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TO THE READER

Pakistan Journal of Distance Education is dedicated to the distance-learning system rapidly growing in Asia and the world over. The Journal welcomes studies, research and review papers dealing with 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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EDITORIAL

Distance Education: Should audio-cassettes replace broadcast media?

The third world countries are faced with illiteracy. Only Asia and the Pacific region have 666 million illiterate alone; 15 years of age and older which forms 75 per cent of the world's illiterate population. The education scheme in the conventional sector covering elementary, secondary, technical, adult and higher education is poised with staggering means and materials. This has resulted into educational deprivation of the masses. Mostly the rural masses are hit hard.

This task is formidable, clamours for huge resources, scientific planning, innovation and creative thinking yet the situation necessitates viable alternatives which can detour from the path of formal system. The widely accepted alternative system the world over which has gained momentum during the closing 20th century, is distance-education — a successor to the erestwhile correspondence education. This system is heavily dependent upon print material though supplemented partially by the electronic media — the radio, television, computer and numerous others in the offing.

A commitment to the use of media, particularly television created a new wave of distance education that broke with the dull old tradition of correspondence education. The excitement to make use of television and radio in the newly founded system of distance education, however, soon started showing a sign of thaw as the findings of various researches showed that their use was costly particularly in the third world where separate education channels are a rariety. Bates on media research said, "television and radio in particular are proving to be of less significance in teaching system or more difficult to use successfully than was originally expected." To him "the greatest media development during the Open University's 23 years of existence has been the humble audio-cassettes."

There are several reasons why audio-cassettes are found to be so popular. The academics like them because they feel they have more control over their use and can integrate cassette more tightly into course design. The use of two channels, sound and vision, in a controlled and integrated way through the combined use of cassette and print is a very powerful medium.

Students like audio-cassettes; in a majority of courses, they are ranked as the most useful component after correspondence, text. Programmes used individually by students on cassettes lend themselves much more to the teaching of skills. For almost all subjects audio-cassettes can be a practical and in-expensive means of personalising material providing variety and interest and presenting information whilst the eyes are occupied elsewhere or merely resting.

It is no more expensive to purchase and copy the cassettes and to mail them to students with their other materials than to pay for radio and television transmission times for courses with fewer than 500 students.

Few distance-teaching universities have an easy access to radio and television network with coverage comparable to that available to the UK Open University through BBC. In most countries the broadcasting service is provided by an organization, a national broadcasting organization, commercial institutions or a government department separate from the distance-teaching institution. Many are dependent on separate broadcasting organization for the producation distribution of their broadcast material.

Adequate transmission facilities are also not satisfactory. The broadcasting organizations are unwilling to make available peak viewing or listening times to audience. Thus there is a growing distrust in the advantages of television and radio over printing or face-to-face teaching. Many systems using television now offer a video cassette service to students. In all cases this is mainly a breakup to transmitted programmes.

The features that appeal to students are their convenience of control students have over them and their informality. They are like having personal tutorial with the course author in the students own room, a quality that appears to be lacking in radio or television programme, howsoever, skilfully they are made. Audio-cassettes are integrated with correspondence material as a major area for development in distance-education. They are cheap, easy to control and make convenient for students and above all educationally effective. Audiocassette use is certain to increase and the cost will continue to drop. More significantly production for distribution on cassette will free distance-education systems from their dependence on broadcast organizations for television production.

Distance-teaching institutions should be preparing carefully to match their offerings to the home media environment of the 21st century while operating their existing media as effectively as possible.

> Prof. Dr. Ahmed Noor Khan Editor



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PURSUIT OF EXCELLENCE IN DISTANCE HIGHER EDUCATION **REVIEW OF THE 15-YEAR HISTORY OF** KOREA AIR AND CORRESPONDENCE UNIVERSITY BY

Kim Jong-Suh **Research Professor, KACU**

Ι. Introduction

"Pursuit of Excellence in Distance Higher Education" for the theme of 1987's Fifth Forum seems to be adequate in that this forum is supposed to maintain a logical sequence and graduation with earlier ones, this theme reflects a natural extension from what was discussed last year.

Professor Lee Yung-Dug referred to excellence in open education in his keynote speech as determined by the Fourth Forum as the primary issue of discussion. Making education accessible to everyone who wishes for it brings us to the implacable demand of ensures excellence which is the lifeline of higher education.(1)

'Excellence' which emerged as the subject of concern last year would therefore receive exclusive treatment as this year's forum. This theme can be somewhat abstract and so that distance higher education and excellence both be preciously conceptualized.

Distance higher education Α.

To begin with, and attempt may well be made to distinguish between distance education and air and correspondence education, though these two are not clearly distinct. While the former is defined with reference to educational idea, relation between the host and clientele and method, the latter has a specific reference to media. What is discussed hence forth reflects a conceptualization which is closer to the latter. Therefore, air and correspondence education takes the place of distance education in this paper.

Air and correspondence education defies definition in simple terms. It is a kind of self-directed learning, which uses broadcasting media and correspondence as a means for communication. It is designed for people who have no access to education provided by a teacher at a fixed facility. In other words, it is a new approach to teaching which transcends spatial definition carries two connotations. One refers to a nonformal type and the other to a formal of education. In traditional terms, air and correspondence education denotes a nonformal type and the other to a formal of education. In traditional terms, air and correspondence education denotes a nonformal education which prepares its clientele for a certifying examination and includes cultural and language programmes aired by tv and radio to the community at large. The unique problem of this approach is that it does not necessarily lead to an ascendance of educational attainment, whatever the amount of education received may be. Although air and correspondence shares the same method of education and clientele with distance educator, those who have received it are formally recognized as having completed an equivalency of formal education, it is in this respect that air and correspondence education is not different from traditional schooling. Korea Air and Correspondence University, British Open University, Japanese Correspondence High School and correspondence programmes organized by private universities offer this formal type of air and correspondence education.

From the viewpoint of equal opportunity education, the formal type of air and correspondence education has brought massive reform to the educational system. The educational system used to be clearly divided into two pillars, social education (adult and nonformal education) and school. The legal recognition of educational attainment applies to the former alone. With the advent of air and correspondence education, there has emerged a new system falling somewhere between the two. This sytem makes a most remarkable accomplishment to 20th century education equal opportunity higher education.

To clarify distinctions among these, university, social

education and air and correspondence university, the following comparison matrix useful.

	University	Social Education	Air & Correspon- dence University
Objectives	Academic research	Practical skill	Academic research & practical skill
Degree	Bachelor	None	Bachelor
Curriculum	Theoretical	Job & life oriented	Theoretical and job and life oriented
Clientele			
1. Age	Age specific	Age specific or no limit	No limit
2. Job	None	Employed or none	Employed
3. Intellectual	Homogeneous	Heterogeneous	Heterogeneous
4. Motivation	Strong	Strong or weak	Strong
Teaching method			
1. Communica- tion	Person-to- person	Person-to-person	Remote communica- tion
2. Guidance	Direct	Direct	Via broadcasting media
3. Teacher-stu- dent ratio	Low	Low-high	High
Admission	Preliminary examination score & school performance	serve or desig-	School performance
Place for study	School	Society educa- tion organisation	Home & on-the-job n
Years	4-6 years	Short-term	5-10 years

Table-1 Distinctions among the university, social education and Air and Correspondence University

Dropout ratio	None	Low	High
School size	Middle & large	Small	Large
Supervision	Higher Educa- tion Bureau MOE (Ministry of Education)	Social Education Bureau MOE	Social Education Bureau MOE
Education cost per student	High	Middle	Low

B. Excellence

Bruner asserts that the most common goal of education consists of enhancing the excellence of programmes. We should understand clearly what this means. It means not only elitism in relative terms, as reflected in a limited number of people, but an attempt to help individual learners attain the highest level of intellectual development.(2) This definition carries an individualistic viewpoint. In other words, excellence is defined in both relative and absolute terms. In relative terms, it means producing an island of excellent people in a sea of mediocres. In absolute terms, it ensures that individuals stretch their potential to the fullest measure. Excellence is not predicated on a set of criteria. The highest possible level of development that one can attain is what counts. With regard to this, Gardner comments as follows. "We should praise an excellent accomplishment. even if it is made in the most humble work, and to have contempt for a poor performance, when it is made in a lofty work. Plumbers should be distinguished between the poor and the excellent ones. By the same token, and excellent philosopher is distinguished from a poor philosopher. In terms of what one has done to realize the maximum development of one's potential, an excellent plumber commands respect and admiration for the job well done, while a poor philosopher draws criticism for lacklustre performance in his own field of concern."(3)

In applying this conceptualization of excellence to Korea Air and Correspondence University, some words of caution are in order. The concept of excellence should be interpreted in view of the characteristics of Korea Air and Correspondence University. As mentioned earlier, Korea Air and Correspondence University is a new system of education

which incorporates both school and social education. Therefore, it has the double imperatives of seeking the academic excellence that is sought by formal institutes of higher learning and of ensuring the practical excellence coming from its commitment to fulfilling the needs of social education. Both school and social education can be incorporated into the concept of lifelong education. The excellence that Korea Air and Correspondence University seeks should be considered in the context of lifelong education. It is the kind of excellence that applies to those bound to academic pursuit and practical performance in their job. The common denominator of the two is intellectual excellence. When those attending Korea Air and Correspondence University and its graduates demonstrate intellectual excellence, Korea Air and Correspondence University will win recognition for the quality of its educational programmes.

II. Excellence in Korea Air and Correspondence University

The pursuit of excellence in higher education is a recent phenomenon beginning in the latter part of the 20th century. At this true higher education was limited to a handful of people, higher education was equated with excellence and there was no need to talk about it. As higher education was popularized, following the suit of elementary and secondary education, excellence began to capture the attention of educators as a new issue of public debate. Since the advent of Korea Air and Correspondence University was coincidental with the popularizing wave of higher education, and attempt is made here to examine the process of universalizing higher education and to trace the 15-year history of the university's efforts to seek excellence in this context.

A. Popularization of higher education and pursuit of excellence

In the early 20th century, the provision of free, compulsory education at the elementary level was the supreme concern of many new nations. This set the stage for the popularization of secondary education. At one time, "secondary education for all youth" became a popular catchpharse. This tendency was in marked contrast to the earlier trend that having completed secondary education one was a part of a priviledged people. The conclusion of the World War-II triggered a dramatic increase in the number of applicants for secondary education. This new wave of popularization reached higher education in a matter of a few decades.

The popularization of higher education is illustrated by a marked increase in the number of collegiate students. In 1945, the year of liberation, the total number of collegiate students across the nation (including the northern part) was 8,000. The total population of higher education in 1986 is 1,330,000, a 166-fold increase over that of 1945. This rapid increase is brought into sharp focus by comparing it with enrolments in major developed countries. The number of collegiate students per 100,000 is 5,492 in USA; 2,070 in Japan (1980); 2,012 in France (1980); 2,008 in West Germany (1980); 1,963 in Italy (1980); 1,489 in UK (1980); 1975 in Soviet Union, and 2,007 in Korea in 1981.(4) By the sheer number of collegiate students relative to population, Korea leads other developed countries in popularizing higher education.

In the process of popularization, new problems arose. First, the rapid increase in the higher education population brought a new dimension to the debate over the goal of higher education. The traditional goal of higher education, as we understand it, was limited to producing a cadre of elites who played leadership roles in every walk of life. Article 108 of Education Law set forth the goal of education as "to search for truth and ways to apply it and build a leadership character." This goal may apply only to a small segment of the student population. But, viewed from the needs of masses, it simply does not hold. Now that higher education has been popularized, higher education should derive its goal from the needs of masses of students. Second, higher education is still torn between excellence and diversity. The popularization of higher education does not necessarily lead to a downward trend in the quality of the education. The mandate remains clear that higher education should not forsake its inherent task of ensuring excellence. The new concept of excellence should be comprehensive enough to cover the wide spectrum of various programmes responding to technological development and industrialization. The fact that the number of courses offered by universities in Korea has risen to 3,217 in 1984 bears witness to the diversity of programmes.(5) Emphasis on excellence therefore is particularly justified as programmes are diversified.

B. Excellence in Korea Air and Correspondence University

Korea Air and Correspondence University is a new type

of educational institute, which is responsive to the popularization of higher education. If higher education institutes had insisted on serving only a few, Korea Air and Correspondence University would not have been created. The increasing demand for higher education brought many before the door of universities, awaiting to quench their thirst for learning. The advent of Korea Air and Correspondence University was acclaimed as a new promise for the future, particularly among the adults who had lost opportunities to continue schooling due to economic and other reasons. The remarkable success that this type of education has achieved in the span of 15 years is largely due to the cooperation of those who supressed their desire for learning. Amid its rapid expansion. Korea Air and Correspondence University has continuously sought excellence in the quality of educational programmes.

The intention of Korea Air and Correspondence University to seek excellence is manifested in Education Law. Article 114-2 of Education Law revised in November 15, 1968. This law provides that the national university can establish an air and correspondence college. Deserving of attention here is the word "national university." Dr. Kwon Oh-Byung, the Minister of Education, expressed misgiving about the possible degradation of education quality, when private universities are allowed to open up an air and correspondence colleges in view of past practices of using the enrolment opportunity as a means to profit-making and I quote "the national university is more reliant in guarding against such practices." There was a consensus of opinion about locating the air and correspondence college in Seoul, where there was only one national university. The reasoning behind holding Seoul National University responsible for air and correspondence education was that it could draw on the outstanding human and physical resources of the university to ensure the quality. To begin with, it was named Air and Correspondence College associated with Seoul National University. Just prior to its inauguration in 1972, it was prefixed by "Korea," with the vision of developing it into an independent institute. Its initial enrolment of 12,000, was selected from 55,196 applicants, showing a 4.6 to 1 competition ratio. The competition was most fierce in the elementary education department. In order to be eligible for admission, one had to be within the top 5 per cent achievement ranking. From the outset, Korea Air and Correspondence University was given a climate supporting the pursuit of excellence.

It was also determined that other factors could possibly stymie the attempt to seek excellence in distance education. In terms of the quality of students, Korea Air and Correspondence University was likely to fall behind the enrolment standard of regular evening courses of universities. Although there was a considerable degree of apprehension about a sizeable segment of student dropping-out. Korea Air and Correspondence University stuck to the criteria that would ensure a high academic standard as those of other universities. The conferring of degree was strictly limited to those who met the established criteria, no matter how small the number of successful bidders for graduation. Viewed in the context of lifelong education, it may hold that students are allowed to stay in school as long as they meet graduation requirements. The number of years one spends is an indicator of the amount of education one has received. As a result, out of the 1972's entrants (11,172), 24.6 per cent (2,751) graduated from two-year programmes. This success ratio is still considered 'satisfactory' by international standards.

