often said that on visits overseas he found that the four British Universities whose names were internationally known were Oxford, Cambridge, London and the Open University.

I think it true to say that academics in the Open University were very content as they began to build up the profiles of courses. The model used for the original Foundation Courses was a sound one: students liked the style; their success rate was good; our part-time staff found their work satisfying; and so, with a few innovations here and there, we kept to the model. During the first ten years we had one or two periods when we had difficulties in controlling our expenditure and we had one or two panic moratoriums on spending; but, by and large, we enjoyed a reasonable level of government grant conducive to our growth. We had sufficient scope to experiment with new media and to introduce improved student support systems. Things were moving for us and so we continued to develop our new ideas and, I think, focused the attention of many people in higher educa-
tion on the importance of good teaching. We were consolidating our success. Academics and administrators consolidated their positions—individually and collectively—within the system. One could begin to see first the beginnings of institutional ossification. Now that the focus in course writing had shifted beyond the interdisciplinary Foundation and second level courses, academics identified more closely with the interests of their Department. They identified themselves more with the national and international community of scholars to which they belonged than with the University within which they worked. Large numbers of staff had been ten years or more in post and the artificially high rate of promotions which had occurred in the developmental stage was slowing down. I do not want to suggest that new developments were not happening because patently that would be untrue. We were still extremely lively and innovative, but we had progressively identified with specific subject disciplines or other areas and boundary lines in terms of course writing and research and promotion prospects could be worked out by an individual.

By 1976 the University had turned its attention to the second objective contained in its Charter—namely "to promote the educational well-being of the community generally". This was the beginning of our programme of Continuing Education (which in your terms we might equate to Functional Education). We started to produce short courses—such as aspects of child care, or caring for handicapped people; we produced a study kit on microprocessors with the assistance of funds provided by the Department of Industry; we developed courses which led to a Diploma in Reading Development and other in-service courses for teachers and we offered many of the courses from our undergraduate programme to be taken on a one-off basis.

All this activity, which involved the setting up of a Centre for Continuing Education, was strongly supported by those of us who were adult educators at heart, but was looked upon rather more distantly by those who saw their role as 'academic' in a traditional sense. These people had found their role in our system and did not welcome this new development nor see the need for it. In Senate the Vice-Chancellor and others were at pains to emphasise that all staff would be welcome to be involved in the activities of the Centre for Continuing Education, but there was no obligation to become involved.
In recent years, because of the more rapid rate of change in our industries and the rapid developments in the new technologies our Continuing Education programme has developed strongly in technological updating and in management as well as developing further its programme in health and social welfare, professional development in education, community education and leisure education. These developments have been pushed forward with low staffing levels and with heavy reliance on external contributors. The programme is self-financing and is 'market' and 'profit' conscious. We have had loans of £2½ million from government but we have to pay interest on these loans. Although the Continuing Education programme does not draw any funds from our main grant it does, of course, rely upon the infra-structure which we have developed for the production of our undergraduate courses. It relies to a large extent on the services of people (such as myself) whose contributions are not recharged to the programme.

Our Continuing Education programme is successful by any standard. We now have 200 courses and packs of learning materials. 27,000 students are enrolled and the packs are used by many more. In the past four or five years we have spent £17 millions on course development. We are forging strong links with industrial training and updating schemes and are beginning to convince the government that we can make a significant contribution to ease the economic and social change through which our country is passing.

Thus the Open University is responding to some of the driving Forces for Change and in the process it is utilising its 'Assets for Change' which exist in those lively and adaptable groups of staff whose interest has been caught by this latest development.

We are changing too in response to another - and less pleasant - Force for change. Reduced funding has caused us to look for a considerable number of early retirements (voluntarily taken) in order to reduce our salary bill. It has caused us to delay the production of courses in our degree programme and has resulted in raised student fee levels which almost endanger our principle of 'openness'. Not unnaturally these moves have caused disquiet among our academic staff and it is obviously noticeable that individuals and departments tend to protect their own particular interests. Many departments are already over stretched and
have had to curtail activities. The atmosphere is now much less conducive to innovation and for both real and for 'political' reasons it is increasingly common to refuse additional tasks unless additional resources can be negotiated. Thus it is that our financial predicament is beginning to affect the climate for change which we need to sustain if we are to develop fully the potential of our Continuing Education programmes. Having said that, I would emphasise that there is a great deal of course production activity in progress within Continuing Education, where a Master's course is being produced in Manufacturing and the Industrial Applications of Computers (funded by the Science and Engineering Research Council) and our Open Business School is busy producing new courses in management. Nevertheless we are moving much less comfortably towards Change.

The Open University has been in existence for fifteen years. It saw clearly and wholeheartedly what its first task had to be, the organizational development needed that to be achieved. From 1976 it has moved enthusiastically but not with unanimous support towards the development of its Continuing Education programmes which now emerge as having a significant contribution to make to the industrial training and social needs increasingly evident in our society. During the past three years we have had to undertake these developments in an increasingly tough financial climate. It is to our credit, I think, that we have been able to impress industry and government with our efforts.

But what of the next 15 years? Can we see how we shall need to interpret our philosophies of 'openness' and 'new opportunities' in the light of economic and social developments, and in anticipation of the responses which the rest of the education system is likely to make - so that we still have a special place in the United Kingdom?

I am sure that we shall continue to hold to our basic tenets of openness and the provision of new opportunities and the other values we hold. But we shall have to acknowledge that the interpretation of our role was not fixed immutably in 1970 and, indeed, already in the 1980s we have shown that we can develop new areas which are quite consistent with our original philosophy.

In an easier financial climate we could continue to try new developments on a very broad front and then pick out
those areas which could be successfully brought within an acceptable re-interpretation of our philosophies. As things are we cannot afford such a broad advance. We must be selective in our innovations from the start; we must plan and accept priorities so that we can do a few things creditably rather than many things less well. The mere gathering together of faculty plans will not do. No one will get the resource they bid for (because Committees tend to make reductions across the board rather than to take the bold decision to prioritise) and the risk is that, as everyone begins to operate within reduced budgets, no one will have the opportunity for innovation.

Not surprisingly, there seems to be a good deal of frustration among members of the University. The cause is seen to be the financial constraints, the effects of which I have already explained. Without under-rating this constraint, we need to promote the realisation that the University has the resources in human and in real terms to solve its own problems if we put our minds to it.

The need is to set up a programme which will allow us to take a closer look at ourselves and at the way we can respond to the choices that confront us. We need to find ways in which the aspirations of individuals can be more closely integrated with the University's objectives—and with its planned activities. The emphasis in such a programme must be on changing the response of individuals to the problems which the University faces.

The University must respond to the changes that are taking place in the UK (industrial and technological change, social conditions, governmental influence). It must also bring together the professional objectives of the people it employs and its organizational objectives.

This amounts to a development of the total organization at all levels which has to be undertaken by all the people who work in the University. We are a democratically controlled university and our destiny is in our own hands.

This year we made a start on a programme of organizational development under the leadership of our Vice-Chancellor and his Deputy. We began in a gentle fashion by announcing a series of five two-day seminars. About 20 people were invited to each one. They were drawn from
academic administrative and operational areas and involved staff at different levels of seniority. The object was to begin the confidence-building process, the extension of trust, and to indentify clearly a consensus view that some improvement is necessary.

