



**PAKISTAN JOURNAL OF
DISTANCE EDUCATION**

VOL.. 1

SPRING 1984

**an
international research
journal**

Research and statistical centre
Allama Iqbal Open University
Islamabad Pakistan

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OF
DISTANCE EDUCATION**

**VOLUME I
SPRING, 1984**

AN INTERNATIONAL RESEARCH JOURNAL

Published by

RESEARCH AND STATISTICAL CENTRE

ALLAMA IQBAL OPEN UNIVERSITY

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Pakistan Journal of Distance Education is a twice yearly international research journal dedicated to distance education. The Journal welcomes studies, research and review papers dealing with the past, present and future perspectives of distance education, with a view to awakening further interest in the newly growing discipline and opening new vistas of research.

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*Dr. Ahmed Noor Khan,
Director,
Research and Statistics Centre,
Allama Iqbal Open University,
Sector H-8,
Islamabad, Pakistan.*

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EDITORIAL

DISTANCE EDUCATION IN THE THIRD WORLD : CHOICES AND CHALLENGES

Over the last two decades, distance-education has become increasingly recognised as a significant form of education. Both developed and developing countries have seized upon its advantages to meet pressing educational and social needs. As Dr. Allana says in his article, it is maturing rapidly from a field of study towards a discipline in its own right. More importantly, its effects are being felt and revealed, often quite strikingly, throughout the world and it has made its way deep into the educational, social and economic main-streams of many societies.

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

Despite these real achievements, however, it is essential that these new systems also create new curricula, that they are not simply used to reach out-of-date academic targets. The learning effected through distance education must try to meet real-life needs and in the most effective and economical way possible. These needs are massive in scale and many need to be met through use of the mass-media. At the same time, we must not be allured towards the highly expensive media if more modest methods and materials will suffice.

In developing countries also the training and performance of tutors is of great importance, and some face-to-face access may remain both a necessity because of postal and telephone deficiencies, but also because of distance and travel difficulties.

Distance education has achieved much in the third world, but much remains still to be done. Better courses will lead to higher completion rates and to greater acceptance by both local communities and by the wider world of education and work. More effective education, distribution and evaluation systems will make distance education more attractive as an alternative or supplement to formal provision.

It is sincerely hoped that this journal will make a worthwhile contribution to such progress. It is intended as a forum for all countries and everyone working in the field of distance education. In this first issue there is some emphasis on our own institution. However, it is hoped that this will encourage staff from overseas institutions to offer accounts, analyses and research reports in respect of their own efforts and activities, but also on wider aspects of distance-teaching methodologies and systems. We introduce ourselves with this first volume to our world-wide colleagues and look forward to a response from them.

Ahmed Noor Khan



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DISTANCE EDUCATION AND NATIONAL DEVELOPMENT*

By

DR. AHMED MOHIUDDIN

In an age in which a tremendous explosion of knowledge, particularly of Science and Technology, has brought about a great social and economic change in general, the benefits of such a change, by and large, have been confined to the developed countries. The developing countries of the world have not been able to benefit much from such a technological advancement and improve the quality of life of their people. Even within the national contexts of the developing countries, the benefits of technological advancement are restricted to a few at the cost of millions of others who inhabit the far flung rural areas which are now classified as the "low hope areas" in development terminology. Illiteracy, poverty, lack of proper health care, large populations and even lack of clean drinking water are some of the main problems that the rural people of these countries face today. Almost 500 million people in these lands still live below the poverty line. According to a recent World Bank report these countries have a *per capita* annual income below \$ 250.00. A future historian will indeed note with great disbelief that the second half of the twentieth century was characterized by two seemingly contradictory trends: accelerated technological growth and mass poverty.

Development has been defined until recently in terms of growth and productivity, for which certain basic inputs in the form of greater investment and better technology were essential. Most planners have now abandoned this narrow position and have veered round to the view that development is more than simply economic growth. They now concede that the distributional aspects of development are also important; *i.e.* the qualitative content of economic growth, the benefits reaching to a much wider base. The presence of some islands of urbanization in a preponderantly rural sea would not be accepted as national development.

Given the complex nature of national development, it is important to see any particular activity in the context of other development processes. The essential inter-relationships between different sectors of development mean that concentration on one sector at the expense of others will be counter-productive. It is a mistake to think that massive investment in one sector will bring about

Professor Dr. Ahmed Mohiuddin, former Vice-Chancellor of Quaid-e-Azam University and of Allama Iqbal Open University is an educationist and scientist of national and international repute. A founder member of the Pakistan Association of Scientists Dr. Ahmed Mohiuddin has led several official delegations abroad. He has published over 33 research articles in national and international journals.

*Paper read in the International Conference "Twentieth World Conference Learning at a distance June 9-15 1982 held in Vancouver, Canada.

development. No single sector on its own will enable a country to improve the standard of living of the majority of its people. This applies to education as well as to other sectors. Educationists can be forgiven for acting as though education alone will lead the way to national development. Education can have a major influence only if it is coupled with changes in other sectors. It is changes in other sectors which make education a necessity as well as an agent for change. Education can both facilitate and respond to change and development occurring elsewhere, but it cannot on its own produce these changes.

If national development affects the lives of the majority of the population so should a system of education. Such a system of education for national development certainly cannot function from within the bounds of a formal system, and no state exchequer, particularly in a developing country could afford to pay for the traditional methods of providing education on such a scale.

A system of distance education appears to be a possible solution to the problem. Although distance education was largely developed in Great Britain—one of the developed countries of the world—it seems to suit more the needs and conditions of a developing country, which has to reach the mass of people in the shortest possible time.

The popularity of the system can be judged from the fact that within ten years of the establishment of the Open University in the United Kingdom about twenty-five institutions of distance education have been established in every continent of the world. Interestingly enough, these institutions are located in both the developed and developing countries. For example in Pakistan the Allama Iqbal Open University was established in 1974. Side by side with the general education courses, it also has courses in agrotechnical skills and areas of occupational interests including Electrical Wiring. The courses range in level from literacy to a highly specialized Master's degree programme in educational planning and management. The Allama Iqbal Open University has widened the scope of distance learning as a means of national development.

As we understand it today, a system of distance education as an organized programme of teaching and learning, should aim at extending the facilities of education to all sections of a society in the shortest possible time, regardless of who and where they are. Functional and occupational courses taught through distance education have great potential to serve as an effective means of producing the type of manpower required by many sectors of a national economy. One striking feature of the system is its ability of providing adults with the opportunity of personal and occupational growth according to their aspirations, at minimum cost and without disturbing the routines of their working life.

Many of the problems of developing countries result from the imbalances between the supply and demand of the right kinds of manpower required for development activities. This imbalance is evident in shortages of manpower in critical sectors of development. A large number of the population who received initial education require retraining for jobs where there is great demand for labour. This re-training must take place in the shortest possible time and certainly before a major change occurs in the economic fortunes of the society. Here is an area which provides new challenges to the planners of distance education systems.

The high percentage of illiterate people in the developing countries is also a source of many problems. Since literacy on its own pays negligible dividends, it does not attract the masses. On the other hand development projects without literacy may not succeed. In Pakistan, I have witnessed several development schemes, especially for the rural sector of the country, ending in failure mostly for reasons of mass illiteracy. It is not mere rhetoric, this is the problem of many nations of the world, and many of you present here will certainly share this concern with me.

We can see that a distance-learning system has potential for contributing to a nation's development through the process of educating and re-educating the masses. But the currently known system or systems of distance learning have limitations in educating the uneducated or the illiterates. The scope and media of distance learning should be defined and redefined to cater to the needs of the millions of people for whom illiteracy is a major handicap, so that they can become more productive members of their societies and contribute to their own individual and national development and well-being. Elimination of illiteracy is only one of many challenges to systems of distance education in the developing countries. And as I said earlier, the system as it has evolved in the developed countries of the world, has not yet oriented itself to the situations prevalent in the developing countries as it generally caters for the vast proportion of the population who are at the post-literacy level. In the developing countries, on the contrary, individuals at post literacy stage do not represent a major proportion of the population. We need to use this conference to redefine the meaning and scope of "distance education" and determine its goals and objectives, in the broader perspective of the problems and educational needs of the masses in the developing countries of the world.

In Pakistan, as I said, we established Allama Iqbal Open University, as a national centre for distance-education. We are now teaching over 45,000 students annually. There are currently over sixty courses, ranging from basic literacy to a Master's degree, including programmes in general functional, vocational and professional areas of specialization and immediate national needs.

We are beginning to use the distance-education system for our national development and I see great prospects for such an enterprise in other countries of the world. The present conference has indeed provided a great opportunity to "distance educationists" drawn from all parts of the world to share the experiences and concerns of each other and to evolve a viable methodology and a workable plan of action to popularise the system for the more effective accomplishment of the national tasks assigned to them. I hope that the papers which follow will certainly shed light on different aspects of the problems and provide an opportunity for critical examination of the entire spectrum of prospects and constraints associated with this emerging concept.



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DISTANCE EDUCATION AND ITS FUTURE THROUGH NEW COMMUNICATION TECHNOLOGIES

PROF. DR. G. A. ALLANA

An Emerging Discipline

Distance education is becoming an increasingly common mode of education both in the developed and the developing countries. It is speedily showing sign of maturity and it is expected that it will soon move over from a field of study to a discipline. It is likely to spread fast in the developing world as it promises to ease out the mounting pressure on the formal school system, reach with speed and economy to educationally disadvantaged groups of population and contribute significantly to the acceleration of the development process through the use of an array of communication technologies.

Distance education is a land of contrasts. Nowhere are these more evident than in the technologies used by distance teaching institutions. With great promise for the future, in principle, it implies a commitment to increased accessibility to a vast variety of audience. This accessibility means a readiness to meet students where they are educationally as well as geographically and to provide carefully tailored programme offerings and assessment to help them meet their personal, economic, social, vocational objectives. In addition, such a system reduces the constraints on how people can learn by utilizing new educational techniques and methodologies and provide new opportunities for interdisciplinary study.

The main stays of distance education are the print and communication technologies. The print is often supported by broadcasting particularly in the developing countries. Research, however, shows that in the recent past there has been a move away from broadcasting. It is evident from the growing realization that the amount of learning materials required to be made available for courses would be too great to be covered by broadcasting alone. Broadcasting technologies have their limitations in terms of fixed timings, higher unit costs, low level of listening and viewing skills, inadequate accessibility, poor production quality, inconvenient distribution, awkward transmission, political considerations, academic distrust, etc.

Trends in Communication Technologies

Two different trends are emerging fast in the communication technologies for distance education. The first pertains to more choices and more difficult

Professor Dr. Ghulam Ali Allana is Vice-Chancellor, Allama Iqbal Open University. An eminent scholar in linguistics, literature, history and folklore Professor, Allana is founder Director of the Institute of Sindhology. The author of 20 books and the same number of research articles he has led several official delegations abroad.

decisions regarding the selection and use of technologies and the second refers to the fast shrinking boundaries between different communication technologies. Developing countries, however, are enthusiastic about the broadcasting media despite their technological limitations and financial constraints.

The distance education institutions in the developed countries are offering more and more video cassettes, video-disc and audio cassette services to their students mainly to back up transmitted programmes. These countries, however, have yet to decide the use of video cassettes in comparison with broadcasting. Current practices regarding use of broadcasting still favour it as it has the ability to reach every home and the costs are lower than video cassette distribution costs. These countries are also seriously considering the use of satellite and cable television as they provide more channels and hence better coverage and better transmission times.

Other technologies, with limited use, include telephone teaching and possibly in the next 2-3 years viewdata and telex. Viewdata is a significant new technology. It is, however, in its early stage. It is, therefore, difficult to predict its potential for distance education. Use of teletext is also in an experimental stage but it holds a promise for effective distance teaching.

The domestic computer offers another technology for distance education because of the rapid development of micro-processors. Other technologies which are likely to influence the course of distance education include computer-assisted-learning (CAL) in the form of pre-packaged computer assisted instruction|computer managed instruction, the open-access auto-elaborative computer assisted learning and the collectively-elaborative computer assisted learning. This technology has just started playing its role in distance education, particularly in adult education. It could not be tried earlier as the costs were abnormally high. The recent technological improvements have made the use of this technology a practical possibility. Yet another trend in prosperous countries for the promotion of distance education refers to two-way system (interactive) instead of one way system *i.e.* broadcast. The interactive system for distance education is characterised by quality, suitability, understanding, availability, readiness, depth, and low costs.

Research carried out in the developed countries regarding the use of new communication technologies has made new demands on students, teachers and the institutions. The strains of these demands make the distance education systems become rather inflexible and there is a tendency for media to be squeezed out of the teaching strategies or, at least, reduced to an enrichment function.