The patient effort of Korea Air and Correspondence University to maintain a high academic standard was rewarded with the social recognition of its quality education. From 1973 to 1981, it produced a total of 13,150 applicants for the examination which qualified for transferred entrance into formal universities. Out of the total applicants, 2,923 (22.2. per cent) passed the examination. Other junior college produced a total of 32,987 applicants while only 6.6 per cent (2,174) passed the examination.(6) The fact that Korea Air and Correspondence University registered more than three times as high a success ratio as other junior colleges captured the public's attention.

After being upgraded to a university which confers bachelor's degrees, Korea Air and Correspondence University has maintained its standard of high quality. In 1985 and 1986, a total of 2,271 students advanced to reputed graduate schools, including Seoul National University[22], Yonsei University[87], Korea University.[8](7) Those who have passed national qualification examinations number 30, including the bar examination[10], higher civil examination[14], accountant examination[3], tax specialist examination[1], and other.(8)

III. Tasks

There are specific tasks to be performed in seeking

excellence in air and correspondence education, which not only provide a sense of pride among students but also enhances their social development.

First, the unique character of Korea Air and Correspondence University should be defined to provide a systematic approach for the pursuit of excellence in air and correspondence education.

As mentioned earlier, Korea Air and Correspondence University can be defined as an institute of lifelong education. Since lifelong education is a highly abstract concept encompassing school education, home education and social education, Korea Air and Correspondence University, as an institute of lifelong education, may lose its unique, concrete substance. There is a need to specifically define the functions of lifelong education, which are assigned to Korea Air and Correspondence University. As a new system which incorporates both the functions of school and social education, Korea Air and Correspondence University has the dual imperatives of ensuring the excellence that is required of the two, namely; academic and practical excellence.

Second, as an institute which provides quality education, it is essential that Korea Air and Correspondence University maintain a high standard of intellectual development. Under on circumstance should it degrade the intellectual standard of programmes to suit the competency of average students. The pursuit of excellence requires that Korea Air and Correspondence University maintains a high standard even at the risk of failing a sizeable majority who do not meet this standard. The social recognition then, a university difficult to graduate from is the source of energy that fuels its development. Korea Air and Correspondence University it may be said owes its development to the reputation it has gained from people. KACU attracts bright students and motivated students and creates a climate supporting intellectual development. Dr Lee Yung-Dug further qualifies this point.(9)

Korea Air and Correspondence University requires a longer span of years to complete than regular institutes of higher education, if it is to maintian a higher academic standard. A larger proportion of students failing to graduate from Korea Air and Correspondence University can be justified by this concern, ie, setting and maintaining a high academic standard, while making education accessible, is the only way to ensure the excellence of air and correspondence higher education.

Third, by expanding regional study centres, it is possible to develop among students a sense of affiliation with the university. The students of Korea Air and Correspondence University envy their counterparts attending the regular institutes of higher education for the classrooms, library and student services facilities which facilitate their learning. Having no access to such facilities is a source of frustration to distance education students and this can discourage their learning. Additionally, regional study centres should be expanded to allow students to attend class at least twice a week, thereby developing intimacy and receiving intellectual stimulus from classmates. Twelve regional study centres were established in provinces or cities, as the subsidiary organization of Korea Air and Correspondence University. By erecting another 25 study centres at the country level, Korea Air and Correspondence University would have a nationwide network. Despite the rapid expansion of study centres at the regional level, we have a long way to go to meet the facility needs of air and correspondence education. It is necessary to establish a regional study centre which encompasses at least two countries. For example, the British Open University is served by 13 regional study centre and 253 subcentres, with 238 full-time professors. Part-time lecturers and counselors number 5,176, assisted by 589 administrators.(10) Among accomplishment that Korea Air and Correspondence University has made, the establishment of regional study centres comprises the most remarkable milestone in the annual of its development. however we must continue to extend the outreach of air and correspondence education and this good should be given a top priority.

Fourth, special programmes should be developed, which challenges the intellectual potential of bright students. Burner asserts that excllence applies not only to a few bright students but all who hold the promise of development. Thus it is not desirable to anchor the level of instruction to the average level. What is important is to provide programmes which challenge the intellectual potential of bright, medicore and dull students alike.(11) His assertion holds important implications for Korea Air and Correspondence University's efforts to seek excellence in its programmes. With the diverse backgrounds of students, a cadre of bright students exists whose intelligence rivals any of those attending the regular institutes of higher education. Organizing and providing programmes which challenge their potential not only serves them but will go a long way toward building a new climate conductive to learning and research for the University, such a programme may defy definition in simple terms, due to the diverse needs that students bring to the classroom includes preparing students for high civil examinations, accountant examination, etc. A special programme is in order, which equips students with skill in writing creatively. Those who wish to advance to graduate schools will cry for a kind of programme that will fulfil their inquiry.

Fifth, making higher education accessible to anyone who wishes for it itself offers a way to seek excellence. It appears that opening the university to everyone has nothing to do with or, may rather become an obstacle to seeking excellence. By contrast with the popular practice of admitting students on the basis of the established qualification criteria, admission based on their demonstration ability to learn may offer the advantage of seeking excellence. They ability to learn is judged on the basis of performance in high school. But it should be noticed that adults who have long since finished schooling are also admitted, assuming that they have improved their ability through practical experience, though their performance were poor in high school. The competency-based admission promises a greater possibility of realizing excellence than the qualificationbased admission. An aptitude test needs to be developed to provide data for the comptency-based admission. An English test may serve this purpose as the representative indicator of other subject matters.

Sixth, textbooks and broadcast programmes should be developed by course teams. A course at British Open University consists of reading (65%), broadcast programmes and learning via audiovisual materials (10%), class instruction and counselling (15%), and home assignment and test (10%).(12) From this fact, it is readily noticeable that textbook and broadcast programmes assume the most important dimension of air and correspondence education. The development of textbook and broadcast programmes, which play such a vital role in air and correspondence education, is more often than not sole responsibility of a professor teaching the respective subject matter. Whether he or she is qualified or not. Pointing out the inefficiency of this practice, Dr Stevens of British Open University, who served Korea Air and Correspondence University as a consultant from April 20 to 30, 1987, made the following suggestions. "The adoption of course teams for the development of textbook and broadcast programmes is an implicable mandate to Korea Air and

Correspondence University. Besides the professor who actually teaches, a course team is composed of a teaching assistant or course assistant, P.D., an editor, a designer and a evaluator, who assume a joint responsibility for producing materials and instructions."(13)

The British Open University has won a reputation for the quality education it offers. Textbooks and broadcast programmes it produces are found in use in may universities in the United States. This reputation is the result of involvement by course teams in the development and production of materials and programmes.

It may not be possible to adopt course teams for all subject matters at once. A plan should be promoted to adopt this system for all subject matters on an incremental basis. A preparatory stage should precede its actual implementation, beginning with one or two subject matters.

Seventh, strict quality control should be exerted on graduates by raising the standard of the achievement test. Evaluation is the major device of quality control. It is not only the term examination that provides clues to qualification for graduation, but more important is the final examination which features comprehensive coverage of all subject matters. Therefore, in strict quality control, "strict" carries two connotations: one is related to academic standard and the other to the managerial issue. The former may well be effected by raising the academic standard of the English test to such an extent that ensures comprehension of English textbooks in one's major field. The common expectation of the college graduate who is supposed to have no difficulty comprehending in English textbook becomes a valid criterion on which to judge qualification for college graduation. The graduation examination should include four subject matters. The average number of subject matters to be completed over a five-year schooling is 45. Selecting four or five out of them for inclusion in a test does not ensure the validity of the test. Whether examination should be administered by subject matter or in an integrated form covering different subject matters requires research.

We see that research needs to be conducted as to what strict quality control means to management. Failure to ensure strict adherence to the established procedure of management defeats the university's efforts to seek excellence.

IV. Summary and conclusion

Fifteen years have elapsed since Korea Air and Correspondence University was inaugurated in 1972. Tracing its efforts to seek excellence in educational programmes and deriving tasks comprises a meaningful undertaking, which is expected to provide motivation for yet another leap in the development of air and correspondence education.

Seeking excellence in distance higher education was first conceptualized. By equating distance education with air and correspondence education, an attempt was made to shed light on the unique character of Korea Air and Correspondence University. Since Korea Air and Correspondence University represents the third educational system which incorporates the functions of school and social education, it is burdened with double imperatives of seeking academic and practical excellence. This excellency carries two connotations: one represents an attempt to help individual learners attain the highest level of intellectual development and the other refers to the intellectual edge of one student over the other.

The popularization of schooling has given anew dimension to debate over the excellence of air and correspondence education. Waves of popularization, beginning with elementary education in the early 20th century, reached higher education in the late 20 century. Korea has seen this rapid succession of popularization sweeping elementary, secondary and higher education over the four decades since its liberation. How to seek excellence amid the popularization trend has been a matter of special concern facing the system of higher education in Korea.

Korea Air and Correspondence University emerged from this trend to popularize higher education. From the outset, the excellence of educational programmes was a matter of serious concern. To maintain a high academic standard, Korea Air and Correspondence University was established as an attachment to Seoul National University. A highly competative admission enabled the selection of bright students. From 1973 to 1981, when air and correspondence education was limited to the junior college level, 22.2 per cent of its graduates passed the competitive examination to be qualified for transfer admission into regular institutes of higher education. This success ratio was three times as high as that (6.6 per cent) of other junior colleges. After being upgraded in 1981 to an independent university KACU as a fullfledged institute which confers bachelor's degrees, has continuously made efforts to ensure excellence. In 1985 and 1986, a total of 2,271 graduates advanced to highly reputed graduate schools. Another 24 graduates passed the bar examination, high civil service examination, accountant examination or other qualification examinations.

Not content with these accomplishments, Korea Air and Correspondence University continues to seek excellence. It has been suggested that the following tasks must be met in this pursuit:

First, Korea Air and Correspondence University should seek its own excellence characterized by the unique missions assigned to it.

Second, Korea Air and Correspondence University should maintain a high academic standard which leads to the highest level of intellectual development.

Third, regional study centres should be expanded to provide facilities for as much class instruction as possible.

Fourth, special programmes should be developed, which provide for the maximum development of intellectual potential of bright students.

Fifth, the admission of students should be based on their demonstrated ability to learn.

Sixth, textbooks and broadcast programmes should be developed by course teams.

Seventh, achievement evaluation should be strengthened and rationalized as part of a quality control scheme for graduates.

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MOTIVATION OF ADULTS: IMPLICATIONS OF ADULT LEARNING THEORIES FOR DISTANCE EDUCATION

BY

Michael Hough

This paper attempts to address the problem of motivating adults, particularly but not only in the context of distance teaching. Its approach is needs-based, in that it identifies in some detail the needs and interests of adults, due to an acceptance of a viewpoint promoted constantly in adult learning theories — that effective learning should be based on the needs and interest characteristics of the adult learner.

Thus this paper will attempt to: review the general principles of adult learning; describe in detail the nature of the adult learner as suggested by current literature; provide suggestions for the design of learning programmes for adults; review some implications for tertiary colleges and their staff, particularly those engaged in correspondence teaching, of accepting ideas about motivation derived from adult learning theories.

Adult learning: andragogy

The emerging theories of how adults learn (as distinct from how children learn) were subsumed into the term 'andragogy' by Knowles (1970). The term refers to the principles of adult learning, as a contrast to the term 'padagogy'; which describes the principles of child or adolescent learning.

Sources such as Kidd (1973), Cropley (1977), Knowles (1970, 1978a, 1978b), Miller and Verduin (1979(, Peterson (1979), Whitbourne and Weinstock (1979) and Kimmel (1980)

review the principles and scope of adult learning theories. One essential idea that has emerged from such sources is that adults do not learn, think (or even read) in any single or simple way. Newton (1977; 116) depicts the adult learner as 'an autonomous, experience laden, goal seeking, "now" oriented problem centred individual.'

A key feature of adult learning approaches can be summarized as: 'it allows the learner to select the content and processes of learning, content and process are based on individual needs and interests' (Meyer, 1977: 117).

In a later section in this article adult career and life stages are reviewed, and one of the andragogical principles stated by Newton (1977: 362) provides a direct linkage and support for studying the career and life stage needs of adults, namely:

'. . . the adult's readiness for learning is inherent in his societal role as worker, parent, spouse, organization member and the like. Since need is basic to want and readiness, the requirements and demands of the adult's present situation and aspiring roles in real life must dominate and supersede all other considerations in andragogy.'

Another guide to important priorities in designing meaningful learning experiences is provided by Peterson's (1979) review, of the research literature on learning by adults. This review concluded that only three major demographic variables — age, level of educational attainment and place of residence — were highly relevant for educational planning. These factors support the argument that the needs and experience-based concepts of andragogy offer useful insights into the learning needs patterns of adults, in a way summarized by Lowe (1975: 51):

'the implications of andragogy for education are obvious. We might best summarize them by advising adult educators to spend as much time studying the rhythm of mental, physical and emotional development of their students as do child psychologists and pedagogues in the primary school.'

The nature of the adult learner

Since one direct pathway to motivating adults is to

meet their needs, the following needs-based aspects will now be reviewed:

- 1. adult life stage theories;
- 2. career stage theories, illustrated by a selected professional workgroup; and
- 3. perceived limitations in such stage theories.

1. Adult life stage theories

A literature review reveals a group of stage theorists who describe how adults' needs and interests change as they progress through the perceived stages of adult life. These writers can be categorized into age-based theorists who specify a time-based relationship of events, or developmental stage-based theorists who describe details of a sequence of developmental characteristics that could normally be expected. The following review is based on a comprehensive treatment by Mulford (1979).

Life stage theorists such as Gould (1972), Levinson (1974, 1978), O'Connor (1981), Sheehy (1976, 1981) and Viney (1980) have suggested the probable relationship between the concerns, problems and tasks in life that are common to most adults at specific age periods. Levinson (1978: 21) stated that the basic purpose of this type of enquiry was 'an interest in generating and working with hypotheses concerning relatively universal, genotypic, age-linked adult development periods within which variations occur.'

Such proposed patterns of development are characterized by terms such as provisional adulthood, age thirty crisis, mid-life transition and restabilization period.

Developmental stage theorists provide an alternative approach, by focusing on a more abstract continuum than agebased theorists. Their approach is described by Leovinger (1976) as providing 'both a normal developmental sequence and a dimension of individual difference in any given age cohort. All represent holistic views of personality and all see behaviour in terms of meaning and purpose... Finally, although the sequence of stages is not identical from author to author, there are many recurring similarities.

Development stage theorists selected different concepts

on which to base their proposed sequnce of change. There are those who selected life events such Neugarten (1963, 1968, 1971) and Havighurst (1967); ego development e.g. Erikson (1963), Loevinger (1976), Dale (1968), Chickering (1976) and White (1975); moral development Kohlberg (1968) and Peck and Havighurst (1960), and cognitive development such as Harvey et al (1961), Hunt (1961), Joyce et al (1974) and Oja (1979). Summaries of these theorists are tabulated in Mulford (1979: 159-163).