At each of the first two seminars we began by asking the participants what proposals or initiatives they had tried to advance but which had been frustrated. Participants discussed the type of frustrations they had met and by the afternoon of the second day they had identified the things they saw as being 'wrong' in the University and placed these in three main categories. These two seminars each arrived at the same overall conclusions.

1. The University lacked a strategic plan which took account of change in society.

2. People did not feel that they were being well managed. (Many heads of units or disciplines did not recognise that they had a management function).

3. Good use was not made of individuals' potential for development through transfer to other jobs or to other departments, etc.

Later seminars, involving different groups, began to consider how these problems might be resolved. Professionals in our Staff Service Division took an interest in 2 and 3 and are now beginning discussions about improved training for managers and the development of career counselling.

The seminars will continue to address the first question, which will most probably lead to a view that we need to find answers to questions such as these:

a) What is the likely pattern of economic activity; the likely pattern and type of employment; the likely social needs in the UK over the next 10-15 years? What phases can we discern?

b) How is the education system (primary schools through to further and higher education) likely to respond? What phases of development might there be?

c) What particular function is open to our University -
bearing in mind its basic philosophies, special expertise, existing strengths etc.? How might we begin to shape our plans?

The confidence, trust and concern for people which is a central feature of the whole approach to this re-appraisal should enable us to respond with a more open and rational approach to decision making - the willingness to face tough problems and to agree on tough decisions. The process will take time. Attitudes are not modified overnight. But the only way we shall understand the problems and each others' hopes and fears is through open examination of the issues. Of course there will be difficulties, but this approach that we have begun places great reliance on the organisation to solve its own problems and to face change with greater confidence. For The Open University it can mean that we continue to make a POSITIVE APPROACH TO CHANGE.

I hope that I have said something of interest. Our solutions may not be your solutions of course. It is very interesting to me that you, like ourselves, are trying to respond to many new needs - and in so doing are having to develop new methods and organisational structures. I do not doubt that the process sometimes causes tensions and problems because change is rarely comfortable. But I do believe that if we try to understand what is happening and why it is happening then we are well on the way towards working together to find a positive response.
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Islamabad Pakistan
SUCCESSFUL LEARNING PROGRAMMES with illiterate adults have been accomplished by applying the principle of "easy to difficult, the known to the unknown, self-felt needs to observed needs" within the presentation of material and flow of learning. Adults need self-confidence, satisfaction of success, and the utilization of their newly-learned skills. Non-formal adult education cannot afford drop-outs in promoting a programme that must be supported at local levels.

The symbol-system based on numbers is much simpler than the languages system based on words. For numbers, the learner has to master only ten basic numbers (0-9) and a few operation symbols such as plus, minus, divide, multiply, and equal. The words and sentences of basic arithmetic are relatively simple to decode and understand. Since most adults know how to count and calculate small numbers, it takes only a short time to learn how to read and write in the number-system and perform many of the calculations needed in everyday life.

However, the symbol-system based on words requires mastery of initial, medial, and final shapes of letters in the alphabet plus the vowel markings and the various letters that have the same sound. The grammatical patterns and syntax need to be learned, especially if the primer is not presented in the mother tongue.

The simplicity of first learning the number symbol-system generates enough self-confidence that the adult learner is willing to devote the required amount of time on a continuing basis. The discipline of learning becomes established with numeracy and can eventually be applied to the learning of words. Numeracy thus becomes a basic foundation in the learning process for illiterate adults who have seldom, or never submitted themselves to a disciplined, regular form of acquiring academic skills.
Most adults are motivated to learn some system to protect themselves from those who would take advantage of their illiteracy and ignorance on vital subjects affecting everyday life. One of these basic needs concerns finance. People buy on credit, take loans, receive payments, and enter into various other financial arrangements or obligations. Whenever the illiterate adult is also living close to the poverty level, the motivation to 'combat the system' and survive is very much intensified. The consumer must deal with the shopkeeper, who deals with the wholesaler, who deals with the factory, etc., until all are pressured to keep accounts, records, and financial statements based upon an accurate knowledge of numbers.

A short course can be taught in the local language. Almost immediately the learner can acquire useful skills of calculation involving the use of numbers. One learns prices, quantities, totals, measurements, balances, and other functional applications of numeracy. Adults who take the basic arithmetic course will be eager to continue with the rest of an instructional course.

The experience gained in learning to read and write numbers and doing simple calculations such as '4 + 5 = 9' has direct transfer to learning to read and write words and sentences. The adult has learned to hold a pen or pencil, work with paper, make lines, and comprehend the marks on a page. Both "languages" (numbers and letters) require many similar skills such as relating written symbols to words, right-to-left orientation, control of hand movements, and understanding the text for relevant aspects of life. A course in basic arithmetic thus serves as a useful bridge or pre-primer introduction to reading and writing.

The content of a basic arithmetic course could include the following topics:

A. Reading and writing numbers to place values from 0 to a million;
B. The four main operations — addition, subtraction, multiplication, and division;
C. Measurement of length, weight, capacity and time;
D. Counting money, making change, and calculating prices;
E. Family budgets and accounts (which could introduce key words).
Electronic calculators are becoming less expensive and readily available. They could become part of the class teaching equipment or some students might get their own somehow. In such a prestige-type of culture, calculators would add to the interest and motivation of learning. Also the learners could do calculations involving large numbers even before the participants have memorized all the basic arithmetic tables and procedures. Calculators can also help the students to verify the accuracy of their figuring done in the traditional way, thus adding to the educational breakthrough of independent, self-reliant learning by the individual himself.

The basic arithmetic course can be used in all the regional areas, regardless of the various mother tongues. Since some of the particular teaching problems may vary among these languages, a separate teacher's guide could be prepared. Audio cassettes could also be recorded and made available for specific instruction. The basic materials could include a slate, chalk, paper, and pencils. Part-time teachers could be recruited from the local community and trained. A local committee of real leaders could select class sites and make arrangements according to local custom. All costs should eventually be borne by the community and the learners.

In the class, the teacher should set-up role-playing situations such as a shop where tea, rice, cloth, and other items are weighed, measured, priced, and calculated for payment. Students take turns playing the roles of cashier and customer at a simulated general store or pharmacy. Teachers collect empty tins, boxes, and plastic bags as props. Flashcards can be used for testing arithmetic table facts.

If a decimal system is used throughout country it should be an advantage in starting with numbers. The 'Arabic' and 'Urdu' numbers are somewhat similar and both could be taught. The format for stating numerical problems appears to be similar among all the regions. All people can participate in this initial programme of learning and immediately use their newly-learned skills.

The first pre-primer arithmetic course in Ivory Coast was prepared by Fulbright Professor Raymond Zepp for use in a functional literacy programme for adults in the Ajukru
village of Mopoyem. The course was oriented to helping class members weigh and calculate the price of fish produced by the local cooperative. A programme is now being developed for the Anyi language spoken by 350,000 people, in the south-eastern part of Ivory Coast, which begins with a short course in basic arithmetic.

In Roumania, the government successfully conducted a mass literacy campaign in 1969-1972 by using numeracy as a pre-primer introduction. The small committee from Pakistan that visited Roumania learned about this unique approach to literacy and was favourably impressed.