Distance education systems operative in developing countries are also under the stress of similar demands. These demands are, in their case, rather more pressing as the level of visual literacy happens to be quite low. The distance

students in these countries need to be assisted in developing visual literacy skills or television programmes will never be able to carry the core content of a course. Alongwith these demands the use of communication technologies is greatly influencing the issues of power, control, evaluation, funding and budgeting within the distance education institutions both in the North and the South. The investigation into these issues proposes designing interacting organizations leading to change in the existing structure of distance education *i.e.* from almost independence to interdependence.

The expose may lead to conclude that it will not be possible during the later half of the decade to discuss an individual communication technology in isolation. Television, telephone and computer are merging into single technology called communications or telematics. This situation presage fundamental changes in distance education during the current decade. Present communication technologies require the distance learning institutions to rather operate complex delivery system of broadcasts and mailings in order to take advantage of various devices with the student. If the advance of technology integrates these devices into a single domestic terminal it will greatly simplify the delivery system as well as enable the institutions to create, at a distance, the ideal of a mutually dependent community of teachers and taught.

The AIOU Experience

Allama Iqbal Open University is essentially a distance learning institution. Since its establishment in 1974 it has been able to create the necessary structures for the development and production of course books and radio and television programmes. By 1982 the University had produced 789 radio programmes and 160 television programmes. These programmes are in support to 36 media-based courses. On average, a full-credit course has a radio support of 9—18 programmes of 15 minutes each and 5—7 television programmes of 30 minutes each. The Functional Education courses claim greater broadcasting support than other courses.

Both radio and television programmes were originally produced in collaboration with Pakistan Broadcasting Corporation and Pakistan Television Corporation on a fee-payment basis. For a number of reasons, including financial, this arrangement was never satisfactory. Since 1978 the University has produced its own radio programmes and, since 1983, has been in possession of purpose-built studios for both radio and television production. The studio buildings house the Institute of Educational Technology and its professional staff of producers, engineers and designers as well as a non-broadcast media section.

The radio studios have the capacity to produce 750 programmes per year and the television studios 100 programmes. All are intended to supplement, require and elaborate on areas of the correspondence texts which need this. The programmes are well received by students and have also created much interest among

general listeners and viewers. Indeed, they act as a useful means of recruiting students and as a helpful way of keeping the University's aims and activities before the public.

Programmes are monitored by academic and production staff, but also through Regional Offices since radio programmes are broadcast by local stations using tapes supplied by the University. Evaluation of broadcasting, in terms of student use, educational impact and cost-effectiveness has not so far been systematic. A large-scale questionnaire/interview study is nearing completion, however, and this should produce very useful data.

In the meantime, several problems remain. Although the University now has control over both radio and television production, it is still dependent, of course, upon PBC and PTV for transmission. Two chief difficulties arise. The first is transmission costs, which for radio are Rs. 14,000 (£ 700) per hour and Rs. 20,000 (£ 1,000) per hour. These very high charges are a very serious drain on the University's resources, despite the wide audience coverage theoretically possible.

The cost/coverage issue is directly related to the second problem, that of actual transmission times. These are negotiated with both Corporations every three months for the following quarter and there is often great difficulty in obtaining timings suitable for our target groups, particularly of course during peak audience periods.

Because of these problems, but also because of student access difficulties as well as on educational grounds, the University is turning towards video and audio-cassettes, slides and viewfoils, etc. In a phased development over the next three years, and with UK/ODA assistance, 160 model study centres will be set up throughout the country. They will be equipped with colour television, slide-projectors and viewers, radio/cassette-players and headphones. Progressively at least a third of these centres will also have VCRs and overhead projectors. The first forty of these centres are scheduled for operation by the end of 1984. A further ninety centres will be equipped to a lower standard, but, as resources permit, it is intended to upgrade all centres eventually.

Not only will facilities assist with access to radio and T.V. They will enable the use of other media packages which may, in fact, be more educationally effective and economical. In addition, such centres may become the focus of local educational activity not only for students of Allama Iqbal Open University, but for the community as a whole.



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**DISTANCE LEARNING SYSTEM AND STRUCTURES
COUNTRY PAPER ON
ALLAMA IQBAL OPEN UNIVERSITY PAKISTAN***

By

DR. IFTIKHAR N. HASSAN

Context

Pakistan is an agricultural country situated in South Asia. It shares its borders with India on the east and Iran and Afghanistan on the west. It has an interesting topography. The north and north west consist of high mountain ranges including the second highest peak in the world, K-2. On its extreme south is the Indian Ocean. Karachi is the biggest city of Pakistan and is also its chief seaport. The river Indus and its tributaries with a net work of distributory canals and dams provides both water and electricity to its 83.7 million population.

Most of the population is concentrated in the plains of the Punjab and Sind where the population density is 229 per square kilometre and 134 per square kilometre respectively, constituting 56 per cent and 22 per cent of the total population. The population density for the whole of Pakistan is 109 per square kilometre.

Pakistan's urban population in 1981 was estimated as 28.3 per cent of the whole. Sind is the most urbanized province of Pakistan with 43.4 per cent of its population residing in cities and towns. Karachi is the biggest city having a population of 3.5 million, followed by Lahore with a population of 2.2 million. The population growth rate as estimated from the 1981 census indicates that Pakistan's population has increased five times in the last 80 years. The inter-census growth rate between September, 1972 when the last census was conducted and March, 1981 works out to 3 per cent. Pakistan has an agricultural-based economy which, with rising costs of oil imports is suffering from all the ills which appear to be the lot of third world countries. Perhaps the only positive sign in its economic growth is that the country is self-sufficient in food and also exports agricultural produce. Pakistan has a fairly well developed system of roads, railways and airways which link all parts of the country. The postal

*Professor Dr. Iftikhar-un-Nisa Hassan is Dean, Faculty of Basic and Applied Sciences in Allama Iqbal Open University. She holds a Ph. D. in Clinical Psychology. She was Director, National Institute of Psychology, has acted as Vice-Chancellor, Allama Iqbal Open University and has been a UNESCO consultant.

*Apeid Study Group Meeting on distance Learning Systems and Structures, Wellington, New Zealand.

system is also quite efficient. Even the remotest village is served by the Department of Post and Telegraphs. The same is the case with telephone, radio and television networks. The radio covers 100 per cent of the country and the telephone about 80 per cent, whereas television at present covers only 30 per cent. However, it is hoped that in the near future television coverage will also improve.

Educational Setting

Pakistan, like India, inherited a British system of education which is basically a system for the education of the elite. The students who pass their grades remain in school and the ones who fail are made to leave school. Secondly the approach is content-oriented, with very high standards of theoretical knowledge, which forces students to resort to rote-memorization.

There have been many efforts to bring about education reforms in the last thirty-five years. The curriculum has been revised many times and emphasis has been shifted from one area to another. Presently more emphasis is being placed on primary education as compared to higher education which uses up the major part of the educational budget. The Pakistan Government spends about 2 per cent of its G.N.P. on education which is very low and is being increased in the next five year plan. Similarly the total allocation for primary education is being increased in the next five year plan. The target of achieving universal primary education is being revised from 1983. A special group has been appointed by the President to suggest ways and means of achieving universal literacy in the next five year plan. The group has presented its report to the President and although the document has not been publicly released as yet, it is understood that greater stress has been laid on using informal and non-formal means for improving literacy *e.g.*, mosque-schools, local councils, mass media and distance teaching institutions.

Elementary education in Pakistan is free but not compulsory. About 60 per cent of school age children are in school. The drop out rate is quite high in primary schools. There is a tendency on the part of the parents to pull out their children from school around the age 8 to 11 to use them on the family farm or other family enterprise. In the case of girls it is to help around the house. This tendency is quite high in the rural areas where the drop out rate is more than 50 per cent in the first five grades. The retention rate is better in high schools, but many students do not continue their studies beyond primary or elementary school level. This is much worse for girls and the ratio between boys and girls is that of 3:1 at all levels of education.

Education is a provincial matter and each province has its own separate policy and budget allocations. However, universities being autonomous bodies receive grants in aid from Federal Government through the University Grants

Commission. Provincial Governments also receive Federal grants and policy guide lines for making their own education policy especially regarding innovations or educational reforms. Although the provinces are free to make their own budgets etc., there is a lot of uniformity between the provinces as far as the curriculum and educational budget or teachers salaries are concerned. The medium of instruction in all parts of Pakistan except rural Sind is Urdu. English is taught as a second language and Arabic has gained a lot of importance since a large number of Pakistanis are finding employment in the Middle Eastern countries. There are about 60 thousand primary schools, 10 thousand middle schools and high schools, 500 arts and science colleges, 100 professional colleges (medical, engineering, agriculture, etc.) 100 teacher training institutes, 250 polytechnics and technical and vocational schools and 19 universities. The total estimated enrolment at primary school is 7 million, in high school 2.3 million in arts colleges .25 million. 30 per cent of the total educational budget is currently being spent on primary education and the rest on technical, vocational, professional and university education.

Historical Development of Distance Learning Institutions

Pakistan has a tradition of private education in which the student appears for public examinations by preparing at home or by attending private institutions which help students in preparing for public examination at different levels. The number of candidates appearing for BA and MA level examinations has been quite high in the past. Most of these persons are in-service and not able to complete their education earlier.

A small fraction has been studying through correspondence both at home and abroad for higher professional courses. The diplomas in Chartered Accountancy and various branches of engineering and technology with UK-based universities are some of the popular programmes.

The establishment of Allama Iqbal Open University in 1974 has been one of the major efforts on the part of the Government to provide an alternative to those who, due to one reason or another, have not been able to complete their education at a younger age. The University has been established not only to provide continuing education to in-service personnel but also to educate the masses in important areas which may enhance their economic base and bring positive changes in their life style. The approach is functional and goal-oriented. The establishment of Allama Iqbal Open University was viewed by the policy planners as a supplement to the formal system which may help the Government to combat growing ignorance amongst the public, poor access to schooling, retrieval of educational drop-out and provision of continuing education facilities to in-service people, especially teachers.

Institutional Structure

Allama Iqbal Open University was established in 1974 under an Act, of Parliament. It was fashioned after the Open University of the United Kingdom, and senior staff of the UK Open University have been working with the staff of Allama Iqbal Open University on a long time consultancy basis. In addition academic and administrative staff of Allama Iqbal Open University are sent to the UKOU for training. Following are its major objectives as stated in the Act :—

- (1) To provide facilities to people who can not leave their homes and jobs in such manners as it may determine.
- (2) To provide such facilities to the masses for their educational uplift as it may determine.
- (3) To provide facilities for the training of teachers in such manner as it may determine.
- (4) To provide for instruction in such branches of learning, technology or vocations as it may deem fit.
- (5) To make provision for research and for the advancement and dissemination of knowledge in such manner as it may determine.

Unlike other institutions of distance learning, the incubation period of Allama Iqbal Open University has been relatively short and the expansion of programmes and enrolment quite rapid. Being the only institution of distance learning in the country, it works very closely with the Federal Ministry of Education, formal universities of the country and many related ministries and welfare agencies like the Ministry of Local Government and Rural Development, the Agricultural Research Council and the Ministry of Health and Social Welfare. Being a University it is a member of the University Grants Commission like the rest of the Universities of the country and its degrees and diplomas are recognized by the University Grants Commission.

Divisions and Sections within the University

The University has four major programmes under its Act :—

- (a) Teacher Education.
- (b) Functional Education.
- (c) General Education.
- (d) Research and Evaluation.

In order to execute these programmes several academic departments and institutes are organized under three faculties, *i.e.*, Faculty of Basic and Applied Sciences, the Faculty of Social Sciences and Humanities and the Faculty of Education, each headed by a Dean. The major academic departments include: the Institute of Arabic and Islamic Studies, Department of Basic Sciences, Department of Agricultural Sciences, Department of Industrial Education and Business Management, Department of Home Economics and Women's Studies, Department of Social Sciences, Departments of English, Urdu and Iqbaliat.

The average enrolment in each semester is about thirty-five thousand. As students can enrol upto two credit courses in one semester the average number of students in one semester is about twenty thousand. Most of the students in the functional and teacher-training programmes take only one course at a time.

Students

Its academic programmes vary from functional programmes like Kitchen Gardening, Tractor Maintenance and Poultry Farming to general education courses leading to FA, BA and MA. There is no entry requirement in terms of age and academic qualification for functional courses or such students who are not following a degree programme. However, BA programme require students to have a intermediate diploma or certificate as an entry requirement and the Intermediate programme requires a matriculation certificate.

The first convocation of the Allama Iqbal Open University was held in 1979 and the youngest student receiving a certificate was a 16-year old girl and the oldest student was an 82-year old man who had enrolled in an Arabic language programme. Being an open learning system the university does not stop any one from registering in its courses because of age. However, due to the nature of its courses, the students who enrol are generally adults.