All developmental theorists, whether age or stage based in their explanation detail, are considered to provide guidelines for understanding and anticipating the rhythms of mental, physical and emotional development in adult interests and needs. Whilst there are certainly differences in detail and emphasis, there is consensus in the broad concept that adults are not similar in their concerns and interests over their life span. Developmental stages are a more specific concept, used as the mechanism (in most theories) for grouping concerns and interests across different points in the life span.

2. Career stage theories

There is a growing body of literature which focusses on the career related needs and interests of particular work groups. A very representative group is provided by those studying and writing about the career needs of teachers who also constitute a group with considerable user requirements for distance education.

Although teaching has for many years been considered a career-less profession (eg Lortie, 1975), a large number of writers have investigated the developmental stages of teachers' careers whilst they remain in the basic task of classroom teaching. Such sources suggest that a teacher's working life can be divided into career stages, and represent a growing body of opinion that there is a range of different career needs associated with the one occupational position of classroom teacher. These stages appear to result from a complex interaction of personal muturation, experience, and changes in attitudes and interests over the working life span of each teacher.

Fuller appears to be the seminal career stage theorist, and published a range of aritcles in the 1960s and early 1970s on the different concerns of teachers as they progressed from college practice through first year teacher to an experienced teacher. Fuller's contributions were the synthesis of disparate earlier research (see Fuller, 1969 for example), and the conceptualization of a 'developmental concerns' framework of career stage (namely, preservice beginning teacher and experienced teacher).

'these studies suggest the need for different types of inservice and staff development at different career stages. However, they also suggest that there are different stage development inservice needs within groups. . . some teachers seem to bypass stages, other do not progress as far in stages as do other.'

This section clearly indicates that professionals have different types of needs at different points in their career, and that situation-specific learning, appropriate for particular subgroups, is a highly desirable approach to motivate career professionals.

3. Perceived limitation in stage theories

Whilst there is a considerable theory based which describes the needs of adults by career of life stage theories (either age-based or developmental-stage based), there are opposing viewpoints to these perhaps simplistic resolutions of complex human issues. The main opposition to the acceptance of stages or developmental changes as the means of describing adult needs can be reviewed at two levels: conceptual and methodological. The conceptual concerns emerge from writers who argue that developmental stage change is not the only type of change that would occur, and that there are other elements (stable and unpredictable) to the adult personality, needs and interests.

For example, Neugarten (1963) suggested three key issues existed in any adequate theory of adult development: (a) aspects of orderly and sequential change throughout life; (b) consistency versus change in personality over long periods of time, and (c) issues of antecendent — consequent relationships during a life span.

A broadly similar argument is offered by Gergen (1977) who argued that there are three approaches to understanding and explaining human development: (a) through patterns of stability — explicable through early experience-based theories, such as Freud; (b) through patterns of ordered change - explicable through developmental-based theories such as Erikson; and, (c) through the new pattern of aleatory (chance) change — influenced by the biological nature of the human organism plus the effects of culture.

Methodological concerns arise because of studies suggesting that analyses based on adults reporting their own needs (eg by surveys) are suspect (see Coleman, 1976: 15-17; Jones and Hayes, 1980; and Brayne, 1980). These studies suggest the existence of both perceived and felt needs. Perceived needs reflect what respondents think should be their needs when reported to another person; whilst felt needs are those that the respondent personally believes they should acquire, although not acknowledging them publicly.

These sources represent the major conceptual concerns detected. In judgement it is considered that they provide a perspective and context from which to use developmental theories, rather than direct opposition to them. Their value is in providing an awareness that there are other aspects of adult behaviour and needs than those suggested from purely developmental considerations.

Thus there may be areas of constant needs across the lifelong learning requirements of adults, as well as stage or age specific learning needs. Both dimensions can be acknowledged by adult educators through offering of a range of learning experiences designed to meet specific needs of either change or stability in adults.

This early description of career stages has been pursued by subsequent researchers in one of two different ways: firstly, as a pattern of change related to a definite age range or career point, or, secondly, as a pattern of change related to some developmental characteristic or concern of either the teaching process or the teacher.

As examples of the first approach, Smith (1972), Peterson (1979), Newman (1978, 1980) and Ryan (1978) described varsions of career progression stages — such as, first year, early, middle or late career.

The alternate approach was provided by theorists who described teacher stages in developmental task terms not immediately relatable to a particular age or job phase. Instead, career stages are described in terms of the development progression of a set of characteristics. For example, Gregorc (1973) provided a detailed profile of career developmental in four stages: becoming — growing — maturing — fully functional professional.

Dalton (1977: 23) suggested a four pattern of career development for professionable in organizations, with a primary career relationship in each stage of: apprentice, colleague, mentor and sponsor. His developmental model describes each stage in terms of the central career activity, primary relationships and major psychological relationships envisaged.

Other developmental stage descriptions of teachers are provided by Apelman's conceptualization (1978:25): beginning teacher-focus on new ideas and activities-focus on extending and developing curricula. Krathwohl (1978:10) suggested the sequence of change: presentation centred-interaction centred-pupil centred; whilst Hall (1978a, 1978b) proposes that teacher concerns can be staged in terms of a level of concern about each innovation, namely; awareness; informational, personal, management, consequence, collaboration and refocussing levels of concern.

This second (developmental) approach tends to offer more sophisticated conceptualizations of staging than does the first (age-related) models. However, the age (or career stage)-based theorists provide a more practicable research approach because of their abilities to identify their proposed stage by clearly measurable demographic characteristics such as age and length of teaching service.

However, a major unresolved problem is that age or career point related stage theories tend to assume as inevitable progression through (eg) a teacher's career, whilst the developmental task related stage theories do not. There seems little double that some physiological age dependent changes usually occur in a teacher's career (eg loss of energy and physical capacities). However, earlier conceptions that most adult learning and mental conditions and mental capacities are age dependent have been thoroughly discredited in current adult learning literature (see Kidd 1973, ch 1 and 2, Cropley, 1977, for details).

Any appropriate perspective on this dilemma is provided by Ryan (1974: 4).

4. Some specific adult learner characteristics The first three components of this section have
suggested that adults will be motivated to learn by learning experiences based on their linkely career or life stage needs. Whilst this can be extremely helpful for adult educators involved in people-oriented teaching content (eg staff developers), there remains a considerable volume of content which may be deemed important to teach, but is not easily relatable to adult needs.

Leaving aside for a moment a fundamental question for further consideration, should adults be taught content they do not see as relevant to their needs?, the remainder of this section focusses on more specific suggestions for deciding the learning characteristics of adults.

McClusky (1975: 112-121) reviewed learning potential in older adults and indicated that adult performance on intelligence tests show that adults could increase in performance, and certainly did not decline with age as previously was believed. However, McClusky suggests that adults become more differential in their abilities and for learning (and other) purposes we should acknowledge crystallized intelligence — based on experience, and fluid intelligence, based on primary biological forces.

McClusky suggests (1975: 117) that fluid intelligence may peak early and then tend to decline — mainly because of disuse and poor motivation, whilst crystallized intelligence continues to grow to the end of life. He further suggests that any decline is inversely correlated with health and fitness.

Speaking mainly about older adults he states (p118):

'the capacity to learn is there, possibly in a latent form. But it is there, and it is the task of adult education to arrange the circumstances and the stimulation in order that this potential may be actualized.'

The following subsections provide advise summarized about adult learning:

- a. Learning strategies: McClusky provides some learning strategy suggestions for the older adult learner (p120-121) in that learning:
 - must tap some deep interest and need;
 - must restore confidence in ability to learn;
 - should be noncompetitive;
 - should provide plenty of opportunity for fellowship; and

- should be accompanied by the opportunity of counselling to assist learners relate instruction to personal needs.
- b. Learning situation characteristics: Some specific learning situation characteristics suggested by McClusky are:
 - a supportive environment;
 - the use of techniques that reinforce learning, e.g. tutors very clear as to learning expectations held;
 - use of auditory and visual imagery in the presentation of information;
 - self-pacing of learning.
- c. Criteria for planning adult learning: In another context, McClusky (1970: 166-175) suggests the following characteristics:
 - i. adult learning has demonstrable consequences;
 - ii. the status of the adult's teacher is an essential component of that teacher's task competence;
 - iii. the adult learner is autonomous, and may be sensitive about the learner role;
 - iv. continued learning by adults improves their learning effectiveness;
 - v. active participation by adults improves their learning;
 - vi. problem-solving is a sound learning model for adults;
 - vii. learning is made meaningful to adult learners by: - dealing with their experiences,
 - giving maximum insight into relationships, and
 - achieving the goals of the learner;
 - viii. adults may resist learning because of:
 - conflict of new learning with ideas of previous learning,
 - reluctance to change,
 - learning involves risks, and

ix. learning transfer occurs when adult capacities for using experience and generalizing experiences can be drawn upon.

Thus to maximise adult learning requires a judicious selection of techniques which optimise the above characteristics and ensure maximum motivation of adults to learn. One essential ingredient that emerges for distance education is that two-way feedback and interaction between learner and learning institution seems to play a vital role in helping to decide whether an appropriate set of factors has been selected for particular learners.

Some options for the organization of adult learning

Bergevin, McKinley and Smith (1970: 270-288) attempted to develop a series of policy guidelines for the instructional activities of adult education. This approach attempted to provide a conceptual framework to account for the structural elements in the adult education situation (p270). This section of the paper attempts to summarize that framework, and to comment upon some implications for distance education.

The framework proposes characteristics of the content and structure of an adult focussed educational activity, in order to assist the adult educator (called the learning agent in this approach) to understand more clearly the implications of his or her role. A summary of their main ideas follows.

1. Content options

Content may be analysed as (op-cit 272-273):

- potential, i.e. all content that could be selected and presented to the learner;
- manifest, i.e. all content that is actually provided to the learner;

- latent, i.e. content that the learner possesses and can bring to the selected learning situation without further stimulus;

- potential latent, i.e. content that the learner possessed (although may not be able to actively recall at present), that could be brought to the learning situations through the use of appropriate stimuli;
- ultimate, i.e. this is the content that is actually received by the learner and organized meaningfully in a learning situation. This occurs as a result of presented (ie manifest) content interacting with the learner's latent content to enable new learning to occur.

A number of implications arise from this categorization approach to the roles of content in a teaching-learning situation. It is a teacher's responsibility to organize content relevant to the perceived needs of the learner — by a process of acceptance or rejection of potential content based on a knowledge of the learner. This implies some type of information gathering phase about learners and their needs may be an important initial step in successful distance education for adults. Another useful mechanism would be to use this information gathering to detect previous learning experiences that suggest latent content, so that the actual content selected provides stimuli to both reactivate and improve upon any past learning.

Thus the role of the designer of distance teaching for adults may need to extent to selecting experiences that maximise latent content in learners, as well as the more obvious (and traditional) task of selecting appropriate new content.

(To be continued)

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Allama Iqbal Open University Islamabad — Pakistan

ALLAMA IQBAL OPEN UNIVERSITY

AND

NON-BROADCAST MEDIA

BY

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We are all aware of the fact that developing countries have several problems in the field of education. To name a few there are low participation rates combined with high population growth, disparities between urban and rural areas and provinces, lack of trained teachers high illiteracy rates and all its off shoots, high dropout rates, employment difficulties for the educated and the noneducated and despite unemployment problems nonavailability of skilled labour. These problems need to be dealt with on a war footing. It is a proven fact that investment in education contributes to high health standards, higher literacy rates, increased use of more productive agricultural techniques, lower rates of population growth and better standard of living. For any country education is the most important element of development and modernization.

Pakistan has scarce resources to attain its multiple ends for development specially its present education system is inapt in many ways. Formal education is inadequate to reach and teach the entire population of the country and is largely urban oriented and inappropriate to rural Pakistan which comprises 72% of the population. To educate the masses, there is a need for nonformal education system. A system which can educate the masses, can reach the dropouts from education institution, can enter the doorsteps of those who are bound to stay indoors, and can train the people in new and improve skills.

Before we proceed ahead let us define nonformal education. Nonformal education is a deliberately organized educational activity outside the established school and university system, particularly for adults and out of school youth, from, both rural and urban areas. Purpose of this education is communication of ideas, development of skills, changing attitudes or modifying behaviour related to the realization of development goals and the achievements of higher standard of living together with the welfare of all people.

The countinuing economic inability of the government to meet the demand of a total education system compelled the country's educational planners to explore the possibilities of nonformal education system which could overcome the limitations of formal system. Allama Iqbal Open University is an answer to this demand and is spreading the education far and near to the entire nation through its nonformal education system.

Introduction

In Pakistan, the nonformal education system through AIOU has created a growing awareness and acceptance as a dominate approach to education for the future of the nation. In this University it is recognized that "education" is not "equivalent" of "schooling." It is not confined to anyone level, medium or kind of education. It is very much appreciated that this University can not be and need not be limited to the buildings within the campus walls. Here I quote John Masfield, who said "there are few earthly things more beautiful that a University because it is a place where those who hate ignorance may strive to make others know, where those who perceive truth may strive to make other see."

The AIOU aims at providing the masses with an opportunity for further education through organising the following learning activities:

- 1. Systematic study of correspondence text by students at their homes or work places.
- 2. Use of multimedia to supplement the learning activity

at all levels.

- 3. Face-to-face tutorial meeting at study centres and tutoring by correspondence.
- 4. Written assignments, final exams and practical work.

Nonbroadcast media

Out of the four major activities of AIOU mentioned above we are concerned with the use of multimedia in this discourse. In the context of education media is considered as a channel for communication or it is a systematic way of designing, carrying out and evaluating the total process of learning and teaching in terms of specific objectives based upon research in human learning and communication, and employing a combination of human and non-human resources to bring about more effective instruction.

The University is utilizing two types of media:

- Broadcast media
- Nonbroadcast media

The broadcast media namely the radio and the television is extensively used by the University but at times certain difficulties faced by the University for the use of this medium, are as follows:

- 1. High transmission cost: The University has to pay a substantial amount from its own budget towards transmission cost to Pakistan Broadcasting Corporation and Pakistan Television. This cost is constantly rising.
- 2. Inadequacy of transmission time: This is perhaps the most serious difficulty of all. It is not only the quantity of time but the Corporations usually prefer to transmit educational programmes to odd hours which is not convenient for the students.
- 3. Insufficient quantity of transmission time and also the gradual increase in the number of programmes with the passage of time: The present transmission time does not meet the University's requirement. With more programmes it will be even worse in future.
- 4. Lack of complete coverage: Substantial number of

targets cannot receive the transmission and many homes do not have radio or television sets. Moreover, most of the villages in the country do not have electricity.

- 5. Complexity of timetabling specially for radio broadcasts: Some programme is distributed at different times in different parts of the country and proper timetabling for a large number of programmes is difficult.
- 6. Displacement of educational programmes: The timing of any programme is changed unannounced, for telecasting or broadcasting games commentaries, speeches by VIPs and special reports.
- 7. Difficulty in reaching the small groups: Broadcast media is not cost effective for small groups.