Note: NUMERACY is defined as "the capacity for quantitative thought and expression". (From the Latin 'numerus' + -acy, as in literacy) Supplement to Websters' Third New International Dictionary, 1976.
LANGUAGE AND DISTANCE LEARNING

By

Anees Bano Khan
Chairperson Department of English, AIOU.

In a survey conducted by the present writer during the Postgraduate Diploma in English Language Teaching Workshop held at the Allama Iqbal Open University from 7-19 September, 1985, various assumptions about language and distance learning were considered with a view to improving language learning and teaching skills. Although many of the following observations reflect the general consensus of opinion among the participants (teachers of English language and literature in Islamabad, Rawalpindi and Northern Areas), the scope of the paper has been broadened to include the wider question of language learning in open systems and related factors.

It is generally felt that language learning through distance methods is problematical, and that self-instructional texts (with or without supplementary audio-visual material), and occasional tutor-checked assignments are in themselves an inadequate substitute for direct student-teacher communication in a system of which, as Holmberg notes, the separation of teacher and student, or what has been termed the separation of teaching behaviour from learning behaviour, are distinguishing features. In view of this, Baath's assertion that good education can be provided through this method, and that face-to-face teaching components are not really necessary, is unusual. In-service school and college teacher-training through distance methods forms one of the objectives of the AIOU English Department and as such our Workshop group was here not to learn language (although perhaps that was implicit) but rather how to teach language in a situation where education standards generally, and those in English specifically, exhibit considerable decline. Teachers enrolled for the Diploma in order to become more effective teachers. Indeed, in the absence of any conventional Postgraduate Language Teaching course in the country, this Diploma, launched in April, 1981, has filled an important need for those wishing to improve qualifications or those interested simply in knowing more about the subject. Our PGD course has done much to create an awareness of the need for new techniques in language work.
Some twenty teachers ranging from the 9th Class to the Master's level attended the Workshop. Recognition of English as the pre-eminent world language was acknowledged jointly with regret at deteriorating standards in English and the lack of expertise in teaching methodology in Pakistan today. Given this, it was felt that such workshops provide an invaluable opportunity for face-to-face teaching on various linguistic and non-linguistic matters.

Comprising two parts, the PGD Diploma has 32 Units with 4 Units' equivalence given for the mandatory two-week Workshop. This face-to-face exchange constitutes an important link between the University and what is usually an invisible silent majority - its students. It is invaluable because the "autonomy" of the distance learner is so often inseparable from a sense of loneliness and alienation, compounded by the fact of prejudice from those used to the formal educational system. As Wedemeyer remarks perceptively:

In a society in which education is dominated by traditional institutional methods and practices, the non-traditional learner knows loneliness, not so much in a social sense, as in the sense of identity as a learner.

Back-door learning has been something of an embarrassment to traditional institutions. To learners, non-traditional learning is sometimes a frustrating kind of satisfaction, fulfilling to the self, but eliciting from a schooling and credential-oriented society an incomplete and distorted image of actual accomplishments. In ways characteristic of any bureaucracy, the viewpoints, policies, and procedures of traditional education have denigrated, dismissed, or downplayed the self-initiated and self-directed efforts of learners. It is almost as though such learners don't really exist; as though their achievements in learning can't be identified, measured, and compared with the achievements of traditional learners. Similarly, studies of non-traditional learning have, by and large, been ignored.

Most participants felt that the sole support of assignment comments from frequently tardy tutors and the occasional letter of inquiry to the Course coordinator left much scope for person-to-person discussion. Recent attempts at personalization of AIOU services such as the Enquiry Cell and
Students' Extra-Curricular Activities have helped considerably in bridging the gap between the young learner and the University, but most PGD people are hesitant to participate in these programmes for age or service reasons. Similarly, inter-teacher discussions on ELT problems are difficult because of the lack of qualified personnel in the field.

GENERAL DIFFICULTIES

A certain malaise apparent in teachers of English stems partially from fluctuating educational policies, poorly prepared or out-moded texts and a highly unfavourable student/teacher ratio, especially in rural colleges. In cases where a single teacher deals with a class of over a 100, assembly of the class itself takes up to ten or fifteen minutes, leaving only twenty-five minutes for the actual period. Another contributory factor is the existing discrepancy between current academic realities and future plans, as for instance in the difference between recognition of the importance of English on national and international levels and the controversial attitudes implicit in official plans to exclude English as a medium of instruction in all Government institutions from 1989. It is unfortunate that the retention of English as a medium has somehow become synonymous with a surrender of religion and/or culture. As Smith asserts in a cogent analysis of English as a world language, it is readily apparent that the learning of a specific language does not in any way diminish the inherent significance of vernacular tongues.

Teachers of pre-medical and pre-engineering classes face additional difficulties in teaching a tension-ridden group who, preoccupied largely with securing high percentages for admission to professional institutions, are consistently averse to compulsory English classes. Since, academically speaking, Intermediate is a kind of "great divide", it is essential that special courses be devised for this ESP category. Indeed the PGD can only be effectively implemented in the context of a thoroughly revised syllabus with emphasis — in language classes — on English as a functional language. While everyone agreed conceded that teaching could be enriched by supplementary material such as pictures, maps, charts, overhead projectors slides, cassette and radio, most teachers are reluctant to use personal material in the absence of institutional help in providing them. It was suggested that PTV screening of relevant films
on texts used in the English literature curriculum would facilitate the teacher's task by familiarizing students with a different cultural perspective. This may, perhaps, be more readily possible with the commencement of a second television channel.

Teachers labour under a number of social and psychological constraints and are often trapped, as it were, between the Scylla and Charybdis of education and society. Accorded merely lip service on one hand to the "nobility" of their profession they are, on the other, sensitive to their relatively insignificant, socially peripheral position in a power-structured society such as ours. To this pervasive uneasiness may be added several other factors. This has previously included insecurity regarding actual equivalence of Diploma/degrees from the open system, the battle for which has only recently been successfully concluded. In wanting real as well as formal recognition by job-giving agencies and in contending with sceptical attitudes towards non-traditional learning, teachers suffer from a sense of victimization which is not entirely unjustified. Also relevant is the problem of the "psychologically absent" teacher who, caught in his present job, lacks a basic sense of commitment to his subject, work and students and who yearns prepetually for greener pastures.

Many participants regretted that existing classroom conditions were not entirely favourable to the best possible implementation of PGD methodology which is centred on the four main linguistic skills: listening, speaking, reading and writing. Ideally, language lessons should integrate all four aspects, but candidates were quick to point out the difficulties of doing so. Discussions on developing more constructive teacher-attitudes evoked the following responses.

LISTENING

Traditional emphasis on 'obedience' in the student is, if anything, counter-productive to good learning. Classroom routine tends towards an increasing monologue situation in which the teacher speaks unceasingly and students listen in a semi-hypnotic state. Listening becomes a passive condition with little feedback from the listener. In such situations it is not possible to gauge the extent of comprehension when listening has deteriorated into a totally passive encounter.
Listening comprehension can be enhanced by the regular use of pictures, charts, films, cassette players and radio.