One of the researches carried out by the University's Research Cell in 1982 of a small sample indicated that 50 per cent of students take AIOU courses because they are interested in education, 37 per cent to improve their technical and vocational skills and for promotion in their present jobs and about 3 per cent for other reasons. The largest group of students falls in the age group of 21 to 30 years. They make up 50 per cent of the student population. 15 per cent are in the age group under 20 years and the rest are in the 30-*plus* age group. Only 2 per cent fall in the 51 years and above category.

An overwhelming majority of the AIOU students are government servants and they make up 73 per cent of the total student body. This category also includes teachers. They are followed by students and businessmen, who comprise 7 per cent each. House-wives are 4.5 per cent of the total and rest of the groups are 2 per cent or less.

Course Structure

As already mentioned, there are four main programmes. Each is discussed below.

Functional Education

Functional Education Courses are viewed essentially in the occupational context. The prime purpose of functional courses is to assist individuals in acquiring applied knowledge, skills and desirable attitudes required for improved productivity and living. Some functional courses are accredited for general education at various levels depending upon the academic level of the student and of the course.

General Education

The University's programmes of General Education lead to the following qualifications :—

- Intermediate Certificate.
- BA Degree.
- MA (Educational Planning and Management-EPM).
- Diploma (Post-Graduate).

The General Education Programme provides an opportunity for continuing education/training to those who cannot join formal educational institutions for various reasons.

Teacher Education

The University offers orientation and training courses for in-service teachers at school and college levels. Orientation Courses are designed to update the knowledge of serving teachers in subject content and teaching methodology. These courses are : Primary Teacher's Orientation Course (PTOC) ; Primary Teacher's Certificate (PTC) ; Certificate of Teaching (CT) and Arabic Teacher's Orientation Course (ATOC). A Post-Graduate Diploma Course is offered to college teachers of English language. Also an MA level programme for in-service educational planners and administrators in the field of Education Planning and Management (EPM) is offered.

Research and Development

The programme provides for conducting surveys and research in the following areas :—

- a. *Adult Functional Literacy Education.*—To develop reading materials and to devise methods for use on a wider basis by other field organizations. These projects are currently located at Daultala, Punjab (completed) ; Bhitshah (Sind), Sarai Naurang (NWFP), Samhani (AJK) and Baluchistan (area yet to be identified).

- b. *Survey Research*.—To assess the needs and demands of people, to determine the types of courses and programmes to be offered.
- c. *Instructional Research*.—To help in the design, improvement and revision of instructional material so that it is of optimum effectiveness.
- d. *Evaluation*.—(Based on a regular system of feed-back). To provide a valid basis for the improvement of subsequent course and programmes.

Women's Studies

Allama Iqbal Open University, under the directive of the President of Pakistan, is preparing a comprehensive literacy, middle and high school, programme for women's education. Priority is being given to courses leading to matriculation through distance teaching. Several courses are under preparation and will be launched in 1985.

Teaching System

Allama Iqbal Open University is primarily a distance teaching institution using multi-media techniques. The main components are :—

- a. Correspondence packages which include books and supplementary study materials ;
- b. Radio and television broadcasts specially prepared for distance learners ; and
- c. Tutorial instruction through correspondence, at study centres where possible and workshops, where appropriate.

The printed lessons (units) are sent to students' home or places of work. These are integrated with radio and television lessons. The schedule of these programmes is sent to the students with the correspondence packages. Tutorial guidance is imparted by specially appointed tutors through correspondence as well as tutorial meetings on previously fixed week days in the evening and on Fridays. The tutors also mark student's assignments which form an integral part of each course.

Allama Iqbal Open University's teaching system is student-based rather than teacher-based. A full credit course has an actual study period of 18 weeks. A correspondence unit for each week requires 10—12 hours of study per week. A half-credit course comprises nine units. Most of the courses have nine or more

radio programmes during the semester and some courses have a television component. The University has established study centres in various educational institutions where tutorial meetings are held weekly or fortnightly. Attendance at the study centres, though highly desirable, is not compulsory except for technical courses.

Students are expected to work regularly through the semester. Each full course has four assignments (a half credit course has two) which the students are required to complete and send to their tutors for assessment. The tutor-marked assignments are returned to the students with instructional comments. The marks obtained by the students in these assignments are sent to the Controller of Examinations for recording. The final examination is held in the last week of the semester. The overall result is based both on continuous assessment and on the final examination, 50 per cent weightage being given to each component.

Cost Effectiveness

Since the University is still at an early stage, any analysis of cost-effectiveness of the University is necessarily tentative. The main area where the University programmes overlap with conventional system is in the field of General Education. A study has shown that the costs of the University are roughly equal to those of conventional education at Intermediate level, but considerably lower at Degree level. The cost of in-service teacher training courses is almost one-fifth of a comparable on-campus course. However, once the University is functioning fully, analyses of cost effectiveness would undoubtedly reveal a much greater cost advantage for its system.

Tasks Ahead

During its pioneering years the University has done a remarkably good job in setting up a suitable structure, creating study materials, organizing material distribution, developing assessment and examination procedures, etc. Problems which are fast becoming apparent include the balance between central control and evolution of regional authority; the level and method of market research; the need for coordination of course planning. During the last five years the University has reached a point where it offers 61 courses with a student enrolment of about 23,000 during the last semester (1983). The present seems to be an appropriate time to make a critical reappraisal of University performance and consolidate its efforts in improving programme offerings in a systematic manner.

The courses that are being produced by the University now need to be grouped into majoring areas that would enable students to pursue their certificates and degrees in a set of allied courses. The intention is to arrange courses in clusters like Technical, Functional, Business, Language, Humanities, etc.

Due to the particular socio-economic and cultural conditions of the country the female participation rate in education programmes has been very low at all stages of education. There is therefore, an urgent need to increase the rate of female participation during the next few years. As already mentioned, the University is developing courses particularly tailored to the specific requirements of women, for launching within the next two years.

Dividends in distance teaching are also dependent on teacher performance. In order to promote greater interest and effective participation, both role-based and content-related tutor-workshops are envisaged. These would involve a series of workshops for over a thousand AIOU part-time tutors for various courses. AIOU is also actively considering engaging senior experienced tutors as Senior Tutors, based at its Regional Offices.

There is need to augment study centre facilities including the availability of supplementary books and audio-visual media material and equipment at all centres. Distance teaching will increasingly serve the far off and deprived areas of the country as more study centres are established there.

With the rapid increase of student enrolment in the University courses from a mere 904 in 1975-76 to 63,658 in 1983-84 the University is using computer services, addressographs and other technological devices as to improve the efficiency of the registration, mailing and feedback systems.



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THE NEED FOR NON-FORMAL EDUCATION IN PAKISTAN

By

DR. SHAUKAT ALI SIDDIQI

The profile of education in Pakistan during 1983-84 presents an interesting matrix of educational constraints, developments and challenges which warrant our serious consideration. The estimated rate of literacy for age 10 and above is around 26 per cent for both sexes, 32 per cent for males and 14 per cent for females. The rate of literacy in rural areas is as low as 15 per cent (both sexes) with a 23 per cent rate for male and hardly 5 per cent for the female population. The number of illiterates in the 10+ age group is estimated to be around 50 million in 1984. Around 55 per cent of the children in the age-group 5—9 are enrolled in primary schools covering 75 per cent of the male and 35 per cent of the female population 10 + age group. Even with 7.3 million enrolment in primary schools, about 6.8 million children (5—9) are still out of schools in 1983-84. About 55 per cent of those enrolled in primary schools drop out before completion of primary education, adding an additional number of over 4 million out of school youth per annum to the already bulging stock of 50 million illiterates in the country. Pakistan is spending around 1.7 per cent of its G.N.P. on education during 1983—84. This allocation is indeed shamefully low even in the context of other developing countries of the world: India, Thailand, Egypt and Malaysia are spending 2.8 per cent, 4 per cent, 5.5 per cent and 6.7 per cent of their G.N.Ps respectively.

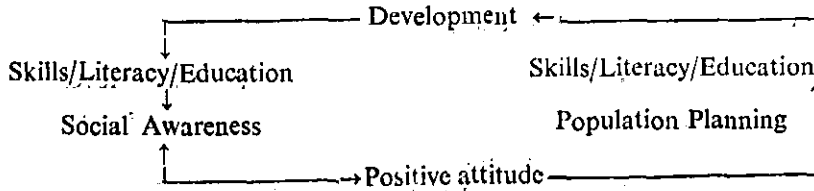
These constraints have led to the exploration of alternative methods of reaching masses of people in the shortest possible time. Let us look at the alternative strategies which may be adopted to over-come this colossal problem in Pakistan.

Alternative Strategies

The problem of development in Pakistan can better be explained (in Gunnar Myrdal's words) as the problem of circular causation. All forms of development imply fuller participation of national manpower in productive roles. This participation demands preparation of the masses by providing them with basic literacy and some training in employable skills. Huge resources are required to provide institutionalized training in literacy and skills to masses of people. Developing countries cannot afford to provide this training until the explosive

Dr. Shaukat Ali Siddiqui is Dean, Faculty of Education in Allama Iqbal Open University. A professor of education Dr. Siddiqui has long professional experience and has represented Pakistan at national and international education conferences. He is the author of numerous research articles on national issues.

rate of population increase is checked by changing people's attitudes towards family size. Positive change towards family size in itself demands a certain amount of education or social awareness as a high positive correlation has been demonstrated between population control and education. The theory of circular causation can be illustrated through the following diagram :—



Pakistan at the present stage of its development, therefore, seems to be fully entangled in the cobweb of circular causation which can only be broken through simultaneous adoption of alternative strategies and approaches. Some of these strategies may be listed as below :—

- (1) *Universal Primary Education.*—As revealed by the data above even at present, only 55 per cent of the school age children are enrolled in primary schools. The percentage of girls attending primary schools is as low as 35 per cent. Our efforts need to be directed towards expanding primary education facilities at least to the extent that all boys and girls in the 5+age groups are enrolled in schools within the next 5 years. The target of free compulsory primary education should be staggered in various communities and districts rather than standardized at the national level. We may initially select 10 districts every year for expansion of universal primary education facilities and proceed to other districts in a systematic manner. It is assumed that in a few districts the present enrolment ratio of the 5+age group is as high as 95 per cent or more. With a more intensive effort in such districts education can be universalized and made compulsory even from the year 1984-85. Such an arrangement can ensure optimum utilization of the existing resources as 100 per cent of the children in these selected districts will start schooling when it is made compulsory for them. It will not necessarily require any additional funds to expand education in such districts. The funds thus saved will be allocated to other districts. We may also plan for introducing a particular home study method as an alternative strategy for universalizing Primary Education in Pakistan. This involves a week long study by children at school while they engage in home study during the next week. This home study is guided by a self-learning package which is given to the students on the conclusion of their previous weeks study in school. The next week other out of school children are brought to schools for

similar study. Such a methodology can help double the school enrolment in a typical primary school through the use of Self-Learning Kits which have been successfully experimented with in developing countries of the world including the Philippines. A project on Self-Learning Kits (SLKs) can be undertaken by a national agency like the Allama Iqbal Open University.

- (2) *Para Primary Education.*—Data on primary education reveal that around 55 per cent of primary school level students drop out before completion of primary education. The idea of village workshop schools so vividly advocated in the National Education Policy needs to be institutionalized at a massive scale in the rural areas and the apprenticeship training scheme intensified in the factories and small scale industries in urban settings so as to accommodate a vast number of dropouts every year.
- (3) *Provision of Literacy Skills.*—Provision of adult functional education to 50 million people is the most formidable problem of Pakistan today. The concept of Mosque and Mohallah Schools already enunciated in the National Education Policy needs to be reinforced at the local community level, since at present there is no infrastructure available for the provision of literacy to the masses. Fortunately there is no pressure group to resist the tendency of decentralizing efforts at the local levels through the newly created institution of local bodies in the country. It should be made incumbent on local bodies to survey the illiterate population in their areas and institutionalize arrangements for starting evening literacy classes by engaging teachers and retired personnel. This can be done by the national Literacy and Mass Education Commission in collaboration with the local government and rural development organizations. Alternative approaches need to be explored to achieve the target of 100 per cent literacy in the country before the so-called target date of 2010 A.D. Federal Government effort alone with a meagre provision of 53 million Rupees in the 5th Five-Year Plan (*i.e.* Re. 1.00 only per adult illiterate) will not solve the problem unless local communities and voluntary agencies (*e.g.* All-Pakistan Women's Association, Girl Guides, Farm Guide Movement, Adult Basic Education Society etc) are encouraged to participate more actively in this important national endeavour.
- (4) *Nonformal Education.*—Because of the magnitude of the problem and scarcity of resources, it does not seem to be feasible to meet the critical gaps in the education of the masses in the immediate

future through exclusive reliance on the formal system of education which is much more expensive and time consuming. The conventional approach of formal education which implies acquiring land, constructing a building providing furniture and equipment, engaging whole time staff for instruction and creating a vast infrastructure of administrative and supervisory machinery is perhaps too expensive for Pakistan within the context of present constraints on education, as Pakistan is able to spend only 1.7 per cent of its G.N.P. and 5 per cent of its total public expenditure on education during the current financial year. We need therefore to streamline our efforts to strengthen the non-formal system of education for all those levels and varieties of education which can operate at post literacy stage. The experiment of AIOU shows that during the last five years the annual enrolment of students in functional courses and intermediate, B.A. and teacher education programmes has gone to over 60,000 whereas the total enrolment of all other universities was around 32,000 in 1980-81. We may immediately stop opening new intermediate and degree colleges as well as general universities and divert all students of these programmes to enrol with the Open University. In this way the funds saved from higher levels of education can be diverted for universalising primary education in the shortest possible time.