In order to overcome these difficulties the AIOU is using non-broadcast media whenever and wherever it is needed. It serves the following functions:

- i. It facilitates class study of single copy material.
- ii. It stimulates student's interest.
- iii. It saves time.
- iv. It encourages students participation.
- v. It provides a review.
- vi. It helps students learn to communicate their ideas visually.
- vii. It provides a medium for individual or group report.
- viii. It makes the class room dynamic, relevant and attractive.
 - ix. It makes learning more interactive through applying accepted learning theory.
 - x. It improves the quality of learning.
 - xi. Through NBM instructions can be provided when and where desired or necessary.
 - xii. The role of the instructor can be appreciably changed in positive direction.

The University has also its own criteria for producing the nonbroadcast media that is as under:

- Be of genuine interest to student.
- Be suitable for their level of understanding, ages, grade levels.
- Be clearly relevant to curricular goals.
- Fit naturally into the sequence of student work.
- Produce learning that justifies the time and trouble required.
- Provide observational experiences that are not more effectively and economically available in media forms.

Types of media the university is producing

- 1. Printed media: A number of materials, prepared on paper may serve as nonbroadcast media. They are called printed media and consist of three groups:
 - 1. Learning aids
 - 2. Training materials
 - 3. Informational materials
- 2. Display media: Mostly display media is designed by the university for use by an instructor. Information is presented in front of small class or audience. This category includes the chalk-boards, flipcharts and other exhibits. The example for the use of flipchart in combination with audio tape will be discussed later.
- 3. Audio tape recording: AIOU is producing audio material in an economical way to provide certain types of information or instructional content. It can be used for groups and for individual listening also.

These small compact cassettes recorder have made the use of audio materials easy and convenient. These recording can be used for many purposes, serving as a verbal record of interviews and meetings, recording of role-playing situation, for followup analysis and other needs. For instructional purposes, recordings are co-related with readings and worksheets in an audio notebook format. Besides these the university produces the following:

- Tape slide show,
- slides and transparencies,
- posters,
- Multimedia kits,
- audiovisual material,
- wall charts, diagrams,
- drawings, and
- visionbooks.

Facilities for learning

For teaching aids through nonbroadcast media the university has provided the following facilities:

- Model study centre,
- lecture rooms,
- classrooms,
- groups,
- community viewing centre,
- libraries,
- resource centres,
- home study centres.

In this paper we give few examples of NBC media utilised by the University:

- i. Audio cassettes for blinds (talking books): In 1978, the AIOU developed audio cassettes for the blind children of Kandeel Institute for Blind. These cassettes were carrying the programme for 7th and 8th class with sound effects. The programmes were prepared on History, Mathematics, General Science, etc. This effort of the university was greatly appreciated by the authorities. Because the blind children learned the same text as the students of the convocational institutions.
- ii. Audiovisual cassettes for overseas Pakistanis: In 1980, when there was no overseas Pakistan Foundation, the university prepared audiovisual cassettes for the people who wanted to go to middle eastern countries and had language problems. These cassettes contained the programme about Arabic language and even now AIOU is planning to produce courses based on nonbroadcast media, in other languages for nationwide service.

iii. Basic functional education programme: Basic functional education programme is the only programme in the entire country which has broken the barriers of illiteracy and brought more participation of rural population in the education for development and better living standards.

Clientele for basic level of functional education is mostly illiterate and semiliterate. In 1982, AIOU designed a research project FEPRA (Functional Education Programme for Rural Areas) with the assistance from ODA, UK to develop a strategy to provide education for the uplift of rural people. It was a test for AIOU system to bring education to the masses without the pre-requisite of literacy. The project was started in Dinga, district Gujrat (Punjab) and was completed in June, 1985. Now this project has been merged in university's regular programmes and has developed an outreach system for effective delivery based on nonbroadcast media.

Methodology

Through nonbroadcast media participants learn new and specific topics based on their needs and are recorded on cassettes in local languages supported by flipcharts. In this way the nonbroadcast media plays the role of a teacher. This programme has the following components:

- 1. Audio cassettes,
- 2. flipcharts,
- 3. handouts,
- 4. discussion and sharing of experience, and
- 5. learning activities including practicals.

All illustrations on flipcharts are reduced and put on handouts. The learner can recall the lesson and the discussions which took place in the meeting.

Each group consists of 15-25 learners. Two persons are nominated by the group as group leaders, and these group leaders are given training about using the learning material. The group leader training involves development of skills required in handling the group, leading discussion and using flipcharts and and the recorder. Males and females are included in group leader training for their respective group. The university has also produced a large number of nonbroadcast audiovisual programmes.

Conclusion

With the rapid growth of new courses and inclusion of students in the programme from farflung area it is imperative that the university will be banking more and more on nonbroadcast media. There is an urgent need that the staff is trained in this area and all possible ways for the utilization of media are tapped.

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Allama Iqbal Open University Islamabad — Pakistan

OCCUPATIONAL BENEFITS OF OPEN UNIVERSITY EDUCATION*

BY

Preecha Kampimpakora

When considering the correlation between the expectations and the actual benefits received by relying on rank correlation, the research findings show a correlation value equal to 0.8.

. When comparing the expectations with the actual benefits received by the certificate graduates distributed according to age groups it will be seen that the more senior certificate graduates felt that the actual benefits received were higher than the expectations in almost every area. These research results show a relationship to the length of time spent working in the position under their responsibility. The longer the successful students have been working, the greater the actual benefit will be in comparison with the expectations.

2. Graduates of the elementary education course Table 3.4 A comparison of opinions of graduates of the elementary education courses on expectations and actual benefits received from studying at STOU

No.	. Topic	Expectations		Actual benefits received			
		Mean	SD	Mean	SD	r	
	Teaching-learning process Understanding and analys-	4.11	0.59	3.90	0.54	0.41	
	ing problems Personal adjustment and	4.05	0.63	3.83	0.55	0.41	
	professional development Upgrading living standard		0.67 0.71	3.78 3.83	0.57 0.60	0.41 0.51	

This is a continuation of the article appeared in Vol-IV Issue-II, 1987.

From table 3.4 it can be seen that the expectations of graduates of the elementary education programme, when combined, were higher than the actual benefits received in every area. The actual benefits received were high, however, the lowest being an average of 3.78 from a total of 5.

When considering the order of expectations and the actual benefits received, it will be seen that the research findings show to be equal to 1, which indicates that the order of expectations is equal to the order of actual benefits received.

It was also found that the older the graduates, the less the difference between the expectations and actual benefits received. The same goes with graduates who have been working for a longer time. That is to say, the longer the graduates have been working, the greater the actual benefits received.

When considering from the point of the amount of time spent studying at STOU, it will be seen that those who spent less time studying expected greater benefits than those who spent more time studying. The result of this was that the actual benefits received by graduates who spent less time studing were less than those of the graduates who spent more time studying.

3. Graduates of the secondary education programme Table 3.5 A comparison of opinions of graduates of the secondary education programme on expectations and actual benefits received from studying at STOU

No. Topic	Expectations		Actual benefits received		
	Mean	S D	Mean	S D	r
1. Teaching-learning process	3.93	0.64	3.58	0.71	
2. Understanding and analys- ing problems	3.81	0.65	3.51	0.65	
3. Personal adjustment and professional development	3.93	0.65	3.65	0.66	
4. Upgrading living standard	3.88	0.76	3.64	0.70	

From table 3.5 it can be seen that highest level of expectations for graduates of the secondary education programme was 3.93 and was in two areas, namely the teachinglearning process and personal adjustment and professional development. Findings on the actual benefits received show that the teaching-learning process and personal adjustment and professional development were at the highest level with an average of 3.65 followed by upgrading the standard of living with an average of 3.64. In general graduates of this programme felt that actual benefits received were lower than the expectations. Despite this, the actual benefits received were higher than 3.5 every area.

When analysing the coefficient content of the correlation of the order of the expectations and the order of the actual benefits received it will be seen that the order of the actual benefits received is 0.4.

Analytical findings from a comparison of expectations and actual benefits received by graduates of different ages show the older graduates felt they received many benefits. This is also the case when analysed according to the number of years spent working. The longer the graduate has been working the greater the benefits received.

When analysed according to the number of semesters spent studying at STOU, i.e. 4, 5 or 6 semesters, it will be seen that the difference in the number of semesters spent studying at STOU had little effect on the expectations and the actual benefits received.

4. Graduates of the education administration course Table 3.6 Comparison of opinions of graduates of the education administration programme on expectations and actual benefits received from studying at STOU

No	. Topic	Expectations		Actual benefits received		
		Mean	SD	Mean	SD 1	r
1.	Knowledge and skills in school administration	4.05	0.70	0.75	0.75 0.4	45
2.	Knowledge and skills in administering schools clusters	3.72	0.83	3.31	0.88 0.5	50
3.	Analytical understanding and skills in solving pro- blems in the education system	3.92	0.73	3.53	0.71 0.4	42

- 4. Adapting education to correspond with the education development plan
- 5. Personal adaptation and development in various areas
- 6. Development of personal duties to correspond with social changes
- 7. Application of knowledge gained and results of research on education administration to the development of professional duties
- 8. Upgrading the standard of living

3.88 0.78 3.52 0.80 0.41

4.14 0.73 4.03 0.65 0.40

4.12 0.77 4.04 0.72 0.45

4.06 0.77 3.86 0.76 0.42

4.04 0.75 3.92 0.67 0.47

From table 3.6 it can be seen that the expectations of graduates of the educational administration programme were higher than the actual benefits received. However, even though some statistical differents are evident, there is not a great difference in the overall average. That is to say, when the expectations are high, the actual benefits received are also high thus, the difference between the two is reduced.

When considering the coefficient value of the correlation level of the expectations and the actual benefits received, it can be seen that the coefficient value is equal to 0.9. This means that there is a high relationship between the expectations and the actual benefits received by the graduates of the Education Administration Programme.

If the expectations and the actual benefits received by graduates of different ages are compared, it can be seen that the older graduates, aged 45 years or higher, received greater actual benefits in some areas than expected. There are clearly three areas in which the expectations are higher than the actual benefits received. This has a statistical significance.

When a comparison is made of graduates whose professional time differs, it can be seen that in almost every group, the expectations are higher than the actual benefits received.

When comparing the time spent studying in STOU with the expectation and the actual benefits received, it can be seen that the number of semesters did not cause a great difference in the graduates opinions.

Table 3.7 A Comparison of opinions of graduates of the construction management programme on expectations and actual benefits received from studying at STOU

No	. Topic	Expectations		Actual benefits received		
		Mean	S D	Mean	S_D	r
1.	Application of knowledge of administration as re- ceived from STOU	3.35	0.86	2.76	0.91	0.50
2.	Application of knowledge of construction as re- ceived from STOU	3.89	0.77	3.43	0.91	0.58
3.	Progress in professional life	3.59	0.80	2.74	0.86	0.10
4.	Personal progress	4.01	0.68	3.72	0.72	0.50
5.	Work coordination	3.75	0.77	3.52	0.83	0.57
6.	Work views	4.00	0.66	3.72	0.76	0.32
7.	Upgrading the living standard	3.73	0.70	3.89	0.72	0.41

From table 3.7, it can be seen that graduates of this course have differing expectations in various areas with 'the application of knowledge of administration as received from STOU' receiving the lowest expectations (an average equal to 3.35) and 'personal progress' receiving the highest expectations (an average of 4.01). An overall picture shows that in almost every area the actual benefits received by the graduates were lower than the expectations, with the exception of 'upgrading the standard of living' where the actual benefits received were higher than the expectations. Analytical findings showed, however, that where the anticipated benefits were high the actual benefits received were also high and where the expectations were low, the actual benefits received were also low.

From an analysis of the correlation between the order of expectations and the order of the actual benefits received, it was found that the value of the coefficient correlation was equal to 0.57 which shows that the expectation and the actual benefits received have a rather high relationship.

When analysing the expectations and the actual benefits received by graduates of varying ages, it can be seen that the differences between the expectations and the actual benefits received by graduates aged 45 years upwards were the lowest.

Graduates who have been working for 12 years or more in their present position replied that they received more actual benefits than did graduates in other groups. There are also several other areas where the actual benefits received are higher than the expectations.

When comparing the views on anticipated benefits and actual benefits received by graduates who had been studying in STOU for 4 to 6 semesters, it was found that those who had studies for 6 semesters felt that the actual benefits received were similar to the expectations more so than with graduates in other groups.

6. Certificate graduates of the certificate in local administration programme

Table 3.8 A Comparison of opinions of certificate graduates of the certificate in local administration programme on expectations and actual benefits received from studying at STOU

No. Topic	Expecta	Expectations		Actual benefits received		
and the set of the second s	Mean	S D	Mean	S D	r	
1. Knowledge in local deve-				1.1		
lopment	3.68	0.73	4.34	0.69	0.32	
2. Progress in professional lin	fe 3.29	0.73	3.84	0.74	0.70	
3. Progress in personal life	3.85	0.75	4.52	0.59	0.30	
4. Work coordination	3.66	0.72	4.42	0.67	0.31	
5. Word attitude	3.90	0.69	4.60	0.56	0.80	
6. Upgrading the living standard	3.62	0.65	4.19	0.62	0.35	

From table 3.8 it can be seen that certificate graduates of the certificate in local administration programme replied that the actual benefits received from studying at STOU were higher than the expectations in every area, and when the value is used to test this difference, it will be seen that there is some difference in every area.

When considering the relationship between the expectations and the actual benefits received, the research findings showed that the coefficient value of the correlation is equal to 0.94 which indicates that the actual benefits received and the anticipated benefits of the certificate graduates of this programme have a high relationship.

Research findings based on the age groups of the successful students indicate that the older students are of the opinion that the actual benefits received were high. This opinion also applies to the duration of time spent working in their present position.

323 Comparison of opinion of work colleagues on the work performance of graduates and certificate graduates

1. Certificate graduates of the certificate in teaching profession programme

Analytical findings showed that work colleagues of certificate graduates of the certificate in teaching profession programme were of the opinion that their work performance improved in every area and that the difference between certificate graduates of this programme prior to and after completing the programme was at the value of 't' which has an important meaning at the level of 0.1 in all areas and they are better after completing their studies.

With relation to the work colleagues expectations to the students prior to learning and after learning, it was found that the coefficient value was equal to 0.8.

2. Graduates of the primary education programme

Research findings showed that work colleagues on the average were of the opinion that graduates of this programme had a higher ability, after studying this programme, in all four areas namely, the learning-teaching process; understanding and analysing problems: personal adjustment and professional development, and upgrading living standards.