**SPEAKING**

Possibly the most problematical in the current Pakistan context, the speaking skill is considered by most teachers to be extremely difficult to teach. Except for a tiny vocal group, the majority of the class are reluctant to speak for several reasons. Unfamiliarity with the language outside the classroom, fear of censure and actual ignorance of speech patterns all fall into this category. Extroverts tend to talk better and introverts to read or write well. This may be a generalization, but as Rivers suggests:

Since conversation is essentially interaction between persons, comprehension plays a role, as well as skill in expression. The student may have acquired skill in expressing himself in the new language code, but have had little practice in understanding the language when spoken at a normal speed of delivery in a conversational situation. He therefore makes a noncommittal acknowledgment of the fact that he has been addressed; he has not comprehended sufficient elements in the message to be able to make a further contribution to the discussion, or to be stimulated into a meaningful rejoinder. The conversational gambit lapses, and in a classroom situation the teacher finds himself obliged to initiate another possible chain of interaction along new lines. Students need much practice in listening to the language before attempting sustained conversation. They also need practice in seizing on the elements of a preceding utterance which will provide them with the breathing space necessary for the formulation of their own contribution to a continuing verbal exchange.

In a class group, the teacher must be alert to recognize personality factors which are affecting participation in foreign-language discussion. Some students are talkative, other are shy or taciturn. These characteristics affect student performance in the oral part of the lesson. Nida noted among missionaries that the talkative extrovert learned the language faster than the quiet, studious person. Some students are, by nature, cautious or meticulously careful; still others are unduly sensitive, and therefore easily embarrassed
or upset if found to be in error or not understood. Students in each of these categories often prefer to say nothing rather than run the risk of expressing themselves incorrectly.

Elsewhere, Rivers speaks of the dangers of negative teacher attitudes. Classroom exchanges, debates and a generally supportive atmosphere will obviously help the student develop better speech skills. Frequent use of overseas radio programmes give an idea of correct pronunciation and helps the teacher who is himself uncertain of difficult words. The notoriously difficult question of the definite and indefinite article and such factors as intonation, rhythm and so on. In a stressed-timed language such as English the learner (used probably to a syllable-timed vernacular) will, if unchecked, become virtually unintelligible. Sports programmes are useful for teaching the Present Simple tense and news listening will provoke discussions and foster awareness of world issues. These strategies will help reduce the number of students who despite years of language learning are unable to speak with any accuracy or ease. Teachers should encourage questions and spontaneous expression by maximum participation among the class rather than repeated reliance on a few articulate favourites. Oral skills should ideally precede writing ones, but an emphasis on rote-learning means silent reading and memorization rather than speech.

READING

The PCD units on the psychology of processes in reading are useful, but in a examination rather than learning-oriented system, there is persistent and unhealthy emphasis on 'mechanical' reading and verbatim reproduction of material under examination conditions. The gap between effective reading and comprehension/assimilation is therefore not encouraged to read materials beyond prescribed texts. In actual fact students disregard even basic texts in favour of the ubiquitous guide key "substitutes". Good reading habits are inseparable from adequate library facilities. However even where available as in urban areas these are seldom fully utilized, while those who wish to do so cannot in rural areas lacking such facilities.

WRITING

Again, the emphasis on memorisation and repetition means that organisational skills in proceeding from word to
sentence, sentence to paragraph and paragraph to page, and so on, are ignored in favour of repetitious textual matter. Still in wide use, the outmoded grammar-translation method has failed to ensure the correct application of grammatical structures in actual writing. Even students of "advanced" English are frequently unable to write simple, error-free letters or applications. Recurring errors of punctuation, spelling and vocabulary indicate the absence of good dictionary habits. The situation is often worsened by lack of teacher-interest in failing to provide feedback through promptly returned writing assignments.

It should not, in conclusion, be surmised that the mood of the Workshop was consistently negative. On the contrary, almost all participants benefited from the formal lecturers and found the informal discussions very useful, despite the recognition of problems of language learning/teaching through distance methods. It might be salutary, at this juncture, to cite an encouraging view of the immense potentialities inherent in the non-formal teaching system. In this regard Ronald Gross wishes:

... to call attention to the passionate pursuit of truth beyond academe, by all kinds of people in all kinds of realms: the hard sciences from microbiology to astronomy, the humanities from history to metaphysics, the social sciences from demographics to environmental activism; other realms of knowledge denigrated or undreamt of by the academy ...... utterly voluntary, pro-active, self-directed, autonomous, idiosyncratic, non-institutionalized, productive, innovative, and joyous.

Notes


2. "The concept of distance education", Distance Education, pp. 3-4.

3. Charles A. Wedemeyer, "Back Door Learning in the Learning Society", Distance Education, pp.128-129.


6. ibid., p.194.

7. Ronald Gross, "The Converse of MCE (Mandatory Continuing Education)". Second Thoughts, 2, October, 1979, p.11.

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Sewart, David, Keegan, Desmond and Holmberg, Berje, eds. Distance Education: International Perspectives. beckenham, Croom Helm, 1983, 128-140.


The second half of this year at the University has been both eventful and interesting.

From 12th August to 16th September the Vice-Chancellor Dr. G.A. Allana was on an overseas tour primarily to attend the 13th International Conference on Distance Education at Melbourne. Held between 13th-20th August, the Conference had 612 participants from fifty-five countries. Pakistan was particularly honoured by Dr.Allana's appointment as Chairman of DECASIA (Distance Education Council for Asia). The rest of his tour was spent largely in visiting important educational institutions and holding discussions on a large number of topics of mutual interest. Among the places visited were Honolulu, in Hawaii; San Francisco, Washington, D.C., South Carolina University, the University of Texas at Austin, Texas, and finally, Paris where important talks were held with UNESCO officials.

Dr. Ahmed Noor Khan attended the 9th World Congress on Education, from July 8-12, 1985 sponsored by the World Council for Educational Research at Madrid - Spain. The major theme was: "Education and Work in Modern Society". The topic of his paper was: "Distance Education: An Innovation in Non-Formal Education and the World of Work;".

University Events:

1. The 34th meeting of the Executive Council was held on 15th October, 1985, and approval given to the University Budget for 1985-86. This includes plans for a modern press and the construction of 48 flats for AIOU employees.

2. Mrs. Muzaffari Quraishi, Registrar since 1975, retired on October, and several farewell parties were given to felicitate her on many years' service at AIOU. Dr. M.S.K. Shibli, Chairman, Urdu Department was appointed as the new Registrar.

3. Professor Nazeer Siddiqui was appointed Chairman of the Department of Urdu.

- The AIOU welcomed back Dr. Shaukat Ali Siddiqui,
Dean, Faculty of Pedagogy, Continuing Education and Adult Literacy, who returned to the University after a period of attachment in the Ministry of Education.

- The Department of Arabic and Islamic Studies have been bifurcated, with Dr. Tufail Hashmi as Chairman of the Islamic Studies Department. Mr. Hanif Chaudhry continues both as Head of the Department of Arabic and Director of the Institute of Arabic and Islamic Studies.

- With the departure of Mrs. Shemeem Abbas, to Texas for doctoral research, the present writer took over the Headship of Department in August.

- The long-awaited installation of direct phone lines in all departments was appreciated by all, as this will greatly facilitate their work.

- Work on the construction of the AIOU Residential Colony has begun.

- Dr. M.A. Bukhari's draft of the 7th Five-year-Plan was completed and received wide praise.

- The Vice-Chancellor approved the formation of the following three departments:

  - Special Education, Distance and Non-formal Education and Continuing Education, to function within the Faculty of Pedagogy, Continuing Education and Adult Literacy.