Even in the domain of literacy, exclusive reliance should not be laid on training in 3 R's through formal class-room teaching. More emphasis for the education of older people ought to be placed on their social awareness through ultra-literacy methods. This can be done by expanding our educational services through television, radio, mobile film units and organizing community centres under the auspices of the local bodies in the evening hours. The advance of educational technology has challenged the concept of literacy as being a prerequisite for education. Literacy certainly is an efficient means of education but not an end in itself. The adoption of non-formal education in Pakistan would ensure: (a) immediate diversion of emphasis towards universalization of primary education through savings on higher education, functional education and teacher education, etc., and (b) coverage of the entire population of 50 millions of adult illiterates through T.V., radio, films, farm guides, discussion sessions etc., during the next ten years rather than postponement of the target to as distant a time as 2010 A.D. as conceived in the National Education Policy.

Salient Features of Non-formal Education

Non-formal education as a method of tutelage has long been in existence. The system of non-formal education, as it is conceptualized today, has evolved due to the growing need of education by the teeming millions who, for one reason or the

other, could not receive or continue their education through one formal system of education. The conventional approach of exclusive reliance on the formal system of education as the only solution to the colossal problem of illiteracy, has not proved to be any longer effective in the context of the developing countries of the world. The following are the salient features of non-formal education in Pakistan :—

1. Basically, non-formal education attempts to respond to the needs of such classes of society who have remained economically deprived and who cannot afford to join the formal school system because of the pressing constraints of time and resources.
2. Since Non-formal Education attends to the immediate and practical needs of the citizens, it does not need a formal school situation. The learning situation may be created in a field, a factory, a community centre or any place which ensures appropriate learning experiences.
3. Those who participate in Non-Formal activities are generally motivated individuals for whom it is a voluntary decision to participate in such an activity.
4. Final certification is not as important in Non-formal Education as in formal education. The proof of knowledge or skills does not lie in the paper certificate that one possesses, but in the performance of operational ability that one demonstrates.
5. The content and learning materials as well as the teaching methods are open to frequent revision and adaptation keeping in view the level of satisfaction of needs of the individuals involved in this endeavour.
6. Admission criteria are generally not so strict. Potential students for the non-formal education system are those who require the available learning and who can afford to spare time to receive such learning.
7. It is intended to be cost effective—always endeavouring for purposeful learning situations with the minimum possible cost.
8. There is a general awareness of the potential of instructional technology and communication media particularly the mass-media (including radio and T.V.) to reach masses of people in the shortest possible time.

9. No formal education generally offers a more eclectic and multi-disciplinary approach, discarding adherence to traditional disciplines and stressing an integrated approach for the fulfilment of the felt needs of specific groups of learners.
10. Just to obviate any possible confusion about the parameters of non-formal education, it may be clearly stressed that non-formal education is not "informal" or "incidental" learning. It is a deliberately planned educational effort starting with a well defined set of objectives, proceeding through organized programmes and operations, and invariably culminating in proper evaluation and feedback.

We may have to combine some of the above approaches to meet the growing challenges faced in our own unique situation.

Institutional Framework

Fortunately enough, the number of institutions and agencies which can play a significant role in non-formal education in Pakistan is quite impressive and the range of audiences addressed by them quite varied. The existence of these agencies is indicative of the large reservoir of experiences and activities which may form the basis for a viable programme of non-formal education in Pakistan.

The agencies involved in non-formal education first of all comprise the Ministries of Education, Rural Development, Local Government, Information, Health, Population Planning, Social Welfare, Agriculture, Women's Division and Planning Commission, etc. These top level government organizations have the rich experience of policy formulation, planning and coordination in the social sector.

PTV and PBC, having been engaged in non-formal education for the last so many years, have accumulated a large fund of knowledge and experience to share with their counter-parts in other nation-building departments. The faculties of Academies of Rural Development have close association with the problems of rural populations because of their contact with their field staff. Pakistan Girl Guides Association, All-Pakistan Women's Association, Adult Basic Education Society, Directorate of Adult Education, Government of the Punjab, Social Welfare Council and the Educational Television Cell of PTV are by far the most leading agencies who have long been engaged in conducting adult education programmes in the country. The contribution of these agencies can indeed be very vital for the development of a sound policy line and a workable action plan for non-formal education. The other important national agencies engaged in non-formal education are the Family Planning Association of Pakistan, National Farm

Guide Council of Pakistan, EPPIERD Project of the Ministry of Education, Integrated Functional Education Project is of AIOU and the Adult Education Project of the national Integrated Rural Development Project.

While stressing the need for non-formal education we do not intend to juxtapose the non-formal education institutions with the existing formal education system of the country. Both formal and non-formal education institutions in a developing country like ours must supplement rather than militate against the efforts of each other.



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A STRATEGY FOR EDUCATIONAL DEVELOPMENT IN RURAL AREAS WITH SPECIAL PREFERENCE TO ADULT EDUCATION PROGRAMMES AND THE ROLE OF RADIO*

DR. ABDUL QAYYUM

Education : an overview

Education in Pakistan is in a state of transition. The National Education Policy (1979) has defined the goals and aims of education and reset educational priorities. Newer strategies and modalities are being devised and used to achieve the goals.

Pakistan with a population of about 84 million has a literacy rate of 23.3 per cent. Literacy among males is 31.8 per cent and among females 13.7 per cent. The overall literacy rate in rural areas is as low as 14.8 per cent ; *i.e.* for males 23.1 per cent and for females 5.5 per cent. In certain areas the literacy rate among the female population is as low as 0.8 per cent. In 1981 there were 42.4 million illiterates aged 10 and above. At the current growth rate and in the face of available educational facilities this population group would swell up to 52.3 million in 1988 and 63 million in 1993.

The participation rate at primary stage is 55 per cent (6.5 million students), at middle stage 23 per cent (1.4 million students) and at the secondary stage 14 per cent (0.6 million students). These participation rates at various school levels are the lowest in South Asia.

In spite of 67,000 formal educational institutions in Pakistan supported by a vast but uncoordinated network of non-formal modes of education and with an expenditure of Rs. 5,700 million per annum, the existing system of education in the country has not been able to even touch the problem of illiteracy and related issues that interface between education and society. Our formal system of education is not only dysfunctional and ineffective but is also making our stratified society still more inequitable by concentrating economic and political power in the hands of the upper 20 per cent of the income group while marginalizing the role and status of the vast masses of the people.

Dr. Abdul Qayyum is Director, Planning and Development in Allama Iqbal Open University and Professor of Education. He is author of several research papers and has travelled abroad widely for attending international conferences on education and providing consultancy to the on mass literacy programmes.

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Education in Rural Areas

The school system has been developed in the towns and suffers from "urban bias". The whole conception of the teaching, and very often the training of the teachers, has been along lines suited to the needs of a certain class of urban dwellers—or certainly more suited to their needs than to those of rural dwellers. This arises from the conventional view that the principles underlying education must be the same regardless of whether it is provided in towns or the countryside. The belief has grown that a range of signals from an urban environment are more exciting than those from a rural locality, and so the school turns its back on the rural area in which it is situated and fails to help the community to grasp the reality of rural life.

The system of education in Pakistan suffers from many problems. One of the most significant problems in the field of school education is the low efficiency of schools and the poor quality of their product. At the primary level half of those admitted to class I leave school before reaching class V. In addition, each of the five classes includes many over-age children. About 60 per cent of all primary schools in the country do not have accommodation which can meet even minimum requirements. Female teachers are in short supply in rural areas and teacher absenteeism reported to be rampant.

Expansion of primary education into rural areas has somewhat diminished illiteracy, but it is not accompanied by a restructuring of the content that could have relevance to farming; it only enhances the lure of urban centres. Only in more recent years has the need to adjust education to the requirements of the new society and to move away from cultural colonialism begun to be recognized. Without creating a literate society it is indeed possible neither to appreciate, defend nor promote an ideological basis of Pakistani society nor put the country on a balanced path of development. Both objectives demand an accelerated diffusion of purpose-designed literacy and adult education throughout our population.

It is satisfying to note that the Sixth Five-Year Plan (1983—88) intends to assign a high priority to the improvement of rural areas. The Plan is likely to provide for (a) electricity for all villages (b) doubling the network of farm-to-market roads, (c) increasing access to piped water from 20 per cent to 50 per cent, (d) raising the number of rural schools from about 50 per cent to 75 per cent, and (e) introducing a national rural health service. The outlook for rural development is difficult to assess at this stage. However, it is unfortunate that emphasis within education once again appears to be on extending the number of educational institutions without reference to adult education programmes to reach over 33 million deprived and depressed villagers.

The Plan must take note of this fact otherwise the problems faced by the rural population will become even more serious from a human and logistical point of view. The planners must realise that despite rapid urbanization and phenomenal migration from rural to urban areas it is likely that the rural characteristics of the population will continue to dominate. In a situation where even the dimensions of rural problems are not fully identified and understood lack of realization of population characteristics may lead to disaster. It is time to re-assess the situation and provide for education and training leading to self-satisfaction and social economic improvement. Education action should focus on rural areas and must always be participatory, holistic and locality specific. Such action should be preceded by an assessment of rural Pakistan. The following brief paragraph and the annex to this paper provide a precise account of the rural areas of Pakistan.

Rural Pakistan

Rural Pakistan is a vast and diverse area consisting of 45,000 villages and inhabited by over 60 million persons representing 72 per cent of the total population. It is a poorly provided area of the country. In this area misery of massive proportions is typified in the form of low income, high population growth rate, small and fragmented land holdings, low productivity, under-employment and un-employment, poor quality food, lack of social amenities like health, education, housing etc., poor transport and communication and a general drift of the work force to urban areas. Yet this much neglected rural setting has received little attention in the past. (for details see annex).

Rural Adult Education

Adult education programmes viewed and conceived in Pakistan's context more or less refer to literacy teaching or to knowledge and information about different aspects of basic services and or training in a few crafts.

Broadly speaking adult education means the education of adults by any means other than the regular and credited education provided by the formal education institutions. The definition of adult education depends on its use and meaning for each society. However, there are two distinct modes of adult education. They are: (a) education for adults outside the formal system but not leading to qualification, and (b) education for adults outside the formal system leading to qualification.

There are few adult education programmes in Pakistan and they mostly refer to the second mode. It is estimated that adult education programmes including literacy teaching have an annual coverage of 0.25 million adults through government programmes and 0.05 million through non-government organizations. When these figures are read against the large segment of illiterate population which is estimated to be 43 million there emerges an immediate need for a nation-wide programme of adult education using available print and non-print media.

The existing adult education programmes have two marked weaknesses. First, they are, in most cases, imposed from outside the locality and secondly they make little use of radio or television. Without conceiving adult education programmes at grassroots level and involving radio and television it will not be possible to extend adult facilities to educationally deprived groups in the rural population.

Recently a National Literacy Programme has been conceived which aims at reaching 15 million adults aged 10 years and above during 1983 to 1988. Of 15 million participants 9 million or 60 per cent would be from rural areas. This shows an awareness on the part of the policy and decision makers of the educational needs of rural population.

Strategy for Rural Adult Education

A strategy for rural adult education may be based on the following :

1. Considering adult education a sub-system of education and an essential input for the process of social change and thus making it a national movement of high priority.
2. Re-orienting formal and adult education at all levels to bring education closer to the world of work and to life in rural areas.
3. Arresting the tendency of over-emphasizing in education the apparent benefits of urban life.
4. Adjusting the formal system of education to prevent the current alienation of rural students from their local culture and traditional techniques.
5. Promoting the inclusion in curricula at all levels of education of materials and related issues which are in harmony with specific social, cultural and environmental aspects of rural communities.
6. Strengthening the existing rural institutions and creating conditions so as to enable the rural people to participate in the decision-making processes involving them.
7. Preventing neo-literates from relapsing into illiteracy through the provision of appropriate post-literacy and follow-up programmes.
8. Designing and implementing suitable programmes of technology transfer so that appropriate low-cost technologies can be adopted in farms and homes.