3. Graduates of the secondary education programme

Research findings showed that work colleagues of graduates of the secondary education programme were of the opinion that graduates were, on the average, capable of performing their work duties better learning this programme than before. This difference has a statistical significance at a level of 0.1 in all areas.

4. Graduates of the education administration programme

Research finding showed that work colleagues of graduates of the education administration programme were of the opinion that the graduates skills were, on the average, higher after learning this programme than before learning this programme and from calculation, the coefficient value of the correlation was found to be equal to 1.00.

5. Graduates of the construction management programme

From an anlaysis of the data received, it was found that work colleagues of graduates of the construction management programme gave them higher points after studying this course than prior to studying it in every area.

6. Certificate graduates of the certificate in local programme

Only work colleagues of the certificate graduates of the certificate in local administration programme were asked to make an assessment. It was not stipulated that supervisors also make an assessment. Results of the assessment showed that certificate programme received higher points after learning than prior to learning.

3.2.4 A comparison of supervisors' opinions on the working skills of graduates and certificate graduates

1. Certificate graduates of the certificate in teaching profession programme

Research findings showed that supervisors of certificate graduates of the certificate in teaching profession programme felt that the working skills of certificate graduates were higher after completing the course than prior to doing this course.

2. Graduates of the elementary education programme Research findings showed that supervisors of graduates of the elementary education programme were of the opinion

that graduates' work skills had improved after undertaking this programme. (The average points given were 4.14-4.18 out of the total of 5.)

3. Graduates of the secondary education programme Research findings showed that supervisors of graduates of the secondary education programme were of the opinion that graduates' skills had improved after undertaking this course, particularly with regards to personal adjustment and professional development. (The average points given were 4.02 - 4.18 out of a total of 5.)

4. Graduates of the education administration programme

Research findings showed that supervisors of graduates of the education administration programme gave graduates low points prior to learning and high points after studying this programme, particularly in the area of attitude towards their work. (The average points given were 4.34 out of a total of 5.)

5. Graduates of the construction management programme Research findings showed that points given by supervisors of graduates of the construction management programme prior to undertaking this programme were from low to middling (an average of 2.50 to 3.23). However, the points given after completing the programme averaged from 3.42 to 4.05.

3.2.5 Graduate mobility

Data on graduate mobility has been analysed into two areas:

- i. Graduate mobility in relation to employment and professional responsibilities.
- ii. Graduate mobility in relation to place of employment, transfers from city to rural areas or from rural areas to city, and from city to areas within the city or from rural areas to other rural areas.
- i. Graduate mobility in relation to employment and professional responsibilities

Findings showed that there was little change in the professional responsibilities of graduates and certificate graduates. Most changes were promotions to higher positions within their original postings.

ii. Graduate mobility within place of employment

Preliminary findings showed that the majority of graduates and certificate graduates (about 80%) continue to work in rural areas as they did previously. Only a few, in particular graduates from the school of education studies, have transferred from the city to rural areas.

3.2.6 Findings of the seminar

After completing the research and prior to submitting

the final report, the research team organized a seminar which was held in February, 1987. Representatives of graduates from all schools, representatives of certificate graduates of both courses, work colleagues and supervisors of graduates and certificate graduates, course developers and policy-makers for the use of graduates and certificate graduates also participated in the seminar. The findings of the seminar can be summarized as follows:

- i. The majority of the seminar participants agreed with the findings of the research.
- ii. Suggestions concerning the instruction media, i.e. the difficult nature of some of the printed materials; adjusting the broadcasting time of radio programmes to make them more suitable; adapting and broadening the contents of the cassette tapes used in order to give them more content.
- iii. Proposals concerning discussions on some points of the research findings, such as the research findings showed that radio programmes were of the least benefit. In actual fact, they were, in accordance with their value, beneficial but the listeners had little opportunity to listen to them which made the value appear that they were of little benefit.

Discussion on findings and summary

The findings of the data compiled by the research team showed that from the time that the questionnaires were distributed in April, 1986 and upto July, 1986, only about 32% of the completed questionnaires were returned by the respondees. At first it was thought that this number was too small, but a trial analysis showed that despite the low percentage the deviation (S D) in almost every group of graduates and certificate graduates was less than 1. This shows homogeneity of the data, so it was considered that the information received would be sufficient. Furthermore, as the amount of time available was limited, the data received upto July 1986, was accepted for analysis. Even though some completed questionnaires were later received, they were not included in the analysis.

4.1 Discussion on the findings

The findings on all programmes will be discussed

together as the analytical findings of each programme are similar.

4.1.1 Opinions on the distance-learning system

Instruction media: The main instruction media are 1. printed materials. Analytical findings showed that both the graduates and the certificate graduates studied the printed materials according to the stages outlined in the materials. This is because the graduates and the certificate graduates were of the first batch of students at STOU and STOU was the first university in Thailand to employ the distance-learning system. The students thus endeavoured to comply with the instructions. There is one point, however, which is worth mentioning. Even though the majority of the students replied that they complied with the instructions, the majority of the graduates said that they did not complete the exercises or the pre- and post-study evaluations at the end of the subject matter. This could be due to delays in sending the materials out because in the initial stages STOU faced many problems in the production and despatch of printed materials.

Graduates considered the radio and television programmes along with the cassette-tapes recorded with course materials to be the most beneficial support media. This is because the first media mentioned had motion and the students could see the picture. The second media was of a type that the students could carry with them anywhere thus providing convenience in its use.

2. General views on distance-education: The majority of the graduates were of the opinion that the level of the difficulty of studying under the distance-education system was the same as studying at conventional universities. This is probably because the majority of the graduates are working people, highly experienced and capable of accepting responsibility. Most of the graduates stated that they studied the teaching materials by themselves and that they found them difficult.

The majority of the graduates were of the opinion that the knowledge they gained from studying at STOU was on a par with other universities. The reason for this is because the teaching materials used at STOU are integrated into course blocks and if the graduates apply themselves to their study, they understand the materials easily.

4.1.2 A comparison of the views of graduates and certificates on the various programmes

After comparing the expectations with the actual benefits received, it was found that the actual benefits received by graduates and certificate graduates studying at STOU were rather high. There was, however, still some difference between the actual benefits received and the benefits expected. This is because the certificate graduates in groups 1 and 2 had a high degree of determination, so set their expectations at a high level. An analytical study based on age and amount of time spent working showed that the older students, as well as those who had been working for a long time, admitted that the actual benefits received were similar to their expectations and in some areas higher. This may be because the older students know how to apply their knowledge to their duties. Furthermore, the older students, as well as those who had been working for a long time, were of the opinion that they had no other opportunity to continue their studies. They appreciated the opportunity provided by Sukhothai Thammathiratt Open University and every effort to gain the greatest benefits from this opportunity.

Research findings on the expectations and the actual benefits received showed that there was one programme which differed from the others. This was the certificate in local administration programme where the actual benefits received were higher in all areas in circumstances than the expectations irrespective of age, place of employment and amount of time spent working. This is because students of this programme were mainly locally elected officials (kamnan), head villagers (phu yai ban), locally elected sub-officials (sarawat kamnan) and local medical officers. There were originally over 3000 enrolments for this programme, but only 200 completed their studies. Those who completed their studies thus recognized the benefits of studying. Another reason could be that the course content emphasises practical application, thus bringing actual benefits to the students.

4.1.3 A comparison of work colleagues' views on graduates' and certificate graduates' work performance

After interviewing the work colleagues of graduates and certificate graduates it was found that they were of the opinion that graduates' and certificate graduates' work performance had improved in every area. This could be because the graduates and certificate graduates applied the knowledge which they had gained from studying at STOU to their work without being aware of it. It could also be due to the Thai habit of humbling themselves when asked by researchers to make a personal assessment about actual benefits received and thus give themselves a low assessment. However, when other people are asked to give an assessment, there is a comparative difference.

4.1.4 A comparison of supervisors' views on graduates' and certificate graduates' work performance

As the research findings under this heading are the same as in the previous heading, discussion will not be presented in detail.

4.1.5 Graduate mobility

If a study is made of changes in (1) position and responsibility and (2) place of employment, it will be seen that the changes in the first area are somewhat high. There may be two reasons for this, the first being usual changes in the work procedure. Graduates and certificate graduates of programme at STOU were still eligible for promotion and salary increase because they did not have to apply for study leave as they would if studying at conventional universities. The second reason could be due to the fact that after completing their studies, graduates had upgraded their professional qualifications to degree or certificate level. As a result they were held in greater esteem by their supervisors who entrusted them with greater work responsibilities.

With regards to changes in the second area, that is changes in place of employment, one of the objectives of establishing STOU was to provide educational opportunities to people living at a distance and already employed. After completing their studies, graduates would be able to continue working in that area. Research findings support this policy because it was found that few people made changes in their place of employment and the changes which were made were from the city to rural areas. This could be because graduates had to move to rural areas in order to receive their promotion. For example, people working in city areas as teachers may have been promoted to administrative positions in rural areas.

4.2 Conclusion

From research findings and from the seminar, the research team has been able to make the following conclusions:

- 1. Programmes offered at STOU have met with a middle to high level of success.
- 2. Even though the actual benefit received by graduates and certificate graduates of the various programmes are not as higher as expected, they have received some benefits from studying at STOU. The graduates' and certificate graduates' work colleagues and supervisors are of the opinion that they have received much benefit.
- 3. Most of the graduates and certificate graduates have received promotions in their work, but there have been few transfers and the transfers made have been from the city to rural areas.
- 4. No changes in the course are necessary but some adaptations need to be made in the teaching media. For example, the difficulty in the content of some of the printed material, increased content on the cassette tapes, and changes in the broadcasting times of radio programmes to make them more convenient.

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Allama Iqbal Open University Islamabad — Pakistan

A CASE STUDY OF SELECTED NONFORMAL POPULATION EDUCATION IN PAKISTAN^{*}

BY

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4. Course contents

The course has been designed so as to provide sufficient theoretical knowledge to the students about the emerging discipline of Population Education. In addition to that it also apprises them of the vital statistics of population dynamics in Pakistan. Major contents of the course include the following:

Concept of population education; aims of population education, population growth; rural-urban, age and sexwise distribution of population; impact of population growth on socio-economic development; population increase and the expansion of education; population increase and environment; integration of population education concepts in the teaching of other school subjects, and the role of teacher in promoting population education. (Course outline available in annex-I.)

In addition to the textbook, we have also developed students guide as well tutor's guide and a leaflet containing information about the population education project for wider circulation and apprise the perspective students about the nature, importance and significance of the course.

This is a continuation of the article appeared in Vol-IV Issue-HI, 1987.

5. Methodology

The Allama Iqbal Open University is utilizing its nonformal/distance education through correspondence technique for approaching the target population. Each of the students enrolled in the course gets a learning package at home which includes the textbook, course assignments and other relevant materials. During the correspondence phase, the student is required to submit two assignments to his tutor who evaluates and sends them back to the student along with his remarks. This forms the internal evaluation.

Students and the tutors have an opportunity of face-toface contact at the AIOU study centres after regular intervals. Students attendance at these centre is not compulsory, but the tutor is there to provide guidance to those who feel necessary to have it. Incentive is also being provided to students to attend such meetings.

6. Use of Radio/TV programme

Since, along with the target teachers, public at large has also got access to the media, nine radio and two tv programmes based on the course contents have been produced for having multiplying effects. These programmes are meant to supplement and support the content given in the coursebook. Whereas radio programmes give just talk either of one main or in some cases a sort of question/answer discussion, the tv programmes have an additional benefit of strong visuals presented to sensitive people about population related issues. Students get the schedule of radio/tv programmes along with the other learning material.

7. Orientation and appointment of tutors

Since population education is a relatively new discipline in Pakistan, teachers in general are, not supposed to know much about it. Efforts have, therefore, been made to compile a list of resource persons and experts in the field who have sufficient experience and received training in this field from various national and international agencies. Tutors are appointed from amongst these experts. Tutor briefing workshops are held at regional office of the university towards the beginning of each semester. Specially speaking, tutors are provided guidance on the following major points:

i. motivation students

- ii. instructional techniques
- iii. techniques of evaluation of assignments
- iv. human relationing
- v. techniques of sensitising teachers about populationrelated issues and problems and
- vi. getting feedback from students.

8. Evaluation of students

Evaluation is an important aspect of instructional process. Like all other general education courses offered by the university, students of the population education courses are also required to submit two assignments to their tutors during the correspondence phase. Tutors, remarks help the students a lot in improving their next assignment. This internal aspect of evaluation forms 40 per cent, whereas 60 per cent of the weightage of the overall evaluation is given to students performance in the final written examination held at the end of the semester. Examination centres are located at some places convenient to students.

9. Improvement of instructional materials

Since the coursebook was developed quite sometime back it had run its pilot launching, it was revised, updated and improved. In addition to the incorporation of latest data, considerable changes were also made in the format of presentation, etc. in the light of opinion, observations, comments, suggestions, etc. of tutors and the students. The revised edition of the coursebook has been published. Complimentary copies of the book have been sent to different agencies and institutions engaged in population-oriented activities.

10. Population education course for SST's

Now a few words about the population education course for secondary school teachers. Second phase of the population education project of Allama Iqbal Open University relates to the launching of the population education course for secondary school teachers for the orientation of 8,000 teachers. Outline of this course was developed and improved after discussion with the internal faculty members and outside experts. This course outline was also presented and discussed in a meeting of unit-writers for the course for middle school teachers so as to endure a sequence and gradation in content from middle to secondary level. Then units were assigned for unit improvement, editing and printing, etc. and were followed. The course is expected to be offered from October 1987 semester.

11. Course contents

Like the B A level course in population education this course also has been designed to equip the teachers with considerable background knowledge and also latest information about population education in Pakistan as well as in other countries of Asia. Major contents of the course include the following:

Population education, its significance for Pakistan and relationship with other disciplines; implications of population increase for socio-economic development; ecology, population welfare policies and programmes in Pakistan and some other Asian countries; integration of population education concepts with different school subjects; and the role of teacher in population education. (Outline of the course appears as annex-II.)

iv. Postal Employees Population Welfare Project

1. Introduction

Postal employees, especially those working as Postmaster in relatively backward areas of the country obviously occupy a very prominent place in their respective localities/communities. Reasons for this are quite obvious because they:

- i. being public servant are closely associated with the settings they work in;
- enjoy the confidence of the masses who usually come to them to seek their advice even on their own personal problems;
- iii. are being recognized as community workers;
- iv. are frequently visited by individuals and are aware of their intimate family problems, (sometimes they read and write letters for others) and as such have the

potential for developing into effective guides in their communities.

The number of postal employees are sufficiently large and dispersed to justify a distant learning strategy. Their educational levels (about 10 years schooling) are sufficient for seeking, utilizing and disseminating information obtained through the print.