- At the meeting of the Academic Council on 4th December, approval was accorded to plans for further degrees on the level of M.A., M.Phil. and Ph.D. Among others, work has commenced on M.A. degrees in Urdu and English (The Teaching of English as a Foreign Language).

The Vice-Chancellor also informed us of the recognition of equivalence of the AIOU by the University of the Punjab in late November. This is particularly welcome news after several years' debate on the subject.
Among new appointments and promotions were:

Mr. Mahmud-ul-Hassan as Librarian in October, and
Mr. Javed Mahmoud as Deputy Director, I.E.T. in November.

In August, the Cultural Committee organized an enjoyab-
le evening concert with the celebrated singer Abida Parveen. 
This was made possible only through the good offices of the Vice-Chancellor, upon whose request this artiste agreed to 
come despite her busy schedule.

Visitors to AIOU

The University had a large number of visitors during 
this period. Among these were:

- Mr. Muhammad Yasin Wattoo, Federal Minister of Edu-
cation, who visited on 17th July and congratulated the AIOU on its efforts to spread education in the country.

- Dr. J.H. Hohnholz, Director Institute of Scientific Co-operation, University of Tubingen, West Germany.

- September: Mr. John Millett, Pakistan Officer, Desk ODA, (UK.)

- Dr. Iraj Fazil, Iranian Minister for Culture and Higher Education.

- Participants of the seminar for Senior Educational Administrators on Education Policies and Planning organized by the Academy of Educational Planning and Management.


- A 2-member USIS delegation.

- Mrs. Sarita Adhikari, a Nepalese Home Service Spe-
cialist who came from UNESCO, Bangkok, under the APEID Special Technical Programme on a three-week attachment.
- A three-member WHO Review Mission on teaching materials.

- Carmelite L.Villa Nueva, from UNESCO, Bangkok, Documenta-
  tion Specialist in Population Education, who expressed great
  interest in augmenting the Population Education Library in the
  University.

- Dr. Brumah Kandiah, Acting Director of Studies, Open
  University of Sri Lanka, on a UNESCO Fellowship in
  the fields of comparative Study in Planning, methodology
  and Administrative Structures.

- A three-member Chinese delegation saw the AIOU Lib-
  rary (31-10-85).

- Mr. Kevin Brown, ODA expert on management systems.

- Mr. Alastair North, President, Asian Institute of
  Technology, Bankok.

Students' Extra Curricular Activities

This Committee is run extremely efficiently by Miss Shagufta
Farooqi, ably assisted by the Secretary, Mr. Shahid Kaleem. Among its important functions during this period were:

- An Eid Millan Party of students at (July)
  Rawalpindi Regional Office.

- Jashn-e-Azadi Programme at the (August)
  University Campus.

- Naat Khani and Qirat Competition at (September)
  Rawalpindi Regional Office.

- Study tour Tarbela for (Female (August)
  Students).

- Study tour of Tarbela for (Male (September)
  Students).

- Students' Briefing at Wah Cantt. (October)

- Farewell to out-going Registrar. (October)
- Students' function on the occasion of RDs quarterly meeting.

- Quiz competition on Iqbal (Rawalpindi (November) Region).

- Quiz competition on Iqbal (Islamabad (December) Region).

- Results of Essay-writing competition among AIOU students finalized.

**Lectures**

Lectures were given by the following:

- Mr. Alec Fleming on Assessment & Evaluation Techniques.

- Mr. A.J. Kazi on broadcast Media in Distance Education.

- Dr. A. Kandiah, Acting Director of Studies, Sri Lanka, Open University, on 9th September, 1985.

- Mr. Norman Woods from UKOU on 2nd November, 1985 on Change in Universities.

**WORKSHOPS, SEMINARS REPORTED BY MRS. RAZIA ABBAS**

Workshops form an integral part of AIOU's educational programmes. Among those held were:

1. Workshop for the training of master-trainers in literacy teaching - 15th - 21th September

The workshop for the training of master-trainers in literacy was held in collaboration with the Literacy and Mass Education Commission of Pakistan. As we are aware almost all teacher-training programmes in Pakistan stress the role of the teacher in the education of youth and young children. Only rarely is attention paid to the education of 43 million illiterates of 10 + age group. The Literacy and Mass Education Commission has recently launched a large scale programme of literacy teaching for out-of-school youth and adults.
Teaching an adult is on the one hand very technical and on the other hand a very delicate job. It has the possibilities of both respect and disillusionment for the teacher. There are often chances of conflicts in the adult classes. The second vital issue is that of teaching-methodology. At present several approaches to teaching adults are in use in this country. An adult educator needs to know the salient features of each approach along with its strong and weak points and to be fully equipped with the knowledge necessary for imparting literacy skills.

Realizing the need for training, the Literacy Mass Education Commission requested Allama Iqbal Open University to design and implement a training programme. Accordingly a one week training workshop was organized by the Literacy, Adult and Continuing Education Department from 15th -21st September at the campus of the University. It was inaugurated by Mr. Sultan Daoood, Chairman of the Commission. Thirty-six participants from all over the country attended the workshop. They were all in the service of the Commission either as Master-Trainers or as Research Officers and Supervisors. The workshop was conducted with the help of resource persons from AIOU, Quaid-e-Azam University, the Ministry of Education, LAMEC and the Education Department, of the Government of the Punjab.


Rural societies, particularly in developing countries, even in the last decade of the 20th century are closed societies. Penetration of new ideas into the centuries old practices of these people is a real challenge. The AIOU endeavoured to popularise the idea of planned family life in the rural communities of Pakistan. the crucial role played by the village post-master in the social life of the community, appealed much for making him the hub of the activity. Accordingly, a project was initiated in 1983 for involving Branch Post-Masters who could develop into "small community guides" in their respective rural areas. Experts from AIOU developed the course content consisting four chapters or small units.

About 1,000 branch post-masters were selected as participants in the course. However, only 206 responded to the programme. At the end of the course work component, in
order to have discussion for improvement and expansion of this activity, a two-day workshop was held at the central campus of the University in October, 1985. In addition to the selected participants themselves, seminar officers, administrators of the Post Office and the Family Planning Association addressed the workshop participants.

3. National Training Workshop on the Development of Distance Education Instructional Materials 17th – 26th October, 1985

Distance education is a new field of instruction. the facts of being at a long distance from the students necessitates continuous efforts to make the materials, more and more self-explanatory. In addition to audio and video tapes, the printed materials have the support of radio and T.V. programmes in all forms.

The National Training Workshop on the Development of Distance Education Instructional Materials, held at the campus of AIOU from 17th – 26th October had the objectives of:

i. Sharing and bringing together the experiences and knowledge of persons involved in production of instructional materials for distance education;

ii. providing practical experiences and adopting relevant methods and techniques for developing instructional materials;

iii. reviewing the on-going activities and learning through observation of the process of materials production for distance education;

iv. producing actual materials for pilot testing; etc.

On the whole twenty-seven participants both from the AIOU and outside agencies attended the workshop.


The organization and management structure of distance education is also different from formal systems of education. Different regions of the University are not simply
the administrative units, they have also an educational role which is concerned with the scope and quality of education offered by the Univerity. The production of excellent learning materials is only half the picture. In order to help students get the full benefit of these materials and to complete their studies with satisfaction, the regional administration's have to play their part for the benefit of the students.