Implementation : The role of radio

In the light of the discussion contained in the preceding pages some major educative roles of radio for the promotion of rural adult education are briefly discussed. It may not be out of place to indicate problems preventing radio being used so far to its full advantage. They include :

- (a) Sporadic and non-integrated use for adult education.
- (b) Inefficient management of production resources.
- (c) Insufficient evaluation of programme effects.
- (d) Varied and voluntary nature of the audiences leading to problems in assessing their qualities and observing their response to programmes.
- (e) Presentation of broadcast materials at a pace that can be geared by users to very different learning commitments, etc.

The problems should in no way pose serious obstacles to radio in performing its multiple role as an effective means of adult education. The roles may be identified in the following terms :

- (a) To provide the necessary communication support to adult education programmes in areas of information, motivation and the creation of a conducive environment.
- (b) To design and present a regular information programme to make the rural population aware of various development schemes of the government and other agencies, which are meant for them and aimed at motivating them to come forward to participate in the programmes.
- (c) To present series and or serials on basic human needs in rural contexts. Some illustrative examples may be as follows :
 - (i) Food :
 - Teaching rural food needs to children and adults.
 - Enabling small farmers learn new ideas from distance sources.
 - Introducing new food techniques without the disruption of local culture.
 - Promoting no-till methods and human scale devices to enable the lone farmer to be more productive.
 - Improving the efficiency of bullock-carts and wagons for the transportation of food stuff at lower costs.

- Discouraging the planting of luxury crops.
- Advising how to save natural ecological cycles of agricultural land from destruction, etc.

(ii) **Habitat :**

- Impressing upon audiences that housing is a determinant of society and not merely a construction.
- Explaining mechanisms by which people obtain housing, its design, its relationship to others, its interdependence with natural resources and how houses shape people's life style, culture and economy.
- Sharpening the basic need of belonging for future upkeep of the houses as well as the social development of the community.
- Imparting information on the mobilization of credit, organization of building materials, a minimum scale of amenities for creating a community and not just houses.
- Promoting the concept of eco-villages.

(iii) **Health :**

- Impressing upon rural communities that health is much more than the absence of diseases and repair of human bodies.
- Promoting a basic service strategy which relies on the villagers choosing from among themselves persons they most trust for health care, or the one they turn to for advice.
- Upgrading the local medical practitioners of healthful ways of living.
- Promoting traditional healing methods and alternative health care.

(iv) **Small-scale enterprises :**

- Creating awareness about generating cash income by primary production at the village level.
- Disseminating information and technology essential to the establishment of small scale industries in rural crafts and food processing to support the agricultural sector and to meet the basic needs of the rural population.

DIFFUSION OF AGRICULTURAL TECHNOLOGY THROUGH DISTANCE TEACHING SYSTEM

DR. MIAN HIDAYATULLAH

We understand the meaning of the diffusion process as through Agricultural Extension Educational Services. The related concepts, scope, potentiality and multi-dimensional aspects of Agricultural Extension Education are better explained in the definition established by the Food and Agriculture, Organization (FAO) of the United Nations :—

An information out-of-school educational service for training and influencing farmers (and their families) to adopt improved practices in crop and livestock production, management, conservation and marketing. Concern is not only with teaching and securing adoption of a particular improved practice, but also with changing the outlook of the farmer to the point or stage where he will be receptive to, and on his own initiative continuously seek, means of improving his farm and home business.

Diffusion is closely related to the complex process of communication. It means effective teaching and transfer of messages, improved knowledge and technology from the source—agricultural research stations, farmers and Universities through the Agricultural Extension Service and mass media to the farmers.

Agricultural technology at present times can be effectively disseminated through a distance teaching system, and therefore be effective for diffusion. In Pakistan, this is being done by Allama Iqbal Open University. The aims of developing special distance teaching courses in agriculture are as follows :—

- (1) To offer functional courses in agriculture and animal husbandry based on national priorities and the basic needs of rural people.
- (2) To offer newer and improved farming operations and basic skills to the literate farmer through printed materials, radio and television.
- (3) To educate field extension staff and give in-service training and bring their knowledge up-to-date with current international practices.
- (4) To diffuse methods of improved technology to the farming community.
- (5) To enrich the lives of the rural farming community through enhanced Agricultural Extension facilities.

Dr. Mian Hidayat Ullah is Chairman, Department of Agriculture Sciences in Allama Iqbal Open University. A Professor of Agriculture Extension, he has had long professional experience in the University of Faisalabad in Pakistan and F.A.O. based in Iran and Iraq.

Variables Involved in Developing Courses in Agriculture

The following variables are kept in view while developing an agriculture course at AIU :

- (1) Major subject areas which have been identified.
- (2) Government policy towards agriculture such as self-sufficiency, higher yields, and production of export-oriented crops like cotton, rice, sugar-cane etc.
- (3) Zoning of crops according to areas and climate.
- (4) Training needs of field extension staff.
- (5) Advice and suggestions from experts of national and international repute.
- (6) Advice and consultations with teachers, research and extension staff and representative local leaders.

Writing Course Material in Agriculture

The development and presentation of functional courses in agriculture aims at self-study, self-instruction or self-learning aiming at high educational quality so that the students and participants are able to understand, adopt and utilize the information in more effective performance of their farm and home operations. The courses are developed on a lesson-plan pattern in logical, inter-related steps with continuing emphasis on the application and use of improved agricultural technology. The course-material should ideally replace the teacher or trainer in the teaching, adoption and diffusion processes.

The printed correspondence teaching material should have special characteristics, which may be summarised as follows :

- (1) The content should be interesting, accurate, up-to-date and based on research findings.
- (2) The teaching material should be highly selective, giving essentials and be complete so that the students can understand and apply.
- (3) The course material should be well-structured and in sequence, starting from simple concepts, to more difficult or complex aspects of the subject matter.
- (4) The language of the course-material be in simple Urdu which can be easily understood by the students. Technical or scientific terms, if unavoidable, are translated into as simple language as possible.

- (5) Efforts should be made to aim at maximum clarity, and easiness in the language, together with a lively personalized style of presentation.
- (6) The central objective is to make maximum use of clear, informative, and interest-creating illustrations, diagrams, graphs, charts, pictures and photographs.
- (7) The course material should be need-based, problem-solving and student-active, aiming at engaging the student-audience to the optimal level in the learning process to the stage of adoption and also providing them with feedback, in order to assess and evaluate their understanding for progress, and use of the improved technology covered in the functional course.

The AIOU distance teaching system consists of a sequential process, with a summary as follows :

A. *Planning Process*

- (1) *Identifying major subject areas and special courses* in the field of agriculture in general broad-terms. The important sources of identification are ;—

- *National policy and priorities in agriculture*

- for example, emphasis on gaining self-sufficiency in food production.

- higher farm yields per acre.

- relative priorities on production of cotton, sugarcane, rice, oilseeds crops, gram, pulses, dairy cattle, water management, cash crops and export-oriented commodities.

- *Importance of regional agriculture* or agricultural zoning or specialization for specific economic crops, fruits, forest trees, fisheries, cattle, poultry, sheep and goat etc.

- *Training needs of field extension staff*

- *Informal surveys, factual data, systematic studies, official reports, tested information, publications, press reports and observations.*

- *Views and suggestions of Experts and experienced subject specialists at national and international levels.*

- *Consultations with teachers, research and extension staff and representative local leaders at various levels.*

(2) *Identifying the potential students/participants/nominees* or target groups for specific courses.

— *Field extension staff* at various levels with special reference to the grass-roots :—

— Field Assistants.

— Stock Assistants.

— Secretaries, Union Councils.

— Tractor operators, tractor owners.

— Functionaries of other concerned departments like ; soil conservation, land reclamation, WAPDA, ABAD, revenue, IRDP, education, social welfare, army.

— *Progressive farmers* and small literate farmers with special interests like ; crops, fruits, poultry, livestock, tractor owners.

— *Local representative leaders.* Members of local councils in urban and rural areas especially at the Union Council and Union Committee's levels.

— *Other Interested People,* including men, women, youth, school teachers, school and college students, farm guides, Chand Tara Clubs, Boy Scouts, Girl Guides, etc.

— *Approaching non-government agencies* and autonomous or semi-autonomous bodies and industries, directly or indirectly concerned with agricultural progress like firms dealing in fertilizers, plant protection, agricultural engineering, farm machinery and tractors, APWA, adult education societies.

B. *Course development process*

(1) *Collection of first-hand information* on the related resource materials and exploring a panel of experts (communicators-writers) reviewers and course coordinator and paper setters (applicable at a later stage) :

— *formulation of the initial course proposals* and titles and number of course units.

— *First draft of the course outline.*

— *Proposals of duration* (weeks or months), optimum timing of the year for presenting each course, keeping in view the seasonal variations, climatic and occupational aspects in the different regions and potential clientele groups of participants.

- (2) *Processing of the course proposals through the Committee of Courses of the Department of Agricultural Sciences of the University.* The Committee of Courses is formed of experienced senior university teachers, experts, research and extension personnel having specialization in various important disciplines of agriculture appointed from the national level.
- (3) *Processing the course proposals through the Academic Council of the University.*
- (4) *Formation of course team comprising the course coordinator, unit writers, and representatives of the Institute of Educational Technology (including radio|TV programme producers and designers) and Editing Cell, AIOU.*
- (5) *Briefing of the course writers and reviewers on the format of writing the course Units for distance-teaching with details on coverage of the subject content, the effective use of simple illustrations; graphics, photographs, drawing, paragraphing, and, very importantly, self-assessment questions.*

Grassroot Analysis of Students Benefiting from Distance Teaching Courses in Agriculture.

The following is the range of individuals|students benefiting from distance-teaching technology in agriculture :

Field extension staff such as :

- Field Assistants.
- Stock Assistants.
- Secretaries of Union Councils.
- Tractor operators and tractor owners.
- Officials of departments such as Soil Conservation, Land Reclamation, Water and Power Development Authority, ABAD, Revenue, IRDP, Education, Social Welfare and the army.
- Progressive farmers with interest in crops, fruits, poultry, livestock.
- Fertilizer and other firms dealing in plant protection devices, agricultural engineering firms, manufacturers of farm machinery and tractors, All-Pakistan Women's Association and adult education societies.

The following procedure is adopted for enrolling students to the courses :

Publicity through :

- National and regional Urdu newspapers and related magazines of agriculture.
- Radio and television.
- Publicity leaflets for the course.
- Official letters to concerned departments such as the Agriculture Department, Animal Husbandry Department, Agricultural Engineering, IRDP and Education, District Councils, Deputy Commissioners, army and Social Welfare.

The system of distance-teaching in agriculture has facilitated the training and education of a large clientele in the subject and it is expected that 45,000 villages in the country will benefit from this system of education. It is also expected that a greater number of urban clientele interested in various aspects of agriculture will take advantage of the system.

INTEGRATED RADIO AND TV SUPPORT

- (1) *Simultaneous Script Writing for the radio and TV Programmes* by the course writers assisted by the course coordinator in consultation with the Institute of Educational Technology.
- (2) *Advance recording of the radio programmes*, by the course writers and coordinator by using the facilities of the university studio in the Institute of Educational Technology.
- (3) *Production of TV Programmes* jointly by the course coordinator/writer and University producer on location where appropriate and possible.



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THE ROLE OF RADIO IN DISTANCE TEACHING WITH SPECIAL REFERENCE TO RURAL AREAS

By

SHEIKH ABDUL LATIF

Since the invention of radio, great interest has grown in its use in the educational field. By the 1920's and 1930's many educational institutions in Europe, America and other countries of the world were using the radio.

The manufacturers of cheap battery-operated radio transistors on a large-scale have been responsible for putting most of the world's population into a global communication network. The rapid and extensive technological changes in man's ability to communicate messages and information have in fact been called "a revolution". With the use of radio, when coupled with other measures (printed material, visual-aids), the extension of technology in rural areas becomes easier and effective.

In Indonesia most of the school drop-outs are found in rural areas, often being "Purdah observing" female students. The dissemination of education technology through radio to the students of this kind of community is especially appreciated. Educational lessons on agriculture and other subjects are transmitted.

With the facilities of batteries and cassettes, it is possible to educate rural people. In Thailand 80 per cent of the population live in rural areas and their educational needs are greater than those of urban people. Since these people are scattered widely, the need of distance teaching becomes evident and more appropriate. In this system, two components, *i.e.* radio and correspondence education, are covered. The Government of Thailand has a good radio education network service to benefit the scattered rural people who possess radio sets.

The Chinese have regarded the radio as more effective and important than television. The reason is simply obvious and equally so in other Third World countries. The technology is cheap; the coverage is wider. Radio services are distributed to the public loudspeakers fitted in all places (factories, fields, streets, parks and other public areas). It is through radio, in China, that people are kept informed about various aspects of life. Nobody can escape the sounds of radio. According to an estimate there are 50 million radio sets, which are supplemented with 120 million loudspeakers.