Appreciating the potential role of the postal employees in moulding the public opinion at large in respect of population related issues and problems, the Family Planning Association of Pakistan (FPAP), conceived an orientation programme in population for this target group so as to enable it play its due role in popularising population related concepts amongst the people especially in the rural areas. Consequently, a project entitled Postal Employees Population Welfare Project was conceived and submitted to the Embassy of Canada at Islamabad for purposes of financial assistance. The Project turned out to be a joint venture in which three different agencies, namely the Allama Iqbal Open University, the Family Planning Association of Pakistan and the Department of Pakistan Post Offices were involved. The project, as originally conceived, aims at the orientation of 13,000 rural branch postmasters in a phased manner. The primary and major objectives of this inhovative project were spelled out as under:

Primary objectives

- 1. To continue pressure through persuasion on postal employees to play their potential role in promoting family planning.
- 2. To focus attention on male responsibility for the practice of family planning through the involvement of branch postmasters.
- 3. To evolve a strategy to work with postal employees which will be applicable to similar homogenious groups such as teachers, barbers, retail shopkeepers, panshop owners, etc. etc.

Immediate objectives

- 1. To undertake population orientation of 13327 branch postmasters to enable them to work as effective social change agents.
- 2. To involve 13327 branch postmasters for the purpose of

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motivation/education and delivery of conventional contraceptives to the acceptors in the rural communities wherever branch postmasters are located in the four provinces.

- 3. To enhance clinical/conventional contraceptive services by utilizing six postal dispensaries.
- 4. Dissemination of the message of planned parenthood through posters and other communication media by utilizing the service of 11088 post offices during plan period and afterwards.
- 5. Dissemination of the message of family welfare through stamp cancellors and by issuing commemorative stamps.
- 6. To conduct population orientation of 26 instructors of postal training centres so that they can in turn conduct orientation of about 2500 employees of the postal department at postal training centres each year.

2. Material production

After the final approval of the project, representatives of all the three collaborating agencies started work on the development of materials. Since the representatives of the postal services were fully aware of the strengths, limitations, needs and problems, etc. of the employees with references to their functioning in their communities their first hand information about this target population provided the background in which the experts in population education suggested some appropriate content. The AIOU representatives in addition to vetting the contents also moulded the same so as to suit the nonformal distance-education techniques and hence made the same self-instructional to the maximum extent. As a result of their joint efforts, draft materials were developed with the following tentative outlines to be sent to the listed sample of target employees.

1. Booklet 1

Contents: Population growth; beliefs and practices; effects of rapid population growth on food production health, education, transportation, moral and social life, government operations, etc.

2. Booklet 2

Contents: Advantages of small families to individuals
and the family as a whole in terms of: food, money to spend, savings, health education, family discipline, happiness and better housing. Disadvantages of having big families manifested by: less food available inheritance pressure on housing, etc.

3. Booklet 3

Contents: Interpersonal communication and effective techniques of conveying our messages to others within our socio-cultural contexts. How do people accept new ideas and what principles underlie change in attitudes?

4. Booklet 4

Contents: Different semi-terminal and terminal methods, their use and side effects.

5. SCG Booklet 5

Sale procedures, functioning and services of family welfare centres, referal of semi-terminal and terminal clients and how to maintain relevant records.

6. SCG Workbook

Consisting of various learning activities covering and integrating contents of above 5 booklets.

Booklet 1 Concept of population

This book deals with the following:

- i. Genesis of the concept of population;
- ii. Different categories of population;
- iii. Census;
- iv. Fatilligy and mortality;
- v. Population increase and resources; and
- vi. Migration.

Booklet 2 Present status of population

This booklet deals with the following:

- i. World population: a brief overview;
- ii. Population projection;
- iii. Factors of population increase; and
- iv. Population in different regions of the world: a comparison.

Booklet 3 Population of Pakistan

This booklet deals with the following:

- i. Population increase in Pakistan since 1901;
- ii. Rural and urban population;
- iii. Provincewise distribution of population;

and

iv. Population and problems of food, education, health, etc in Pakistan.

Booklet 4 Population problems and resources

- This booklet deals with the following:
 - i. Process of population increase;
 - Problems of the third world countries in respect of the following: food, education, housing, health, employment, etc.

The content of the material as described above has been supported with indigenous stories, sketches and diagrams, etc. so as to make the same interesting. Provision has also been made for self-assessment by the reader. Relevant data pertaining to population, education, health and other variables have been given in the form of tables and graphs, etc. during the course of presentation.

3. Registration of the target group

The post office department nominated to this programme, 1,000 branch postmasters working in fourteen different districts of the Punjab province. In order to motivate the target group to assimilate the materials developed, they were informed that they were formally registered as university students. The university completed the first cycle of the project in October 1985 which is being followed by other similar cycles.

4. Methodology

Allama Iqbal Open University being the executing agency, it is making use of its nonformal education/distance teaching techniques in providing orientation to the target branch postmasters. Having finalized the registration of the nominees, the university's mailing service department finalized the learning package for mailing the same to the students. The learning packages were sent to the students in four mailings after regular intervals.

- 5. Some salient features of the study material
- a. Dictates by functional and learning needs of the participants.
- b. Language was functional and in simple Urdu.

- c. It was self-instructional with self-assessment questions and learning activities.
- d. Accompanied useful supplementary material to help students through their books.
- e. Depending upon results of the pilot phase was also planned and improved upon.

6. Ensuring students interest

Before the course begins: (a) By an initial letter congratulating the participants on their selection to the course preferably signed by some senior official of the postal department and (b) by a promise that the university will award them a participation certificate.

At the start of the course: (c) First by preparing attractive booklets and (d) secondly by incorporating interesting and meaningful contents.

During each study week: (e) By requesting them to evaluate the learning material and convey their opinions to the AIOU for its further improvement through reply paid feedback cards.

Throughout the study period: (i) By establishing regular contacts between the field functionaries of the P Division and the participants for helping the later through their study material in case of any difficulty.

After the pilot launching was over, the feedback received from the target students was processed so as to find out as to what extent the study material actually corresponded to the learning needs, levels of education, specific experiences and socio-cultural contexts of them. Contrary to the project's expectations, the responses turned out to be quite encouraging out of a total number of 1000 students 443 sent their feedback on different booklets, which are being revised and improved in light thereof.

7. Workshop

In order to further develop course participants into effective community guides in rural areas and to have a final interview feedback from them, a two-day workshop was

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held at Islamabad in October, 1985. Out of all the course participants, 85 participants were invited to attend the workshop, and 45 of the invitees attended the workshop. Most of the workshop participants have shown their keen interest to work as instructor for further training of the postal employees. For the purpose of providing the requisite motivational skill and interpersonal teaching aid, the experts are preparing for them on self-teaching aids in the form of cards and a pre-recorded cassette for use as a learning or teaching aid during group discussions and orientation sessions which will be arranged by them. In this way, the process of orientation of postal employees the revision and improvement of materials in the light of feedback and popularisation of population related concepts among the masses has come out to be an ongoing activity under this innovative project.

v. Conclusions and recommendations

As discussed above, different agencies and institutions offer a variety of public health, child care and populationrelated programmes in nonformal education. These agencies have problems which are of peculiar nature and pertain to the setting/circumstances in which each one of them is operating. Nevertheless, there are certain problems which are true of all the population-oriented activities in the country. Some of them include the following:

- 1. Non-coordination of the activities of different organizations engaged in public health and population programmes.
- 2. Financial constraints faced by these agencies.
- 3. Low motivation level of the target people to accept these programmes and benefit from them.
- 4. Absence of any systematic surveys preceeding the development of valid materials for different programmes of these agencies.
- 5. Relatively out-dated techniques of instruction.
- 6. Absence of systematic research in the field.
- 7. Absence of built in mechanism to develop the selfsustaining capacity of the system.

In view of the above, it is recommended that:

- 1. The efforts of different governmental as well as nongovernmental agencies in population education may be coordinated. Obviously the Population Welfare Division can play a crucial role in this connection.
- 2. Some more resources may be identified or generated to enable the agencies involved carry on their work effectively and efficiently, philanthropists and missinary organizations may be motivated to come forward.
- 3. Detailed surveys may be undertaken to assess the needs, problems and interests of the target population and materials be designed in light thereof.
- 4. Materials developed so may be first tested on limited samples and then adopted for wide scale use.
- 5. Variety of materials may be developed so as to attack the problem from a number of fronts e.g. printed books, resters, broadcast and nonbroadcast materials, etc.
- 6. The team of experts should include people from different areas, for example, from population, education, media, economics, technicians, etc etc. This would ensure the suitability as well as the practical feasibility of the material so produced.
- 7. The system of feedback should be made institutionalized in each programme/project so as to ensure necessary modifications in light thereof.
- 8. Mutual exchange of the materials among different agencies/institutions engaged in population education activities may be encouraged and facilitated.
- 9. Materials developed in other countries who have fully launched and implemented their population education programmes may be adapted so as to suit the local conditions.
- 10. The process of dissemination of the material may be made more speedy and effective so as to ensure the delivery as planned.

The above list of recommendations is just illustrative

and not exhaustive in nature. It is hoped that this workshop would come up with still more useful, cost effective and relevant recommendations.

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- 8. Mrs. Rukhsana Hamidi: Nonformal Population Education Programmes, (unpublished).
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COURSE OUTLINE ON POPULATION EDUCATION COURSE FOR MIDDLE SCHOOL TEACHERS

Unit 1: Introduction to Population Education

- a. Concept of population education;
- b. Significance of "population education" in Pakistan;
- c. Aims of teaching population education;
- d. Terms used in population education.

Unit 2: Background Statistics of Population

- Growth in global population and its dispersion in different continents;
- b. Asia and its population problems;
- c. Historical background of growth of population in Pakistan;
- d. Analysis of present population of Pakistan:
 - i. Increase in general rural urban,
 - ii. Sexwise increase,
 - iii. Problems of agewise increase.

Unit 3: Increase of Population and Resources

- a. Implications of population growth in the present age;
- b. Socio-economic impact of population increase;
- c. Impact of population increase on land, agriculture, housing, health nutrition and communications, etc.
- Unit 4: Implications of Population Growth on the Extension of Education in Pakistan
 - a. Population growth and educational problems;
 - b. Population growth and literacy in Pakistan;
 - c. Population growth and educational development at various stages.

Unit 5: Ecology and Environmental Studies

- a. Impact of environment on human life;
- b. Population growth and problems of sanitation;
- c. Impacts of population growth on physical environment and natural resources;
- d. Problems of migration;
- e. Basic human needs and the modern age.
- Unit 6: Population Education Through the Teaching of Social Sciences
 - Integration of population education concepts with the social sciences curricula;
 - b. Model lessons in some social sciences.

- Unit 7: Population Education Through the Teaching of Physical Sciences
 - Integration of population education concepts with the physical sciences curricula;
 - b. Model lessons in physical sciences.
- Unit 8: Population Education Through the Teaching of Languages a. Integration of population education concepts with the languages curricula;
 - b. Model lessons in languages.
- Unit 9: Population Education Issues and the Role of Teacher
 - a. Major issues: family and community responsibilities;
 - Role of teacher in bringing about a behavioural change through population education;
 - c. Use of cocurricula activities in population education.

OUTLINE OF POPULATION EDUCATION COURSE FOR S S T'S

Unit 1: Introduction to Population Education

- a. Meaning and nature of population education;
- b. Significance of population education in Pakistan;
- c. Population and other disciplines:

Demography, economics, sociology, history, education, biology, anthropology.

Unit 2: Population Increase and Socio-economic Development in Pakistan

- a. Development: its meaning, nature and indicators;
- b. Impact of population increase on:
 - i. Socio-economic development in Pakistan,
 - ii. Educational development in Pakistan.
- c. Some future trends.

Unit 3: Ecology

- a. Meaning of ecology;
- b. Components of ecosystem;
- c. Types and features of ecosystems;
- d. Impact of population increase on ecological balance.
- Unit 4: Population Welfare Policy and Programmes in Pakistan a. Population welfare policy and programmes: a brief overview:
 - b. Population welfare planning in the light of Sixth-Fiveyear Plan (1983-88);
 - c. Comparative analysis.
- Unit 5: Population Education Policies and Programmes in Selected Countries
 - a. Comparative policies and about programmes population education:
 - i. China;
 - ii. India:
 - iii. Indonesia;
 - iv. Eqypt;
 - v. Philippines.
- Unit 6: Promotion of Population Education Through the Teaching of Urdu and Social Studies
 - a. Integration of population education concepts with the curriculum in Urdu;
 - b. Integration of population education concepts with the

curriculum in social studies;

- c. Model lessons of population education in Urdu and social studies.
- Unit 7: Promotion of Population Education Through Teaching of Science and Mathematics
 - Integration of population education concepts with the curriculum in science;
 - Integration of population education concepts with the curriculum in mathematics;
 - c. Model lessons on population education in science and mathematics.

Unit 8: Problems of Population and the Role of Teacher

- a. Teacher's role in coping with the problems of population;
- b. Role of teacher in social development;
- c. Population education and teachers training.
- Unit 9: Promotion of Population Education Through Cocurricular Activities
 - a. Role of cocurricular activities in promoting population education;
 - b. Different cocurricular activities:
 - i. Literacy societies;
 - ii. Dramatic society;
 - iii. Parent-teacher's association;
 - iv. Census/registration.

OUT OF SIGHT --- OUT OF MIND

BY

Louis Moroya, B A, Litt B, Grad Dip Dist Educ

One of the inescapable consequence of teaching, especially in external studies, is assignment marking. Most teachers tend to view this activity as at best a necessary evil, at worst an unpleasant chore. And yet to external students in particular, the assignments comprise the rationale. The epitome of there activity as students. The assignment constitutes the external manifestation of their study, their intellectual effort, in effect their personal sacrifices in time and energy. In short the assignment examplifies their role as students.

In many instances the assignment constitutes the main (in some cases the only) contact between the teacher and the external student. It would therefore appear that the interaction between the teacher and the learner if relegated to such an administrative level must have deleterious consequences upon the teacher (who gives grades and very little else) and the student (who is equally concerned about grades and very little else).

llowever, as the title of this article suggests, external students are in reality at an even greater disadvantage than the face-to-face students. For in not being visible they are easily forgotten, and feeling forgotten many students withdraw from their studies. This article discusses a number of avenues which could constitute a means whereby teacher-student interaction in external studies is given more consideration both from the individual as well as the institute points of view.

Interaction and teaching materials

Most of the literature in the distance-education field

stresses the need for greater interaction between students and teachers, for example:

". . . no matter how good the teaching material may be, some students are bound to fail unless also guaranteed personal contact between the organization and the student and that this contact gives students security both in their work and socially." (Willen, B.1984:26)

The interesting aspect of the above quotation is that it refers to the Swedish distance-education system and at the university level. Its implications for us as teachers at this Institute are also pertinent. Interaction between us and our students ought not to end when we have completed writing our subject, nor when our students have received their teaching materials. Rather interaction is a continuing activity, which should not be solely confined to the working and subsequent despatch of assignments.