To revitalize this effort, a one-week workshop on Management and Counselling was held at the Regional Office, Rawalpindi from 19th - 24th October, 1985. All the Regional, Deputy Regional and Assistant Regional Directors of AIOU participated in the workshop. Officers from the University faculties and administration also attended.

The workshop was organized by the Directorate of Regional Services of the AIOU. It was inaugurated on 19th October, 1985 by Dr. G.A. Allana, Vice-Chancellor. Mr. Norman Woods Consultant from U.K. Open University worked as the Coordinator of the workshop.


M.A. (EPM), a regular academic programme of the University is providing specialization in the field of educational planning and management. The programme, in all, has eight courses. Some core courses, as an academic requirements, have a one-week workshop. At the end of every semester, for all courses offered in the programme workshops are held at the campus of the University. For the semester ending in October, 1985 four workshops for EPM 501 was the heaviest with sixty-four participants from all over the country including Azad Kashmir. EPM workshops are organized by the Department of Educational Planning and Management.


The Allama Iqbal Open University is working for the uplift of the groups of people both economically and educationally deprived. In Pakistan a large number of people are employed as lecturers in English, but usually most of them have third division degrees. They are often appointed on ad hoc terms and their appointment on a regular basis is always
subject to the condition that they improve their division/grade. For assisting with this problem the AIOU has devised a course with the title: Post Graduate Diploma in English Language Teaching (ELT). Persons obtaining this diploma are eligible for permanent appointment.

This diploma programme has a fifteen day-workshop at the end of each semester. The workshop is equivalent to four study units. It is mandatory and students who do not attend the workshop are not eligible for the award of the diploma.

The workshop for the April, 1985 semester was held from 7th - 9th September at the campus of the University. It was attended by twenty participants from Punjab, North West Frontier Province and Northern areas. A workshop for Baluchistan and Sind was held at Jamshoro, Sind from 15th - 30th December, 1985. It was attended by forty participants.

Since the introduction of Open Education systems developments in technology have promised the following major trends and advantages:

(a) A wider range of media becoming available for use in the home;
(b) A greater diversity of access to new media;
(c) Cost reduction for new media, both capital and recurrent;
(d) Greater control for over their learning and greater interaction in terms of learning materials.

What likely effect the use of different technologies have on cognitive thinking and similar questions are focussed for discussion in this book. It does not attempt to provide comprehensive answers, nor does it give a general theory of media selection. It attempts to deal with practical matters arising from the use of various technologies in distance education.

The book is, then, compiled for two types of audience:

(a) The first is the staff working in the growing number of distance teaching institutions around the world;
(b) The second audience is also equally, the growing number of staff in conventional institutions who are now actively considering the potentials and practicalities of "off-campus" teaching-learning systems.

The book is a compilation of writings by a group of international experts on distance education, and describes not only the current state of the art, but indicates as well how future developments are likely to take shape. With a
brief introduction and overview of the four major current
trends in step in technology, the book deals in the second
part with "media in course design". This includes chapters
on new technology, such as word-processors, video-discs,
viewdata, and computer-assisted learning, besides broadcast
television, satellite and cable, video-cassettes, radio,
audio-cassettes, and home kits, etc. Part 3 of the book
deals with "Media in Course Management and Presentation"
while the last, Part 4: "Selection of Technology and Course
Design" covers various media and the shape their use will
give to the course design and its presentation in the coming
decades or so.

Each article carries a list of references and future
readings at the end.

(Mahmud-ul-Hassan)
Librarian
RESEARCH REPORT
IMPACT OF PUBLIC FINANCING ON EDUCATION IN PAKISTAN
By
Ghulam Mohyuddin*

This study was designed to find out the impact of public financing on primary, secondary, teacher, technical, college and university education in Pakistan.

The major objectives of the investigation were: (a) to study sub-sector-wise development and non-development public expenditures on education; (b) to identify sub-sector-wise patterns of public financing of education; (c) to analyse inter-sectoral and intra-sectoral priorities reflected in budget allocations; (d) to examine the growth of educational institutions at primary, secondary, and higher levels of education; and (e) to find out the relationship between public financing and educational development.

Financing and planning are intimately related with each other. Accurate information on the pattern of financing is a vital need for educational planners for the sound planning of education programmes. The results of retrospective analysis are also useful for economists, administrators, decision-makers and the key personnel associated with education.

The present study was undertaken to provide up-to-date empirical information about the pattern of public financing of education and its impact on educational growth in the country. Its findings may prove to be of significance from the educational planning point of view.

Twenty consecutive financial years from 1960-61 to 1970-80 were taken into account to gather the required data. The rationale for selecting these years was that requisite data for this period were conveniently available.

The data required, were fiscal, educational and demographic. The fiscal data consisted of development expenditure on different sectors of the economy, development and non-development expenditure on various sub-sectors of education, figures of gross national product and total public

*This report is based on a thesis submitted in partial fulfilment of the AIOU M.A. degree in Educational Planning & Management.
expenditure. The education data comprised: the number of educational institutions, enrolments and number of teachers at various levels of education. The demographic data included the total number of children of 5-9 and 10-14 age cohorts.

The requisite data were collected from the published and unpublished official documents of the Federal and provincial governments. To analyse these data such statistical techniques, as growth rates, ratios, percentages and correlation were applied.

Findings

The following major findings emerged from the data regarding the size and growth of public sector educational programmes:

A. Size of educational expenditure

1. Between 1960-80, Pakistan devoted an average of 1-4 percent of the GNP to education.

2. The aggregate share of education in the total public expenditure was about 6 percent.

3. Education was accorded low priority in budgetary allocations as compared to many other sectors of the economy, e.g., agriculture, industry, water and power, transport and communication, housing.

4. Primary and secondary levels of education received fewer allocations as compared to international norms of intra-sectoral distribution of funds devoted to education sectors in Third world countries.

5. Intra-sectoral priorities in allocating development funds had been changing rapidly during 1960-80. Fluctuations are more notable at the lower levels of education.

6. Intra-sectoral distribution of non-development funds remained fairly uniform. The largest part of this expenditure was devoted to primary education. However, the financing of primary education has been
poor on the development side.

7. A wide gap in recurring costs per student exists between the lower and higher levels of education.

B. Growth of Educational Facilities

1. Primary Level: The number of primary schools nearly tripled (20,909 to 58,983) during this period. Relatively more emphasis was placed on the expansion of primary schools for girls. The ratio of enrollment at primary level rose from 29.4 percent of the national age-group population in 1960-61 to 47 percent in 1979-80. The student-teacher ratio ranged between 31:1 and 38:1.

2. Secondary Level: The number of middle and high schools also tripled during this period (middle schools 1798 to 5371, high schools 1172 to 3565). The boys' high schools have more than doubled and girls' high schools have increased by four times. The enrollment ratio at secondary level (classes VI-X) increased from 12.3 percent in 1960-61 to 20 percent in 1979-80. The student-teacher ratio at secondary level ranged between 22:1 and 25:1.

3. Teacher Education: There has been a marginal increase (25%) in the number of elementary teacher-training institutes. The number of colleges of education nearly doubled (9 to 17). There was a substantial increase in the capacity of elementary teacher training institutes and colleges of education. But the enrollment in both types of training institutions declined towards the end of the seventies.