Sheikh Abdul Latif has been a Lecturer (Agronomy) in the Department of Agricultural Sciences, Allama Iqbal Open University since September, 1977. He holds an M. Sc. (Agriculture Extension) from the University of Reading (U.K.).

Sudan, is placing a two-way radio linkage through universities to reach out to rural communities by radio using distance teaching programmes. The network of radio will facilitate work in both formal and non-formal education. The object is to link effectively the open universities for the benefit of rural areas. The "Open" approach in Sudan, aims at solving the problems of illiteracy, poverty, diseases and sometimes starvation.

The majority of the people, who are living in scattered rural areas in Kenya, are guided by radio,—the only source of news and other information about the happenings in and around their communities and villages.

According to Wilbur Schramm of UNESCO the most typical pattern of non-formal education is the radio medium and its use as open broadcasting helps in achieving good results.

In the region of Hyderabad, Pakistan, more than 50 per cent of women paid visits to the hospital in connection with various diseases and disorders after hearing health programmes on the radio.

The radio has played a vital role in boosting rice production in Sri Lanka. New agricultural techniques on high yielding rice varieties, fertilizers, pesticides and water management were transmitted under non-formal educational programmes.

Advantages of Radio

Radio as a communication medium has three major characteristics :

- (a) *Radio does not rely on literacy.*—It is an acknowledged fact that the majority of the world's population are living in rural areas in the developing countries. This population is illiterate, which includes those who are deprived of the basic 3-R's of education (reading, writing and arithmetic). They are quite helpless in communicating to others. Under such a situation, how can one expect to transfer the new technology? In order to overcome such problems, the use of radio becomes fully justified.
- (b) *Radio can overcome the problem of distance.*—The majority of the populations in developing countries are scattered over large areas. The villages are located sparsely, and in most of the countries there are a number of natural barriers like deserts, rivers, forests, mountains, marshy lands ; and in such conditions roads are lacking. The rural people are confined to their native locality. They do not know what is happening in the larger world, and around them. In **such areas**, it is not possible to carry out extension activities.

Mobility of staff and transportation is also not possible. In such conditions radio seems to be the realistic and logical alternative approach for solving rural problems.

- (c) *Radio can substitute for extension personnel.*—It has been observed, and my personal experience shows, that most field extension staff have to cover a large areas. The task of the field staff becomes even tougher when they are not provided with a conveyance to travel round their area. Thus contact between farmers and the field staff is very negligible. The extension personnel remain in their offices or even stay at home owing to the lack of transport to reach the fields. Moreover the trained extension field staff are very thin on the ground. They are usually posted in the headquarters near urban areas.

The training of staff is inadequate and out-dated. They have more, theoretically sound knowledge, but no attention is paid towards in-service training.

It has also been seen that in the case of an emergency, such as pest outbreak or flooding field staff are pooled out, with the result that the rural areas are without any field staff. Nobody is there to serve and guide the farmers.

In such conditions the use of radio becomes indispensable as it can substitute for field staff.

Assets of radio

1. Radio has universal appeal and reaches a wide range of audiences among rural masses, breaking geographical boundaries.

In the USA 99 per cent of all farm homes possess radios and there is no doubt that radio, at present, is the most universal mass communication medium. The message reaches you almost instantaneously. Radio can accompany you where ever you go, as most radios are being operated by batteries. In rural areas even where there is no electricity people can therefore listen to radio.

2. Radio is comparatively inexpensive and economical. Programmes are cheap to produce when is compared with the cost of producing a television programme. The Open University, Pakistan, has to purchase air time for different programmes. One T.V. programme of 30 minutes duration costs Rs. 16,000 whereas the cost of a radio programme of the same duration is Rs. 2,800.

3. Radio can substitute for the telephone, particularly in rural areas, which are deprived of telephone facility.

4. Radio can give the listener a feeling of being a part of the programme.
5. You can listen to radio while doing a number of other things ; while eating, relaxing, knitting, cooking, and in field operations like sowing, weeding, spraying and harvesting, etc.
6. Radio has credibility (one tends to believe what is said on the radio).
7. The installation costs for a radio transmitter entail fewer numbers of operators and technical staff, which the developing countries have already demonstrated.
8. The licence fee in most countries is less for radio than t.v. In Pakistan an annual fee for radio is Rs. 20 whereas the fee for t.v. is Rs. 200.

Limitations of radio

1. The assumption that radio now blankets the Third World countries and reaches all its population is a dangerous one. Many mountainous tracts are deprived of radio signals. Transmitters and receivers are distributed unequally in the territories of the Third World.

For the effective use of radio, it is necessary that the transmitters and receivers are distributed equally in all the rural areas of the developing countries if the latest technology is to be transferred to the rural people.

2. It is ephemeral, *i.e.* the message disappears very fast. We miss things. The words, phrases, sentences spoken by the speaker are not repeated. If a street address or any telephone number is read during a radio message, the listener is likely to forget it.

2. Radio is not an aid to practice. It provides "audio" information, but not "visual" information. However, when radio is supplemented with visual aids (posters, radio vision booklet), then the extension of technology to education in rural areas can be made easily and effectively.

3. If the radio programme is not according to the interests and expectations of the listener, he/she switches off the radio or searches for some more interesting programme.

4. Messages are likely to be distorted by personal influence and politics. Pakistan is regarded traditionally as a land of village. Agriculture occupies a prominent position. In fact 60 million people are living in 45,000 villages and constitute 71.72 per cent of the population.

Further, about 90 per cent of the rural population is engaged in agriculture and other allied pursuits. The illiteracy rate in Pakistan is also appalling (78 per cent).

Realizing that majority of the rural population is still illiterate, Allama Iqbal Open University has determined firmly to reach and teach farmers by distance teaching through radio as one of the effective and potential mass communication media.

This assertion has rightly been supported by Michael Young, and his colleagues in the following words :

“Allama Iqbal Open University uses radio, television and printed materials with a view to provide professional vocational and other relevant courses for rural development. It can be concluded without any shadow of doubt that the majority of the developing countries are also solving their rural problems through radio”.



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LITERACY IN PAKISTAN ROLE OF ALLAMA IQBAL OPEN UNIVERSITY

By

DR. ARIF ZIA

Pakistan is amongst the countries of the world having the lowest rate of literacy. This has seriously hampered the overall progress of the country especially in such fields as agriculture, industry and technology. Since the existence of the country as an independent state, there has been no serious effort to change this unfortunate situation. This is, in spite of the fact, that all educational policies, resolutions of the educational conferences and five year plans attached great importance to the cause of education and presented beautifully drawn plans to spread literacy within a minimum period. This ambivalent situation has resulted in great loss of human resources which would be productive enough if they had been provided with education. At present the educational scene is extremely dark as, with the rise of population, the enrolment ratio along with the literacy rate in the country is sliding down every year. The figures available for the year 1981 show a drastic downward trend in new admissions.

It is very unfortunate that there is no arrangement for follow-up of the people who accidentally drop out of the stream, and our formal system of education, upto this time has no provision to cater for the needs of this group of population.

National Education Policy 1978

With the introduction of the National Education Policy 1978, the adult education programmes got a new impetus. Realizing the acuteness of the problem, the new policy proposed innovative strategies to overcome the existing situation. It suggested the expansion of primary education through Mohallah and Mosque Schools. The programme of village workshop schools was envisaged for those who drop out of the primary or secondary school stream. It also suggested the use of multi-media delivery systems to meet the challenge of reaching the mass rural adult population.

The policy proposed the following major programmes for launching a nationwide movement for the eradication of illiteracy :—

- (a) Use of community resources by promoting Mosque and Mohallah Schools.

Dr. Muhammad Arif Zia is a Lecturer in the Department of Literacy and Adult Education of Allama Iqbal Open University. He is the author of a number of research articles and has compiled numerous reports of national and international importance.

- (b) Organization of 10,000 adult literacy centres.
- (c) Contribution of the Allama Iqbal Open University through its multi-media delivery technology for the uplift of the rural areas.
- (d) Use of student volunteer corps to launch the programme throughout the country.
- (e) Training of 10,000 workers to be engaged at literacy centres through the cooperation of Allama Iqbal Open University.
- (f) Distribution of 10,000 (T.V.) sets provided by UNESCO.

The programme of adult education was to be supported by many departments, ministries and commercial, and industrial enterprises.

According to the policy, Allama Iqbal Open University has been assigned the nucleus role for the promotion of adult education activities in the country.

During the last ten years, the Integrated Functional Education Programme of the University substantially developed and progressed. It succeeded in establishing four projects located in remote areas of the country. Each project opened on the average 40 Adult Education Centres in each phase and thus catered to the needs of at least 1200 illiterate people by enrolling 30 adults in each centre. The projects provided skill-training especially for the female population and such skills as knitting, embroidery, sewing, cutting, cooking, child care and mid-wifery were emphasized during the training period.

On account of the main component of social education in these projects a major break-through has been witnessed in the project areas. There is a change in the out-look of the people about life, environment, social structure and preventive measures against diseases. The programme has helped to mobilize the community resources for local development. It has also brought in to the limelight that adult education programmes can only be successful if they have the solid component of skill training, leading towards financial independence of families.

Generally the adult education package of the University contains three major components :—

- (1) Literacy primers used for teaching literacy and the basic characters of language ;
- (2) Follow-up materials generally containing social lessons to bring about change in the outlook and general behaviour of the people ;
- (3) Skill component for the economic betterment of the people. These materials focus upon converting idle labour resources into useful manpower.

These projects were first launched in 1975, the IFE Project Daultala being the pioneer in the field. Its successful completion encouraged the University to launch other projects of this kind in Samahni (Azad Kashmir), Bhitshah (Sind) and Sarai Naurang (NWFP). Up to June, 1983 overall 277 adult education and literacy centres had been opened. They helped to educate 5,495 persons both male and female. The balance of the enrolment remained always biased in favour of females in all the phases of all projects.

In addition to helping the remote rural communities to become literate and to get functional education, the other major contribution in the field of education was the production of literacy material in almost all the major languages of the country, *i.e.*, Urdu, Sindhi and Pushto. The detail of books produced for adult learners is as follows :

(a) Basic literacy books	..	..	..	..	3
(b) Functional literacy lessons	..	..	..	..	220
(c) Writing books	..	..	..	..	3
(d) Arithmetic books	..	..	..	..	2
(e) Follow-up books	..	..	..	..	4

The other by-products of this programme include the adult education training imparted to 273 male and female teachers and the administrative and supervisory training of 24 officers at field coordinator level.

As the projects involved large scale public participation they therefore helped to mobilize public resources in all the project areas. For each centre of this innovative programme, Education Committees were organized as liaison agencies between the public and the project staff. They were also responsible for the operation of the literacy centres. The activities of the committees helped people to organize and mobilize their resources for the general development of the area.

On the educational side of these projects, the main contribution is the development of a suitable strategy for the organization of such programmes in similar areas. They also helped to evolve a suitable approach for teaching literacy to adults and the development of tested instructional materials in three languages of the country. The approach developed in these projects is equally applicable in all developing countries of the world for teaching to adults.

The average per head cost of the programme was Rs. 440 only. It includes the cost of books, follow-up materials, skill training material and equipment, training and remuneration of teachers, training of the administrative staff, surveys of the project areas, evaluation reports and the salaries of the central office and site staff. In this way, it proved to be the cheapest programme of education for the rural areas.

Results Derived

A critical analysis of the working of these projects made it evident that adult education programmes for teaching literacy cannot be made a permanent educational activity. No effort for imparting literacy to adults can be successful if it is not related to the basic needs of the target groups and if it does not have any provision for the teaching of some useful skill.

The teaching methodology used in these projects is also very important from the experimentation point of view. In the first phase of every project a functional approach was used and stress had been on functional literacy, but as it failed, it was replaced by word approach in the second phase. Tests of the classes and the opinion of the field coordinators showed that this approach was much more effective than the first one. It ensures rapid progress in learning the language which paves the way for further study. The adult education centres need very close and regular supervision. In the highly competitive modern age, every person is awfully busy and cannot afford time even to attend to his family, it is necessary that they should feel, they are not wasting their time.

Need Oriented Approach

All programmes of adult education in Pakistan are decentralized. They are organized on a local level, keeping in view the needs of the local population. Management personnel are also selected from the local community. The agencies engaged in adult education are the Federal Ministry of Education, Ministries of Local Government and Rural Development, Women's Division, Government of Pakistan, All-Pakistan Women's Association, Pakistan Girl Guides Association, Adult Basic Education Society, and Pakistan Adult Education Society which have been actively participating in adult education. They have all been mainly stressing the literacy component. Most of their programmes are of a general nature and do not particularly attend to the specific needs of various communities. They are using the same approach, the same methodology and the same materials in all the centres operating under their control.

Under the IFE Projects of AIOU, the Needs Assessment Survey of the area is conducted to prepare literacy materials and skill work component. After each cycle, the programme is evaluated for further guidance and improvement of the material. This process has helped to formulate a new approach towards the problem of adult education. It is need-oriented and gives the feeling of success in the very initial stage of the learning process. It helps adults to proceed ahead independently.