Interactive activity out to be consciously planned and incorporated into our teaching materials. Most of us are so concerned with getting the content right that we lose sight of our unique humanity; generally eschewing our personality from coming through: when was the last time you tried for a little humour to come through the dry pages of the "Notes." Surly we don't need constant reminding that external studies involves the teacher in a didactic conversation with the student. It is precisely in such a "conversation" that the student learns best. Why not then raise the conversation a little to captivate the imagination of your students, while assuring them that the teaching materials were written by a caring teacher? For those who may feel that this smacks of idealism. let me add that external students are special people. They require all the help and security that we can provide.

Written interaction

In distance-education nearly all the feedback that students obtain from their teachers is given in written form. It follows then that considerable care needs to be taken in the way in which written responses to student enquiries are formulated and more importantly the comments made on their assignments. In this regard many workers in the field of distance-education are reevaluating the institution-student dichotomy and are urging a reassessment of the student and his *individual* needs by emphasising a student-centred view of distance-learning. (Forster, A 1984:35).

Assuming that the teaching materials produced by a teacher engaged in distance education are content effective and pedagogically sound; what strategies are available in order for the teacher to maximise the learning potential of those materials? In the first instance the teacher ought to have clearly formulated in his/her own mind, what exactly he/she is asking the students to do in the exercises and assignments provided in the teaching materials. However, the "formulation" ought to be signalled to the students, if meaningful learning is to be the outcome of the mutual interactive process.

The following discussion will serve to illustrate some examples of written interaction between the teacher and the student. The writer is indebted to Barbara Comber for her ideas of descriptive assessment, which although of a nongraded variety, still retain some validity in general assessment procedure. (Comber, B 1983:55-59)

In an assignment, students are asked to furnish their opinions and their analysis of a certain text. The students subsequently discover that their assignments were downgraded because in their analysis they did not include the recognised critics of the work. Rather than confuse the students it would have been far more beneficial if the teacher gave certain clues as to the kinds of written responses expected:

It could be a brief precis with questions and comments; you could include practical examples relating to the topic. In short choose ways of responding which assist you to assimilate new ideas to your existing understanding.

Using this kind of approach the writing for the student is no longer (merely) judgemental. It is part of the learning, the writer takes the responsibility for the way it is performed.

Other aspects to consider in written feedback include:

Find something positive to say:
"Your analysis of was most effective."
"I liked reading about"
"What an excellent idea"

Give personal data back, it helps reinforce the idea in the student that you are also a person as well as an expert.

"My wife is also a teacher and sympathises...." "Your explanation was interesting because I had a similar experience."

Ask questions, students' work is often fresh and challenging which deserves recognition.

"How did you begin....?" "Tell me more about....?"

Writing in the context of the Open University in the United Kingdom, S.M. Rhys argues that the tutor when marking assignments should be balancing three kinds of considerations one against the others; organisational requirements, communication with the student, and attention to content (Rhys, S.M. 1979:38). Obviously, this balance will not be the same from one assignment to the next. The point of the "dialogue" between the teacher and student is to overcome a mechanical approach developing in which the teacher feels compelled to award a grade according to whether the student has compiled with his idealised criteria.

Residential school interaction

The writer observed earlier that personal contact between the student and the institution is important, in providing a feeling of security for the students and equally in social worth. One way in which this desirable goal of interaction in distance-education can be achieved is through residential schools. These schools provide the means for personal contact between the student and the institution and between the student and teacher. Each contact is important, however it is the student-teacher contact that is of more significance to this discussion.

On the whole, the format of a residential school is less structured and thus stands in sharp contrast to the manner in which the teaching materials are presented. Students attending these schools tend to become resentful if the interaction is not beneficials, i.e., they feel they are not learning something new or useful. Recently the writer conducted a survey which among other things looked at students' perception of residential schools. Almost half the students surveyed displayed some negative attitudes towards the schools. Their frustrations at the teachers concerned were conveyed in such terms as, "he waffled on," "was not prepared," "we weren't informed about the format of the school" and so on. These students felt let down, perhaps partly because of heightened expectations that the schools would provide the necessary support structure for their individual needs. At this point it is appropriate to add that a majority of the surveyed sample (totally 64 students) maintained that the residential schools were well-presented!

In what ways then can interaction at these schools be made more meaningful both to the teacher and students? The teacher needs to devise techniques to overcome the resentfulness which students feel when face-to-face interaction leads to "aimlessness." One method tried successfully by Northedge includes the following steps:

- 1. Individual work (note-making) (5 minutes);
- Working in pairs (comparing and consolidating) (10-15 minutes)
- 3. Small groups (4-6) (comparing and consolidating) (30-45 minutes)
- 4. Report back to whole group (30-45 minutes). (Northedge: 1979:40)

There is flexibility in this approach, it allows students to control the pace and direction of the discussion, while also controlling subjective reaction to the subject content until it has been objectively processed.

Conclusion

This article began by lamenting the fact that most interaction in distance education occurred through written responses by students and similar written comments by teachers, to these responses. Unfortunately, in the foreseeable future these written responses, of both kinds, will continue to be the main medium of interaction in distanceeducation. It is upto us as teachers to vary this interactive process and to make it more meaningful to our students. Hence, with a view to engaging further comment on this vital topic, the writer would like to draw his readers' attention to a number of suggestions which they may design to consider.

Suggestion one

Residential schools be compulsory for students enrolled in introductory or compulsory subjects.

Suggestion two

Teachers be encouraged to provide an introductory tape, especially for compulsory subjects, thereby providing students with more personalised interaction.

Suggestion three

Teachers be encouraged to provide a class-wide overview sheet, for each major assignment, thereby informing students of common difficulties, range of marks, etc.

Suggestion four

Teachers explore other modes of teaching externally such as teletutorials, teleconferences, computer marked assignments.

Suggestion five

Teachers attempt to contact all students personally at the start of each semester to introduce themselves, show interest and give encouragement.

Suggestion six

Redesign the assignment cover, so that students have a means of informing their teacher on aspects of the assignment.

Suggestion seven

Teacher spend as much time preparing for and teaching external students as they do for internal students.

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Allama Iqbal Open University Islamabad — Pakistan

COMPUTER SOFTWARE AND APPLICATIONS

BY

Dr. A. Sattar

Software is the collection of all programmes that are necessary to run an application on the computer. Compared to hardware, the developments in the field of software have been less dramatic. A recent study shows that, since 1953 there has been a million time increase in performance/cost ratio of hardware. However, during the same period the cost of software has continued to escalate. For instance, the software costs have shown an increase from 30% of the total cost in the 1950's to 85% in the 1980's. This trend can be attributed to low programming productivity. Software development is essentially a labour-intensive activity. Todate no facilities exist which can automate software production. The low productivity is responsible for a large application backlog at most computer installations.

Types of software

Basically the software is of the following two types:

- 1. Applications software; and
- 2. Systems software.

The applications software refers to the aggregate of all the programmes needed to process specific user applications, like payroll, inventory, scientific computation, information retrieval, etc.

The systems software refers to a group of programmes that coordinate, supervise, and control the operation of computer hardware. In addition, these programmes provide services for data management, translation of users programmes cataloguing, and other day-to-day services required by the end-users.

Programming languages

The software is coded in one of the several types of programming languages. A computer programme is a set of instructions that directs the machine to solve a problem. The programming instructions can be written in different languages which are classified as under:

- 1. Machine languages;
- 2. Assembly languages; and
- 3. High-level languages.

A typical instruction in machine language consist of a pattern of ones and naughts, (bits). Writing programme in machine language is a tedious, time-consuming and errorprone process. To overcome these difficulties, the assembly languages were devised in 1950's. In assembly language, symbolic codes and letters - sometimes called mnemonics are used for each programme instruction. Further, improvement in programming process was effected with the development of high-level languages. High level language instructions closely resemble English languages statements and mathematical formulas can be expressed in symbols used in ordinary mathematics. The high-level languages are functionally divided into two categories, designated as procedure-oriented and problems-oriented. Examples of procedural languages are FORTRAN, COBOL, PL-1, PASCAL, ADA. Their salient features are as follows:

- FORTRAN (formula translator), used on small medium and large scale systems for scientific and mathematical applications.
- COBOL (common business oriented language), used on all types of computers for business applications involving voluminous data and repetitive processing.
- BASIC (beginner's all-purpose symbolic instructions code), used on micros and minis for limited business and scientific problems.
- PASCAL (named after mathematician Pascal), used on mirco and language systems for scientific-oriented application. It focuses on structured programming techniques.
- PL-1 (programming language/1), used on mainframes and combines features of COBOL and FORTRAN.

- ADA (named after Lady Ada Lovelace), used for language computers for real-time applications.

Problem-oriented languages are designed to solve problems in specific application domains: like, education, report generation, text processing and logic-oriented tasks. Examples of problem-oriented languages are: LISP for text processing; PROLOG for logic specifications; LOGD for education; RPG for report generation; and C Language for computer operations and systems programming.

More recently, new generation of languages have been devised. These are known as *non-procedural* languages. The user is expected to specify what is required to be done without stating how the underlying operations are to be performed. Such languages simplify the programming tasks and are useful for query-based applications. Typical examples of non-procedural languages are FOCUS, SQL, Natural, Ramis, and ideal. The non-procedural languages are sometime referred to as Fourth Generation Languages (4GLS). It is anticipated that future programming languages will have capabilities to process queries in natural languages.

Applications software

Applications software can be divided into two categories — bespoke and packaged. The 'bespoke' refers to tailor-made programmes written by organization's inhouse staff. The following are advantages and disadvantages of inhouse software development:

Advantages

- 1. It can be written to confirm closely to the specified requirements.
- 2. It will be more easily modifible as requirements change.
- 3. It can be constructed in an 'open-ended' farm to facilitate its linkage to future planned application development.

Disadvantages

- 1. It requires a heavy investment in development staff (analysts and programmers).
- 2. It takes a considerable time to develop and implement typically 6-12 months.

Software packages

The application software packages — also sometime referred to as 'Canned' Software — are specialized programmes marketed by vendors, software houses and consultants. A variety of packaged software is available in areas like education, accounting information retrieval, finance, database management, manufacturing, statistics, operations research, etc. Most commonly used packages are in the following areas:

- 1. Database management;
- 2. Electronic spread sheet; and
- 3. Word Processing.

The database management system (DBMS) enable elements of data to be stored, extracted and formatted as required by the application. The database software commands are generally of three types (i) data definition commands which define the overall structure of database and characteristics of data elements (ii) data manipulation commands for creation, updation and retrieval of data; and (iii) report generation commands.

The commonly used database packages for small computers are: DBASE-II, DBASE-III, DBMS, Micro-ingress, ORACLE, CONDOR-20. For large computers typical packages are ADABAS, ORACLE, IMS, DL-1, INGRESS, etc.

The packages for financial analysis and planning are known as spread sheets. A spread sheet consists of a table of columns and rows in which the user can enter headings and related data. The data can be manipulated by giving commands of the following types: mathematical (absolute value, maximum, minimum, etc.), statistical (mean, variance, random), logical (of them), financial (rate of returns, net volume). The commonly used spread sheet packages are Calcit, Super Calc, Multiplanner, VP-Planner.

The word processing packages are meant to create, store, retrieve, modify and print documents and letters. The packages software for word processing can provide facilities for editing, formatting, report generation, spelling checking, searching and text retrieval. Typical packages are: Wardstar, Easy Writer, Multimate, Writing Assistant. It is found that word processing on computers can improve productivity by 15% in keyboarding/input and upto 60% in revision/ changes in the draft. More recently, several integrated packages have been developed which combine some of the functions of database management, spread sheet, word processing, communication, statistical analysis, graphics, and operations research. Such systems are typified by Lotus 1-2-3, Symphony, Golden Gate, Application Systems (AS), and Statistical Application System (SAS).

Package software — advantages and disadvantages

The relative advantages and disadvantages of packaged software are as under:

Advantages

- 1. They can be implemented immediately.
- 2. Experience of use should be available from other users.
- 3. The cost may be much less than a bespoke system as it will be spread over a number of users.
- 4. A good package will have been developed by experienced, professionals staff possibly of a higher quality than could be obtained by a user.

Disadvantages

- 1. They are difficult to find and accredit.
- 2. They may not be written in the 'adopted' language of the user.
- 3. There may be restrictions on user modification of the package.
- 4. The user is dependent on the continuing viability of the supplier.
- 5. User requirements may have to be modified to meet the package.
- 6. The package may contain a great deal of redundancy due to its generalization of cover a wider field than required. This may lead to relatively inefficient throughout.

Systems software

The systems software is required for the efficient and effective use of computer hardware. The systems software programmes are supplied by the manufacturers/vendors with hardware. These programmes are classified as follows:

- Utilities;
- Compilers and interpreters; and
- Operating systems.

Availability of systems software

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Originally the user looked only to the manufacturer/ supplier of the 'hardware' for the supply of software. What is more, it was included in the price of the equipment and was an important factor in the choice of the latter.

The availability and capability of systems software and its support, still favours the mainframe suppliers. This historically is perfectly natural: processors containing millions of 'bytes' (characters) of immediately accessable storage and very fast instruction execution rates, allowing extensive multitasking, have a much greater requirement for sophisticated systems software than the more limited capabilities of the mini and the micros.

PAKISTAN JOURNAL OF DISTANCE EDUCATION 1988

Volume-V

Issue No. I



Allama Iqbal Open University Islamabad — Pakistan

WINDOW ON DISTANCE-LEARNING INSTITUTION

UNIVERSITI SAINS MALAYSIA BY

Masooda Chaudhry

Introduction

The Universiti Sains Malaysia (USM) is both a formal and a non-formal institution of higher learning which delivers a distance-education (DE) programme to home-based adult students in the country. Such a programme was launched in 1971 on an experimental basis till 1982 when its status was changed to that of a regular programme giving it the status of an established faculty.

The foundation Vice-Chanceller and his academic planning board declared in 1971 the establishment of their unit for off-campus studies with the following statement:

"... The off-campus education programme is a constitutional commitment to enable both the university to benefit itself as well as the society that sustains its educational enterprise. It is to cater for the many Malaysians who, for one reason or another, do not get as much of it (education) as they can turn to advantage or as they discover, sometimes too late, that they need it. It is meant primarily for adult students in fulltime employment or working in the home, the programme functions to balance the inequalities of opportunity that exists between working men and full-time university students."

The new unit which was part of the centre for educational studies was given a mandate with several objectives. These were:

i. to help those adults who had earlier missed the opportunity for obtaining a higher education and thus qualify for a degree;

- ii. to narrow the gap of educational objectives among the various ethnic groups in the country;
- iii. to take education to economically deprived and geographically isolated areas;
- iv. to increase the nation's (supply of) high level manpower; and
- v. to improve the performance of those already employed by updating their knowledge and skills.