4. Technical Education: During 1960-80 the number of polytechnics and colleges of technology increased from 7 to 25; the number of vocational and commercial institutes increased by about four times (39 to 149) and five times (11 to 54) respectively. The enrollment in polytechnics and commercial institutes increased by seven times and ten times respectively. The enrollment in vocational institutes nearly doubled. The enrollments in polytechnics, colleges of technology/commercial institutes and intermediate
colleges are in the ratio of 1:8.

5. Higher Education: During the past two decades, the number of intermediate colleges rose from 52 in 1960-61 to 203 in 1979-80; the number of general degree colleges rose from 79 to 265; the number of professional colleges from 25 to 29; the number of general universities from 4 to 10; the number of agriculture universities from 1 to 2 and the number of engineering universities from 1 to 3. The enrolments in intermediate colleges, general degree colleges, and professional colleges increased more than three times. The enrolments in general agriculture and engineering universities increased by nearly six, seven and twelve times respectively. A distance teaching University (Allama Iqbal Open University) was founded in 1974.

C. Public Financing and Educational Growth

1. There exists a positive correlation between the change in expenditure on primary education and growth of primary schools, student enrolment and number of teachers at this level. The correlation between change in expenditure on primary education and growth of primary schools is high while the correlation between the change in expenditure on primary education and student enrolment at this level is low.

2. There is a moderate positive correlation between the change in expenditure on secondary education and change in the number of teachers at this level while the correlation between change in expenditure on secondary education and student enrolment is low.

3. Low negative correlation exists between the change in expenditure on college education and the growth of colleges and students enrolment at this level.

4. High positive correlation exists between the change in expenditure on university education and student enrolment at this level while the correlation between change in expenditure on university education has a low positive correlation with the growth of universities in the country.
Conclusions

The findings of the study led to the following conclusions:

1. The education system in Pakistan remained under-financed during 1960s and 1970s.

2. There is no consistent pattern of allocating development funds to the education sector. The same is true of various sub-sectors of education.

3. Public financing at primary and secondary levels contributed more to the expansion of schools and number of teachers as compared to student enrolment at these levels.

4. Contrary to the university level, public financing is negatively correlated with all the components of educational growth at the college level.

5. The growth of education at college and university level has been more rapid than at the school level.

6. The growth of technical education compares unfavourably with the growth in general education.

7. A notable rising trend is visible in respect of student enrolment in professional universities as compared to the general universities.

8. Female education shows relatively better progress at the school level.

Recommendations

The following recommendations are made to improve the financing of education and consequently educational growth in the country:

1. The share of education as a percentage of gross national product and total public expenditure should be raised to the level of the average percentage devoted to education in developing countries (about 4% of GNP and 15% of total national budget).
2. The priorities among various levels of education should be rationally determined to avoid uneven growth of any level of education. The priority assigned to education in drafting policies and plans should necessarily be reflected in budgets as well.

3. The various levels and streams of education should be better articulated to ensure balanced growth of the education system.

4. Financial allocations for education should be based on sound research studies rather than subjective judgements.

For Further Research

5. A study should be undertaken to determine the impact of financing on the qualitative aspect of education.

6. A series of research studies should be conducted at micro-level to analyse the pattern of financing at various levels of education.

7. A comprehensive study at the national level should be undertaken to investigate the inter-play of various factors and forces affecting the educational growth in the country.
EDUCATIONAL AND VOCATIONAL GUIDANCE SERVICES
FOR WOMEN AND GIRLS AT SECONDARY LEVEL IN
PAKISTAN*

By
DR. PERVEEN KHAN, CHAIRPERSON, DEPARTMENT OF
WOMEN'S EDUCATION, A.I.O.U.

According to the 1981 census women constitute 48.3% of
the total population of Pakistan. Of these 22.4% women are
in the active age group. Although this group is very impor-
tant, it is one of the most deprived segments of society,
preoccupied with a combination of repeated pregnancies and an
unending physical work load. This condition is re-inforced
by institutionalised prejudices, along with a lack of inde-
dependent income-generating opportunities. The National Sixth
Five Year Plan nevertheless continues to put special empha-
sis on the encouragement and provision of the vocational and
technical training, skill development and income generating
programmes for women. In the light of the plan, efforts are
being made to strengthen the Government Vocational and Tech-
nical Centres.

The Sixth Five year Plan (1983-88) has also laid spe-
cial emphasis on educational/vocational guidance and place-
ment services. The present Government feels the importance
of starting comprehensive guidelines and counselling services
based on reliable and valid psychological tests and by
teacher-training for the necessary expertise in adminis-
tering and interpreting these tests. The Government has drafted
a plan to prepare and to supply literature about career
opportunities and indications of future trends in the labour
market after carrying out market research. Considering the
present state of preparedness, the establishment of compre-
hensive guidance services has been deemed necessary for this
purpose. The plan seeks to make a beginning in this direc-
tion and has proposed to:

"Make necessary preparations for establishing limited
guidance services on an experimental basis in four
hundred and fifty secondary schools (Six schools in

* A Country Report Prepared for APEID Regional Training Course on
the importance of National Educational and Vocational Guidance
Services for Women and Girls held in Canberra, Australia, 5-14
each district) of which at least two will be girls schools".

Counselling at secondary school level is important because the secondary level is the terminal stage of education for many boys and girls. Secondary education enables the students not continuing education beyond this stage to participate in useful economic activities and become gainfully occupied in productive work without being required to take long training courses.

Schools and the staff aiming to provide vocational guidance must be well aware of training facilities and job opportunities in the field, for the purpose of providing up-to-date information to school staff, students and their families.

The objectives of the vocational guidance system therefore are as follows:

- Helping individual students educationally and vocationally to discover and develop their abilities and interests;

- Guiding individuals to choose occupations according to their abilities and interests;

- Guiding parents to help their children in selecting suitable educational and vocational training courses, which may enhance their existing abilities and help them to specialize in one particular trade.

- Helping to provide gainful employment to the largest number of people through development and manpower training.

- Guiding secondary school teachers in helping to encourage students to select specialised training courses leading to gainful employment or selecting technical courses.

Before going into the details of existing guidance services available in Pakistan it is important to review the present state of vocational training opportunities available for females in Pakistan.
PRESENT STATE OF VOCATIONAL TRAINING IN PAKISTAN

There is a large variety of vocational training programmes both in the public and private sectors, which produce trained manpower of different categories. In the public sector training is imparted through formal vocational training programmes provided in the engineering universities, colleges, polytechnics, mono-technics, colleges of technology, technical training centres and commercial institutes of various categories. The Government has a plan to establish a network of technical trade schools and vocational institutes all over the country to provide training in technical skills to those leaving the school system at various stages before completing secondary education.

There are at present twenty-eight polytechnics including three for women and six mono-technics for the training of technicians. Seven of these polytechnics, also offering training in B.Tech, courses, have been renamed as Colleges of Technology. There is a plan to establish nineteen more polytechnics (twelve for men and seven for women) during 1985-86).

Skilled workers are being trained through a large variety of programmes some of which are managed and controlled by the Government while others are operating under autonomous, semi-autonomous and private organizations.

In the Government Sector, there are fifty training institutes which are managed by provincial labour departments. Of these, thirty seven institutions known as technical training centres, vocational institutions (including agro-technical introduced in 1975) are being developed under the national vocational training project aided by IBRD/ILLO/UNDP, plus organizations such as Water & Power Development Authority, steel mills, railways, Karachi Shipyard, Pakistan International Airlines, health institutes, agriculture departments and small scale industries.