Five-Year Plan Recommendations

The Sixth Five-Year Plan, envisages new strategies for the development of education and mass literacy in the country. It has the promise of making a minimum of five years of schooling obligatory to begin with and the tenure to be raised gradually to 10 years. The plan states that no student who is in school will be allowed to drop out before class V.

The plan seeks to improve the literacy level by means of a double-pronged approach by the expeditious expansion of primary education and through the launching of a functional literacy programme. The present number of illiterates of age 10 years and over (nearly 43 million) is too large to be brought under the first literacy programme to be implemented in the present plan period. A selective approach will be adopted in the determination of the target groups.

Keeping in view the vital significance of younger groups and the fact that they give the maximum returns, the plan proposes to cover 15 million persons (5 million male and 10 million female) of the age group 10 to 19 years under the programme of functional literacy.

The functional literacy programme will be delivered through a variety of media and methodologies which will include first hand teaching and distance teaching with audio-visual aids.

To accelerate the speed of work, a global level coordinating agency is the need of the hour. It should be responsible for the coordination of activities and the dissemination of information. It should also work as a guide post and provide technical advice on matters of interest.

Eradication of illiteracy is one of the crucial issues in Pakistan. It needs international financial cooperation. International bodies such as UNICEF and UNESCO should also come forward and arrange for financial support.

As adult education is the burning issue of most of the developing countries, it needs the development of strategies applicable in all developing countries with minor modifications. The best methods of teaching to adults may also be evolved through research. As there is an acute absence of infrastructure for launching a comprehensive adult education programme in the country, it is necessary that institutional arrangements should be created at the grass roots level on the pattern of the network of primary education in the country.



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THE USE OF MULTIMEDIA MATERIALS IN OPEN AND NON-FORMAL EDUCATION

By

MAHMUD UL-HASSAN*

This paper describes the use of multi-media materials in open educational programmes, the non-formal settings, which have been usefully tried in particular countries engaged in "mass" education of any dimension.

While attempts have been made to discuss the types of media materials available for use, no efforts have been spared to identify the composition of the "Users" through service approaches to them. It was indeed encouraging for me to draw heavily, first of all, from my own job-oriented education and training, and secondly, from the different visits to Hawaiian and Australian institutions who use multi-media materials in formal learnings.

Types of Media

The available media may be broadly grouped as under :

Audio Media.—Discs and tapes, etc. : These are said to be most suitable for correspondence educational purposes. For functional literacy and general adult education, 33 1/3 rpm 4 hours and 8 1/3 rpm for 6 hours recorded presentations are suitable for lectures-discussions, seminars, plenary sessions on a single recording. In the same way reduced tape speeds will increase the number of tracks. Four track tape at 1 7/8 inches per second is not uncommon in developed countries. Questions on the availability of these materials (loan, rental, purchase, by local arrangement or as integrated parts of course materials) are dependent on the institution's decisions. But the most common development is their availability from library-media centres, now variously called in the USA : Learning Resources Centres, Library Media Centres or Resource Material Centres. In the case of formal institutions indeed these are available through A|V collections, Listening Centres, etc. inside the libraries. Brigham Young University (Hawaii) has stopped loan on rental as being unsatisfactory. Tape correspondence courses, specially developed for non-credit teaching at N.S.W. Open University (Australia), are a successful experiment in availability by mailing to off-camps students. The reasons for the relevance of audio media materials, to non-formal education are the same as those for formal education. Problems of low-cost easy-to-operate equipment still persist as much as the material availability. Students at a distance, somehow, incapable of travelling even to study centres for using equipment, remain potentially

*Mr. Mahmud-ul-Hassan is Deputy Librarian and has been associated with Allama Iqbal Open University since 1974. He is the author of many articles of professional interest. He is a life-member of the Pakistan Library Association.

deprived. Such individual learning situations may result in gradual drop-outs. If such a population of non-users increases, because of their dependence on the printed materials (lessons, study guides, etc.), this may be redeemed by providing strong supplementary material resources, possibly by bookmobile service.

Audio-visual media

Films, of course, can be projected on to a screen to create the optical illusion of motion. In formal educational settings films are commonly treated to supplement the teaching. But in non-formal approaches, while they are used to present basic materials of the courses films could also be used in a variety of other developmental programmes like adult education, mass literacy and functional, projects. Also they are considered useful for concept teaching in problems, of time, space, size, etc. In rural settings, like film discussion groups in Togo or rural family development in Wisconsin, films usually help in the learning of relevant life-coping skills.

Graphics and Manipulated Media Materials again are two separate types of supplementary media. Graphics are illustrative, like printings, etc., but manipulated materials are the miscellaneous types may be easy to handle. Specimens and models, other-wise treated as 'Realia,' are classed together with pictures, kits, programmed instruction (simplest form), rocks, seeds and fabric samples. Justifications for their uses are similar to those for Audio. They may be in colour, but being lesser in bulk, and greater in appeal as a supplementary teaching learning device, they provide even fewer service difficulties. Sometimes they may be suitable for mailing, but not always. For this reason, we may prefer slides and transparencies for learning together units as they are easy, inexpensive to despatch by mail, local production, etc.

Slides and transparencies are the materials which are liked and used for their accuracy and intensity of colours. These are essential for showing details and visual effects not otherwise available. 35mm original positive films, photographically exposed and processed into 2×2 size slides, are an effective substitute for pictures, charts, and other illustrative materials too large to permit mailing for learning at a distance. Presently, these may be a substitute for films which cannot be sent out to users.

Students at a distance have another advantage of discussing the slides with other students in learning centres. Small hand-operated slide viewers are available which can also be locally manufactured. Multi-purpose equipment, *e.g.*, tape and slide or slide-cum-strip projectors, are getting increasingly popular and the great number of possibilities of their wider utilization in non-formal learning situations is being exploited.

Traditional Folk Media are enumerated below for information :

- Puppets, shadow figures, marionettes, musical and comedy plays, stories, songs and drama.
- Discussions : formal or informal groups.
- Instructional : board games.
- Materials locally available such as wooden models, flash cards and games.

Users of Multi-media

The clients for multi-media use are generally people who are not attending any traditional schools. Then there are those who have attended school but could not continue towards completion. There are also the "isolated", 'under-employed' and 'unemployed'. They are all of different ages, with multiple educational aspirations. All of them have widely diverse socio-economic and cultural backgrounds.

Since a non-formal educational approach aims at the functional and practical education of people, the instructional process may be designed for the wider communication media, *e.g.* radio, television, books, newspapers, etc. As a programme will have, for its major purpose, the goal of increasing the effectiveness of individuals, alone or in a group, the use of a variety of media and materials becomes the highest priority. And those who are responsible for administering the media-materials use (faculty, the media librarians, programme advisers, counsellors, tutors, etc.) must be initiated into becoming competent users.

It is therefore important that recognition is given more to the use of media-centres, resource-centres, or libraries. For them it will be mandatory to recognize the needs of their users and devise methods, techniques, and the necessary expertise to provide users with whatever media/materials they need and wherever they need them, according to the best possible resources, staff, and services available.

Applications of Multi-media

In order to illustrate the growing use and popularity of media materials at different national levels, a few examples of the use of multi-media for purposes of non-formal education are mentioned.

Case-Studies

1. In the People's Republic of China rural development activities merit attention as reported by Dodds in Henry T. Ingle's "Communication Media and Technology (1974)." multi-media have been extensively utilized to provide

for "locally designed, integrated, managed and supported education. These media include visual and graphic materials such as films, newspapers, posters, bulletin and pamphlets, plus home visits, group meetings, and correspondence courses that supplement radio programmes."

2. A series of case studies on Rural Forums of Ghana, civics education by radio, study groups in Tanzania, radio clubs of Nigeria and the TEEVEE Projects in Quebec and Canada are also of interest.

3. Case summaries, describing multi-media projects, by Dodds and his colleagues at the International Extension College include the 'tele-clubs' of France, Television Literacy Plan in Italy, agriculture extension aids used in Malawi, filmstrips and radio in Rwanda, film discussion groups in Togo, and rural family development efforts in Wisconsin. "Printed matter was also used to supplement the programmes....."

4. Dodds, concluding his survey of multi-media use is reported to have indicated that "the choice of medium is less important than the content and the way it is used," and also that "glamorous media at great expense may be less effective than the careful integration of existing resources."

5. The Open University of UK, Australia's radio, television and correspondence schools, Japan's NHK radio-TV Correspondence High School, Korea's Educational Reform Program and the recent development of the Village Mini-Library Movement in 35,000 rural villages (operated now by Reading Clubs) Village Basic Education project in Guatemala, Free University of Iran and Pakistan's Allama Iqbal Open University are some of the interesting projects. The last two projects, *i.e.* of Guatemala and Iran, are still in the early trial-cum-operational stages and have received very little documentation. However uses of multi-media are extensively planned on a large scale.

6. "In Uganda..." as cited by Wilbur Schramm "the Guide for Extension workers in Agriculture" tells these workers that "mass-media are essential in your work" and advises them to become experts in the use, not only of radio, but also of news stories, circular letters, exhibits, posters, motion pictures, slides and filmstrips, flip charts, flannel graphs, wall newspapers, bulletin boards, photographs, wall charts, puppet shows, local talents : drama, songs, poetry, music.

However, inspite of all the places where media are being used the area of multi-media use for educational purposes has not yet been fully explored and considerable research has to be done in the field to put the resources of such systems fully to use.

Service-Approaches to Users

It is worthwhile to examine any current planning of such non-formal services, when some of the countries may as yet be suffering from weak and unreliable conventional mail-systems. How will we be able to send printed and graphic materials directly to users in their offices, homes and other addresses? The use of various types of media is continually urged. Will that not mean guaranteed access to materials and information? Unable to provide any remote on-line consoles (via computers), shall we not initially evolve a rush-delivery or express messenger service for the provision of materials to our users instead of requesting them to come to our libraries? If we are unable to evolve and practice a support-service in line with the main policies or objectives of the institutions, we in fact fail to achieve the directed goals. As a matter of fact, the library users will need better access (via anything: mail, messenger, telephone or computers) to all types of materials, preferring to stay at a distance, in their homes, in their offices or work places. The analogy will be made to the total system of non-formal education: If education is brought to the learners, why cannot library services be taken to the users? Implementation of this concept may be either by centralization or decentralization. It is a matter of choice, although decentralization of service-functions will be responsive to our aims.

If using the present sophisticated technology, if we also need some kind of breakthrough for making it available to all by creating community Resource Centres, instead of public libraries, school libraries, we have to provide a flexible means of utilising total information, material and services in print and non-print. If this seems impractical due to local circumstances, let us adopt some other alternative to simplify information; e.g. National "Identity Cards" being honoured by all libraries. This concept will only work if we can adopt it as a national commitment, as we are committed to universal education on the national levels. The feasibility of such an idea, in the context of the integration of multi-media materials becomes more and more promising when we see around as the growing impact of technology.

ID cards for library use may be introduced at provincial or state levels. The implications of "over-simplification" of the system can be judged in relative local circumstances. Rather than waiting for decades and losing the benefits of accelerated documentations and information utilization, we just need our Home-Departments to put libraries also in the ads for ID's should librarians or their organizations not honour it for library users. Verification of antecedents of the holder of the national ID is a matter of Government responsibility. This practice may lead us to networks of library and information centres at the national level. This is an efficient approach to information economics internationally as well and which is, perhaps, not much developed in most countries.

Areas of Immediate Problems

It seems equally important to identify areas of immediate problems in multi-media materials for the developing and less-developed countries, which are engaged in non-formal educational approaches.

So far extensive use of multi-media materials has not been made. They have been used, if at all, on the basis of low cost effectiveness. Now there seems also the vital need for making other sophisticated and intermediate innovations available for use in non-formal as well as formal educational sectors.

Therefore assistance must be generated to enable their libraries and media centres to supply such materials to the users wherever they are. Operationally, multi-media materials must be adapted to mailing, so that their size, weight, and formats, etc., do not cause delays in despatch to individual users. Simplicity is another operational factor for designing. As the materials will be used by inexperienced users, often off-campus, they should be able to use them.

The training and availability of media manpower (technicians and operators) is another area which merits equal attention. The most important issue is: should there be a new class of 'media' librarians as a separate category of staff? This is the current trend which is emerging.

Multi-Media Need for Research

Libraries have been producing larger and larger arrays of statistics on how their clients use their collections and other facilities. Why cannot the same be done for the new varieties of media-materials?