Nevertheless, available information indicates that of the approximately 52,000 skilled workers trained annually, only 10% are being trained through the public sector training institutes.

The country has a plan to establish a National Training
Board to ensure the evaluation and standardization of these training programmes.

GUIDANCE SERVICES IN FORMAL SCHOOLS

In the formal school system guidance personnel are usually class teachers. These teachers are selected on the basis of their sensitivity to the needs of students. They usually have no specialised training in the basic principles of vocational guidance apart from their teacher training courses. However, they are usually guided by the principals of the schools in integrating the guidance component into the educational system. This type of guidance and advice is generally limited to the selection of elective courses at secondary school level, (science group or art group). Since the teachers have no information about the actual and potential occupations, however, they are not really able to play an effective role in vocational guidance.

A special project has been started for the training of in-service teachers of the Federal Area in this respect. The specialised training, in carrying out valid, reliable psychological tests and for interpreting these tests at schools was organized by the National Institute of Psychology, Islamabad, in collaboration with the Ministry of Education on an experimental basis. The project, started in 1977-78, was of five years' duration and was later extended for two years. During the project-period a total of about fifty primary and secondary school teachers teaching in the schools of the Federal area, were trained (one from each school). Out of these 30-35 were female teachers.

The training was carried out for three weeks initially, followed by fortnightly meetings with the two groups of trainees (primary and secondary school teachers) for four years. During the fifth and sixth years meeting with these groups were organized on a monthly basis to get feedback from the students and their families.

GUIDANCE SERVICES IN NON-FORMAL INSTITUTIONS

In non-formal education, however, vocational guidance is carried out in a more organized manner and is provided by the individual employer or institution concern. These institutions provide opportunities for specialized education and training, backed up by counselling and guidance, to direct
girls and women into non-traditional areas of education and employment. One of the good examples of this type of service was set up by Allama Iqbal Open University, in 1985. A Students' Advisory Cell was established at the main campus. The AIOU is a distance teaching institution at national level. It deals with a wide range of education, vocational training, in-service and functional education in areas of priority for development. Efforts are being made to bring young girls, illiterate women and drop-outs from the formal school system to vocational training through distance learning methods. These disadvantaged group of females generally remain out of our formal vocational training system.

The Student Adviser is a female, with a background of psychology. She has an additional duty of being in charge of student's extra-curricular activities. The Student Adviser has developed a close rapport with students and employers in the field. She is assisted by a clerical support staff. The Adviser also deals with all queries of students through correspondence. The Enquiry Cell has been in existence since 1979 but its role was previously limited to matters like non-arrival of course materials. It has only recently been extended through the provision of counseling services. The University has a plan to expand similar counseling services to its regional centres, where counseling is at present done by Regional Directors. The University has 14 regional and three sub-regional offices in the various provinces of Pakistan.

Special Women's Education projects have also been initiated by the University, such as vocational training through literacy and related projects and through distance learning methods. A major Secondary School Certificate (Women's Matric Education) Project, specially designed for rural women with an emphasis on skill training is about to be presented.

All these projects have female field staff, trained in advisory and guidance skills. The field staff members are expected to play an important role in motivating rural women and to offer their services for vocational guidance. The training of the field staff is usually done by the specially appointed consultants of the various women's projects.

Skill training guidance is also carried out in the
field at grass-roots level for women. At schools the
guidance is available generally at secondary level after
completing eight years of schooling.

GUIDANCE COMPONENT IN CURRICULA

The component of vocational and educational guidance
has been incorporated in teacher training courses for the
formal system. The proposed scheme of studies for the
Primary Teacher's Certificate programme presented by the
University has a full paper of 100 marks on Child Develop-
ment and Counselling. Various issues regarding counselling
are covered in this paper, such as counselling in primary
schools, the tools and techniques of counselling, counsell-
ing and the teacher, group and individual counselling, along
with the importance of teacher-community relationships.

At C.T. level (Certificate of Teaching) the scheme of
studies includes one full paper on counselling, testing and
evaluation (with 100 marks) for the elementary stage. After
successful completion of the course the teacher is expected
to conduct various types of achievement tests and interpret
their results. The teacher is also expected to possess full
knowledge about various counselling services and acquire the
basic skills of counselling.

Similarly teacher training syllabuses in the non-for-
mal, distance education system have counselling and guidance
components in the form of separate units.

The secondary level curriculum in the formal system
contains hardly any component of counselling and guidance.
However, the curriculum of secondary school education for
women through the AIOU distance teaching system has special-
ized courses particularly designed to meet the existing
needs of rural women. The courses are skill-oriented
towards occupations as such as teaching, health-workers,
secretarial skills, etc.

Counselling and guidance components have been incorpo-
rated in the course on Education. Educational vocational
guidance however, is reinforced through all the specially
designed elective courses. In addition, a special 35 mm
film has been produced by the Women's Division, Government
of Pakistan, on Women at work. The film deals with various
vocational skills suitable for Pakistani Women. The film is
shown, in female schools for teachers, students and their
families in order to create a general awareness about the
vocational training services available.
DATA BANK
STATISTICAL GLIMPSES
OF
ALLAMA IQBAL OPEN UNIVERSITY

Established 1974
Course enrolment upto October 1985 4,91,019*
Total course enrolment in October Semester 1985 52,745*
Student enrolment in October 1985 Semester 33,055
Overseas course enrolment in October 1985 Semester 368
Overseas student enrolment in October 1985 Semester 162
Course participation ratio Male 65% Female 35%
Student participation ratio Male 64% Female 36%
Total courses offered upto October 1985 80
Courses offered in October 1985 Semester 74

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<th>Fields of Study</th>
<th>Courses</th>
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<td></td>
<td>Enrolment</td>
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<td>1. General Education</td>
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<td>(i) Intermediate</td>
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<td>(ii) B.A.</td>
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<td>(iii) M.A. Educational Planning and Management.</td>
<td>365</td>
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<td>2. Teacher Education</td>
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<td>(i) Primary Teachers Orientation Course (PTOC)</td>
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<td>(ii) Primary Teachers Certificate (PTC)</td>
<td>8512</td>
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<td>(iii) Certificate of Teaching (CT)</td>
<td>1097</td>
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<td>(iv) English Language Teaching (ELT)</td>
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<td>3. Functional Courses (Credit)</td>
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<td>(i) English Typewriting / Shorthand</td>
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<td>(ii) Urdu Typewriting/ Short-hand</td>
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<td>4. Functional Courses (Non-Credit)</td>
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<tr>
<td>(i) Agricultural Courses</td>
<td>412</td>
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<tr>
<td>(ii) Elementary Arabic</td>
<td>488</td>
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<tr>
<td>(iii) Daftari Urdu for Federal Government Officers</td>
<td>1004</td>
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*Basic Functional Education enrolment not included.
Media Support

(i) Radio Programmes presented upto October 1985 4314 Semester
(ii) T.V. Programmes presented upto October 1985 760 Semester
(iii) Radio Programmes presented in October 1985 387 Semester
(iv) T.V. Programmes presented in October 1985 44 Semester

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(ii) Sub-Regional Offices 3
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