There seem to be some interesting research areas in non-formal education:

- (a) What media materials are needed to support teaching in non-formal educational programmes?
- (b) What is their effectiveness as independent medium-materials through combinational approaches? ('Integrated' and cross-media).
- (c) What are relevantly greater subject-areas of their use, and how can lower-use areas be further involved into extensive use of media-materials?
- (d) Since non-formal educational programmes cannot afford to use the media-material for recreation, etc. (like formal institutions'), what are their 'direct' and 'supplementary' teaching uses that can best serve the non-formal education?

- (e) Minor areas like 'rentals', 'loans', 'purchases' or availability of media as part of material packages also need some research to determine the effectiveness of teaching through media-materials.
- (f) Research to establish that media-materials used for their intended purpose have achieved that purpose.
- (g) In the case of lower achievements of purpose, research to change the format from one less usable to one more usable.
- (h) Research into whether or not Learning Resource Centres (non-formal) should make use of the same pedagogies as of the formal institutions.
- (i) Research on developing programme objectives for media-materials centres and examining their operational productivity in line with the objectives.
- (j) Research into allocation of minimal resources to facilitate specific operations for the purposes of achieving defined objectives of the Learning Resource Centres. (Cost-effectiveness principle).

We have to understand that any application of educational technology is based on the principle of achieving defined objectives, and the use of technology (Sophisticated, Intermediate or Basic) increases the need for (PPBS) programme planning and budgeting systems. This will become an equally value strategy for our reference. The development of multi-media libraries offers an interesting area of immediate investigation and research.

The outcomes of such research can lead to economical and effective media utilization. This should be as desirable an objective as the presently practised need-based, non-formal educational approach, in itself. Developing countries engaged in solving their educational problems through the non-formal approach will therefore be greatly helped in accelerating some economical and efficient functional-combinations of their print and non-print resources. Joint resource-utilization programmes may thereby evolve, of necessity, at the local, regional, national or international levels.

When we start with such investigations and researches will depend basically on recognition of the fact that efforts have seriously been started by some nations to educate their people wherever they are. Then, we also need to take our multi-media resources to them rather than the reverse.

NEWS NOTES

By

MRS. SHEMEEM ABBAS

Administrative re-structuring of services at Allama Iqbal Open University

Between the middle of 1983 and the beginning of this year significant changes in the academic and administrative structure of the university have been made. These changes are in the areas of :

Admission and Mailing Services.—Bifurcation of the admissions and mailing services has been done for greater efficiency. These have been placed under the Registrar's Office with a Deputy Registrar in charge of admissions and mailings. The Controller of Examinations is now exclusively responsible for examinations.

Course Progress Coordinator and Print Manager.—Separation of the Course Progress Coordinator's functions from those of the Printing and Publications Manager. The division of work between the two offices has led to more efficiency in the launching of courses and in the availability of printed course books. Whereas the Printing and Publications Manager is now responsible for following up the printing of books with the various printing agencies, the Course Progress Coordinator can follow up course development with the departments concerned and keep records of the printed books available to enable the timely launching of courses.

Research and Statistical Centre

The setting up of a Research and Statistical Centre with computer assistance is a significant addition. The university computer under this arrangement will be used for a variety of purposes such as admissions, examinations, pay roll of university staff, data recording for researches carried out by the academic departments and for cataloguing stock-checking in the library in the near future.

Regional Services Decentralised

However, the most significant of changes made in the university infrastructure in recent months is the decentralization and strengthening of the university's Regional Services. The Regional Directors have been given more financial and administrative autonomy in connection with payment at various levels such as payment to examiners, part-time tutors, coordinators and instructors. They have been provided with funds in advance, equal to two months' estimated expenditure to meet expenses which they can adequately justify under the rules.

New study centres in the regions are being set up in the northern areas of Gilgit, Skardu and at Chilas and Bajour and Mahmand Agency in the Federally Administered Tribal Areas. New study centres have also been opened in areas like Golimar and Lyari in Karachi and at Umerkot. Study centres have been opened at Dhoronaro, Shujawal, Jute, Thatta, Mirpur Khas, Jokhio village and Memon Jo Goth in Sind.

Some of the regional offices and centres are being made into model study centres equipped with television sets and video cassettes with the assistance of the U.K. Overseas Development Authority. Regional Advisory Committees are another addition towards involving the local community in the functioning of the AIOU in various areas all over the country. These committees are composed of local councillors, educators and community leaders. The Regional Centres are now being provided with libraries to enable better access to books and materials by students. A generous book presentation for these libraries is being made by the British Council.

A broad-based re-structuring of most services and departments has been made including the Treasury, the Institute of Educational Technology and the Institute of Education, to make the functioning of these departments more effective. The Institute of Education has been upgraded to a Faculty with Dr. Shaukat Siddiqi as the Dean.

Distance Education for Overseas Students

The Allama Iqbal Open University has extended its facilities to Pakistanis, living and working abroad. The first batch of students has been enrolled in a number of courses in the October 1983 Semester.

BOOKSHELF

DISTANCE EDUCATION : INTERNATIONAL PRESPECTIVES. EDITED
BY DAVID SEWART DESMOND J-KEEGAN AND BORJE HOLMBERG
LONDON : CROOM HELM, 1983. PRICE £ 16.95.

For long Distance 'Distance Education' was regarded as the Cinderella of the educational world, but by the seventies and early eighties it has emerged as a valued component in national education systems.

The establishment of "open universities" in both the developed and developing countries the use of audio, video, and computer-aided teaching|learning, sophistication in the design and production of print materials, and above all, better tutorial and support have contributed to the availability and quality of distance education programmes.

This book records these great advances in distance education. The book presents selected writings on the subject appearing in the last ten years. The articles included in this volume provide a new insight and scholarly basis for the theory and practice of distance education. The editors have tried to bring together contributions from many countries. Each of the nine sections carries an introduction.

The book will provide readers with a guide to distance education, which is one of the most rapidly expanding areas of education.—Mahmud-ul-Hassan.

SINDHOLOGICAL STUDIES' (JOURNAL), SUMMER 1983 ISSUE. EDITED
BY MAZHAR YOUSAF PUBLISHED BY THE INSTITUTE OF
SINDHOLOGY, UNIVERSITY OF SIND 67 PAGES PRICE Rs. 15.00.

The Indus Valley Civilization, which dates back to the beginning of the 3500 B. C., reached its climax between 2300 and 1650 B. C. With the passage of time, new features and dimensions of this civilization are being explored.

The journal under review is a laudable attempt to highlight various aspects of the civilization of Sind from historical, geographical, economic and literacy points of view.

It contains exhaustive articles from eminent writers and thinkers like Dr. G. A. Allana, M. H. Panhwar and Sarfaraz Ahmed Bhatti. The subjects have been dealt in a scholarly fashion. The article entitled "Sindhi Elements in Arabic Literature" contributed by Sarfaraz Ahmed Bhatti is indicative of the early contacts between Arabs and Sind and the resultant effects on Sindhi literature.

Despite its brevity, the journal gives an impressive account of various facets of the culture of the Mehran Valley. MOIN QURESHI.

By courtesy of 'DAWN', Karachi.

GIFTED UNDERACHIEVERS: A LOOK AT INTERVENTIONS—GIFTEDNESS, CONFLICTS AND UNDERACHIEVEMENT, BY JOANNE RAND WHITMORE.

Allyan and Bocon (470) Atlantic Ave, Boston, M. A. 02210). 1980. 421 pp + appendix \$ 16.95.

Gifted students have been neglected by schools. But gifted under-achievers have been neglected to an even greater extent. At least part of this neglect derives from misunderstandings about the nature of giftedness, along with a lack of information about the conditions that produce gifted under-achievers. Much of the basic writing on underachievement fails to include the gifted student, few books deal specifically with gifted underachievers. Although it is not likely to solve the problem giftedness, conflict, and underachievement should for these reasons be a welcome addition to the literature on this subject.

Time will decide the accuracy of a pre-publication statement that the book is destined to become a classic. But it appears to be a pioneer textbook in the field.

The writing is clear and direct. It seems always to have the practitioner in mind. It was a pleasant surprise to find none of those dull and frequently used study questions and reading lists that clutter many texts. An exception to this admirable economy is a very long appendix made up entirely of forms and form letters for all occasions. They were apparently used in or inspired by the Cupertino project that heavily influences the book.

No textbook can do everything, but I was disappointed that this one devoted little attention to the reasons for underachievement and gifted students. Teachers of gifted underachievers should know as much as possible about the exceptionality of the students with whom they work. Writers tend to confine their discussion to external causes of problems, *e.g.* cultural differences, progressive problems that conceal giftedness.

Wit more develops her main theme in part four, "Conceptualization and Implementation of a Special Programme for Gifted Underachievers." While it is both interesting and informative, I was uncomfortable with this section. Once again I was told more than I wished to know about the author's programme at

Cupertino, California. I have no particular reservations about that programme. Indeed, it appears to be exemplary in almost every way, but I am traditional enough to prefer a textbook that draws its inspiration and information from a broad base. The author makes it clear quite early that we will not be reading a typical textbook "synthesising information from research," but I would have preferred more synthesizing from more sources and less dependence on a single model.

Despite these misgivings, giftedness, conflict, and underachievement is perhaps the best thing in print on intervention programmes for gifted underachievers. I expect to make considerable use of it in my own classes.

Review by ROY COX

By Courtesy of KAPPAN

June 1981

The book is a very good one. It is a good example of a book that is both readable and useful. It is a good example of a book that is both readable and useful. It is a good example of a book that is both readable and useful.

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**Research and statistical centre
Allama Iqbal Open University
Islamabad Pakistan**

RESEARCH

FEASIBILITY OF ORGANIZING VOCATIONAL EDUCATION THROUGH A NON-FORMAL SYSTEM IN PAKISTAN

By

MR. ABDUL HAMID JANJUA

Abdul Hamid Janjua conducted this research to explore the feasibility of utilizing a non-formal system for vocational and technical education in Pakistan in those fields which experience technical manpower shortages. The research also identifies those fields which could use such facilities effectively.

To assess the magnitude of technical manpower shortages, the National Training Bureau, Manpower Division, Islamabad, and Directorates and Boards of Technical Education were the key sources of information which helped the researcher in developing a questionnaire. The study was through random sampling of the opinions of tutors and study centre coordinators of Allama Iqbal Open University from Karachi, NWFP, Punjab and Baluchistan.

The research findings show that education and training through a non-formal system is feasible in Pakistan in the top ten trades in which technical manpower shortage is acutely experienced. These are carpentry, bricklaying, welding, plumbing, electricity, wiring, radio and television mechanism and construction.

STRATEGY FOR UNIVERSALIZATION OF PRIMARY EDUCATION IN PAKISTAN IN THE LIGHT OF EXPERIENCES OF SELECTED

ASIAN COUNTRIES

DR. S. ABDUL GHAFFAR

This research was conducted by S. Abdul Ghaffar to investigate the efforts made for the universalization of primary education in Pakistan and in some selected Asian countries. The research suggests a strategy for achieving the goal of universalization in Pakistan in a reasonable time in the light of the experiences of the selected countries.

An analytical study of primary education in four Asian countries, Afghanistan, Iran, India, and Sri Lanka was done. This helped to develop some strategies for universalizing primary education in Pakistan. The research finds serious, inherent weaknesses and imbalances in the process and procedures of educational planning. It suggests the formulation of long-term comprehensive plans devoid of uncertainties in the achievement of goals, reduction in the wastage of resources, improvement in the administrative and supervisory functions at different levels, introduction of innovations and the undertaking of experiments in collaboration with research institutes in and outside the country.

**GLIMPSES
OF
ALLAMA IQBAL OPEN UNIVERSITY**

Established	1974.
Enrolment	Todate—1983-84 = 329,054
Courses	Total offered todate 1984 = 71
Fields of Study ..	1. <u>General Education.</u>

		<i>Full</i>	<i>Half</i>
		<i>Total</i>	<i>Credit</i>
(i) Intermediate ..	26	11	15
(ii) B.A.	16	14	2
(iii) M.A. (E.P.M.) ..	8	8	—

2. Teacher Education

(i) Primary Teachers Orientation Course (PTOC)	1
(ii) Primary Teacher Certificate (PTC)	1
(iii) Certificate of Teaching (CT)	3
(iv) Arabic Teachers Orientation Course (ATOC)	1

3. Functional (Credit Courses)

(i) Shorthand (English/Urdu) Elementary/Advanced.
(ii) Typewriting (English/Urdu) Elementary/Advanced.

4. Functional (Non-Credit Courses)

(i) Agricultural Courses ..	Vegetable Growing (Summer/winter). Poultry Farming. Tractor Maintenance. Soil Problems & its remedies. Plant Protection
(ii) Arabic	Al-lisan ul Arabi.

Media Support

(i) Radio Programme presented to date 1984.	1174
(ii) T.V. Programme presented to date 1984 ..	343

Regional Services ..	(i) Regional Offices .. 11
	(ii) Study Centres .. 200
	(iii) Correspondence tutor .. average 40 students per tutor.
	(iv) Study Centre .. average 40 students per tutor.