To these normative aims, the Senate of the University further added the following objectives which were meant to safeguard the standards and credibility of the University's credits offered through the off-campus programmes:

- i. to provide a diversified programme of studies to enable the off-campus students to obtain a standard of academic excellence similar to that required of on-campus students;
- ii. to devise new approaches to teaching and learning that can overcome partially or fully the problems of distance between the place of residence on the one hand and the place of instruction on the other; and
- iii. to organize annually a three-week residential school
 to:
 - a. enable students to meet with their instructors and their peers;
 - b. to supplement independent learning with face-toface instruction.

The growth of the programme was rather slow during the first decade. It was only in 1981 after graduating 700 students and two rigorous external evaluations later that the programme was able to receive full university and government endorsement.

At launching, the university offered courses in the humanities and social sciences. However, by 1973, due to pressure especially from the Ministry of Education, the Natural Sciences and Mathematics were also included in the programme. During much of this period the academic year was organized on the basis of three terms with annual examinations at the end of the academic year. To further maintain the high quality of the USM degree, off-campus students were expected to spend a compulsory residential year. Since then, while still maintaining all of the safeguards to protect the programme's respectability and the university's standards, structural changes have been introduced to include characteristics that make distance-education organizationally efficient and academically sound. These changes went through the following main phases:

- i. 1971-74: Keeping in line with the university's threeyear Bachelors (with honours) programme of three terms each academic year part-time students of the off-campus did the same degree with a minimum of three years in the off-campus mode and one final year in the on-campus mode (3+1). Administration of the programme was emplaced in the Faculty of Education which controlled its administrative aspects, while academic issues were controlled by the six (Chemistry, Biology, Physics, Mathematics, Humanities and Social Sciences) faculties that provided the course.
- ii. 1975-80: The university changed its Honour programme into a four-year eight-semester with a 120 (roughly 40 courses) credit units requirement for graduation. The off-campus programme followed suit. Students were required to spend four years (earning a minimum of 82 credits) in the off-campus mode and one-year or two semesters (completing the 38 credit units) in the oncampus mode. Administratively, the programme was taken out of the Faculty of Education, designated an autonomous unit under the Vice-Chancellor. Academic control was till left to the faculties providing the courseware.
- iii. 1981-present: Following evaluation by a university and Ministry of Education team the unit was upgraded into a centre with both academic and administrative responsibilities. This allowed the centre to employ academic staff (both educational and content specialist), design curriculum, manage course creation, development, delivery and support. It does not allow the centre to award degrees. What the centre in practices does is to help off-campus students acquire up to 90 credits in the distance-education mode thereby enabling them access for one year full-time study at USM on-campus for 30 more credit units and graduation. Students are now expected to spend a minimum of five years off-campus and one year on-campus (5+1).

Operation of the system

A The students

Unlike the other distance-learning systems of southeast Asia, USM's programme is run by a conventional university and therefore not surprisingly it imposes all of the academic entry qualifications such universities impose on prospective students. These are in their case:

- i. For the non-science programme a full high school certificate (HSC). This means students should have principle-level passes in three subjects at least plus a pass in the general paper.
- ii. For the science programme it is not necessary to have a full HSC, but at least have one principle level pass in one of the three natural sciences and a subsidiary (lower) level pass or its equivalent in Mathematics. Diplomas in Science (in lieu of HSC) from local universities, polytechnics or teacher-training colleges with at least three years of science-teaching experience.
- iii. For the Science Foundation Course a pass in the scheme subjects of the MCE is required.

However, because the university's major objective was to provide an opportunity to men and women in employment certain nonacademic criteria were also imposed for admission. These include:

- i. all applicants except those coming into the Science Foundation Programme should be above 21;
- ii. candidates from the public services should be tenured; and
- iii. candidates should have a written consent from their employers to attend the residential schools, final year on-campus and examinations.

To meet the third objective of the programme especially in the science streams, students belonging to the Malay race are accorded special considerations. They are given opportunities to follow a special preparatory programme called the Science Foundation Programme and entry in requires no more than a good pass in the Secondary School Examination as well as a lower age limit. Since 1983 approximately 500-600 students are offered admission into the off-campus programme annually.

B Academic structure

Being tied to a conventional university and its graduation requirements the programme's academic structure had to confirm to it. The three degrees offered are patterned after traditional commonwealth structures. Students are expected to work 4,000 hours spread over four years in the full-time mode. The 4,000 hours are divided into 120 credit units offered over eight semesters. Off-campus students are not full-time students and therefore the university has presumed that it may not be possible for them to acquire the necessary graduating credit units in eight semesters over four years like their on-campus counterparts. Based on this premise the academic programme is structure as follows:

- i. the students will be expected to acquire 75 or 90% of their credit units in the off-campus mode and the remaining per cent in a final full-time residential year where they will follow higher level courses;
- ii. in the off-campus mode students are expected to take a minimum of five (stages) academic years (upto a maximum of ten) to acquire the 90 credit units. This works out to about 18 credit units a year;
- iii. each academic year for the off-campus student takes 35 weeks of which three are spent in residence at the university (the intensive course). An on-campus student on the other hand carries the same load in a semester lasting 15 weeks; and
- iv. students have a choice of majoring in Science and Mathematics (B.Sc. with Honours), or Humanities (B.A. with Honours) or Social Science (B Soc Sc). They are also allowed to cross minor in any of the three areas provided they satisfy the necessary prerequisites.

C The courses

The university desired that the courses offered in the off-campus mode should not be dissimilar to those offered in the on-campus mode at least as far as the content was concerned. However, USM demanded that course delivery should be

appropriate to suit the needs of the home-based learner. In return for this, the university in its transcripts and other official documents deliberately does not distinguish between those graduating through the off or on-campus mode.

In 1971, when the programme started, only eight courses were offered in the off-campus mode. In the year i.e. 1986, 128 courses were available to off-campus students throughout Malayasia.

D Course creation

Like any other organization involved in distance education, the creative act of teaching is divided among different persons. At USM teaching is performed by:

- i. a lecturer or a team of lecturers from the centre of off-campus studies or from any of the other faculties of the university who create the printed material as well as conceptualize and sometimes produce other media supplements. In these tasks the teacher can avail himself or herself of the instructional design and other (editorial) expertise located in the centre. Technical and design expertise is also available from the centre of educational technology of the university;
- ii. a lecturer or lecturers who 'manage' the course when it is delivered to the students. These individuals are responsible for preparing the assignment, examination and conduct of the intensive course from year-to-year. Course managers need not be, though they often are, the same individuals who create the courses in the first place; and
- iii. the regional tutor who meets with the students, in the many study centres, throughout the academic year.

All of these teachers are expected to work together with the knowledge that the whole operation encompasses a single teaching act even though their individual efforts are separately created or performed. It is therefore essential that a carefully devised plan be prepared for course development with complete awareness of the other person's responsibilities. This process is complex and it follows a series of carefully defined steps. These are:

i. Planning-decisions about the curriculum are made by the

academic board of the centre.

- ii. Course development by the course author who transforms the curriculum into multimediated self-instructional lessons. He works with a team of experts which includes an expert of the discipline, an instructional designer, a media man and an editor.
- iii. Course production: manuscript are prepared and delivered to students quickly. These are continuously evaluated for two academic years when finally printed which are used for next five years.

E Media and media production

At least a 30% nonprint media component into all courseware were incorporated. This included the use of a 30-minute/week radio air time given free to USM by Radio Malaysia. Currently the following nonprint media methods are being used by the off-campus.

- i. Radio: This is a half-hour facility given to us free by Radio Malaysia. The programme serves to broadcast information pertaining to counselling (especially during examination periods) administration, and courses especially in the lower levels where student numbers are relatively high.
- ii. Audiocassettes: A number of the science programmes and a few nonscience programmes have audiocassette components. These are given free to students as part of their courseware. The cassettes either stand alone or go as part of an audio graphic sequence. They serve to lead students through difficult abstract and conceptual problems, description of processes, interviews, live tutorial discussions, etc.
- iii. Videocassettes: This medium offers exciting possibilities... but it also comes with the responsibility that it necessitates proper use and not present just a talking face. There is gradual experimentation in its use... however there is little possibility of it becoming widely considered by the academic community.

All USM nonprint media material are created and produced in the university. The university has excellent, almost broadcast quality studio facilities for audio and video production. Through intra-university contractual obligations, the centre for educational technology carries out all production. The producers, technicians and facilities belong to the CET. The academic and instruction design aspects of media programmes come from the off-campus. Together the two centres have been able to produce all of the media needs of the university. While radio programmes reach acceptable broadcast quality, the other programmes leave a lot of room for further improvement.

F The delivery system

Courses in the off-campus programme are delivered in a variety of form:

- i. Print: This is the principal teaching instrument. A comprehensive study guide is written around a recognized textbook or book of readings. In science and mathematics courses, comprehensive interactive texts are created in Bhasha. The production of science books in the national language is one of the valuable spinoffs of the off-campus programme.
- ii. Radio: Used weekly for counselling and general information purposes.
- iii. Audiocassettes: This medium is used for direct teaching, comprehension and review. Cassettes are supplied along with other materials to all students.
- iv. Videocassettes: Instructional designers in USM agree that this is an exciting media but one which requires imaginative use. Progress in the development of video as a delivery mechanism is slow.
- v. Interpersonal: Dual mode institutions have a distinctive advantage in their availability of human academic talent. USM uses this resource to great advantage. The annual residential school of three weeks provides students unlimited access to course-writers, coursemanagers and other academics for consultation. Greatest amount of teaching/learning takes place at this time. During the rest of the year the university makes available regionally-based part-time tutors, specially for the science and mathematics courses for consultation. These tutors are regularly trained for their jobs by the university. Often they are graduates high schools teachers.

NEWS AND VIEWS

Aisha Akbar

During the first six months of 1988, considerable activity was generated on the AIOU campus. Inauguration of the university staff colony was the most important event of the period under review. From 27th June to Ist July, the Vice-Chancellor, Dr. G. A. Allana had been in Thailand to participate in the regional seminar on establishment of a regional resource centre in distance education. Scholars and dignitaries from Pakistan and abroad visited the university and university staff participated in various activities in the country as well as abroad.

University staff colony

The university staff colony was inaugurated on 10th February, 1988 by Dr. W. M. Zaki, a former Vice-Chancellor of this university. Addressing a large gathering on the occasion, Dr Zaki paid rich tributes to Dr. G. A. Allana for making the university an internationally known and recognized institution.

Dr. G. A. Allana, in his address stated that efforts have been made to provide all basic amenities to the residents of the colony and a dispensary, a school and a shopping centre would be established in its premises.

Visitors to AIOU

The university had a large number of visitors during the period, among them were:

Period

6.1.1988	Mr. Vilna Histor from Britian.
10.1.1988	Mr. Foster Diebold, Edinboro University, Pennsylvania along with two colleagues.
31.1.1988	Chief U.N. High Commission, USA.

4.2.1988	Dr. Syed Jaffar Shaheedi, Professor, Tehran University, along with six colleagues.
7.2.1988	Dr. Milton Israel from Canada.
16.2.1988	Mr. Tariq Somer from Ankara University, Turkey.
24.2.1988	A seven-member delegation of All China Women Federation.
1.3.1988	Mr. A.M.R.B. Attanyake, Deputy Minister Higher Education, Sri Lanka.
14.3.1988 to 19.3.1988	Mr. P G Scopes, Dr. R. Skelton, Mr. Lingham, Dr. G. Haley of British Overseas Development Administration.
4.4.1988	Mr. Asif Fancy, Chief of Agha Khan Edu- cation Services along with a delegation.
5.4.1988	Twenty-five female students from Agri- cultural Training Institute, Sargodha.
18.4.1988	Mr. Aneesal Islam, Education Minister, Bangladesh.
5.5.1988	A two-member delegation from Al-Quds Open University, Sudan.
5.6.1988	Mr. Fracness Aprahanian, ODA Consultant from UK.
6.6.1988	Mr. Allan Burner, Pakistan Desk Officer, ODA, UK.
16.6.1988	A high level team from Edinboro Univer- sity, Pennsylvania, USA.

Regional seminar on establishment of a regional resource centre in distance education

The Vice-Chancellor, Dr. G.A. Allana, attended the regional seminar on the establishment of a regional resource centre in distance education held in Bangkok, Thailand from 27th June to Ist July, 1988. The seminar was organized jointly by UNESCO Regional Office for Asia and the Pacific (PROAP), Sukhothai Thammathirat Open University (STOU) and the Asian Association of Open Universities. Dr. Allana was elected Vice-Chairman for the seminar while Prof. Dr. Iam Chauja-Ngaw, Rector, STOU was elected as its Chairman.

The main emphasis of the seminar was on the preparation of concrete proposal for the establishment of the centre, and as such the seminar was a project development activity.

The seminar met in plenary sessions as well as in working groups to review new developments in higher distance education in the region and finalized the project for supporting the post-secondary education. Later a meeting of the executive committee of Asian Association of Open Universities was also held on the Ist July to expedite the establishment of the centre in collaboration with Sukhothai Thammathirat Open University (STOU).

The centre will initially work on three projects given below:

- 1. Creation of a distance-education database and a learning material documentation file.
- 2. Planning and organizing appropriate training activities.
- 3. Development of a service provision programme.

Participation of AIOU staff in workshops/seminar/ conferences inside the country

The Vice-Chancellor, Dr. G.A. Allana, participated in the International Sindhi Adabi Conference held at Hyderabad from 2nd to 4th February, 1988. Dr. Allana besides reading paper, also presided over the concluding session of the workshop.

Mr. Majed Rashid, Assistant Professor, attended the 39th Insurance Training Course on Labour Market and Employment held from 28th February to 17th March, 1988 in Islamabad. Dr. Ahmed Noor Khan, Director, Research & Evaluation Centre, attended the 8th Computer Orientation Course for Senior Management held from 27th March to 31st March, 1988 in Islamabad.

Dr. S.A. Siddiqui, Dean, Faculty of Education, Dr. Zulkaif Ahmed, Chairman, Department of Teacher Education and Dr. M. Arif Zia, Assistant Professor attended the National Conference on Primary Education Curriculum Performs Project held in the last week of March, 1988 in Islamabad. Mr. Shahabuddin Shahab of Print Unit attended a threeday training course on Modern Trends in Book Publishing held at Islamabad from 29th to 31st March, 1988.

Mr. Iqbal Hussain, Research Officer, attended the 16th Electronic Data Processing for Management Applications which continued from 29th May to 30th June, 1988 in Islamabad.

Dr. M.A. Bukhari, Associate Professor, participated as resources person in the training course on manpower planning and economic growth organized by Pakistan Manpower Institute in Islamabad from 12th to 30th June, 1988.

Nominations for training in UK under ODA Phase-III

The Overseas Development Agency UK continues providing assistance to AIOU in various ways. An important component of this assistance is the provision of training facilities for AIOU staff in UK. The following members were sent abroad for training during the period under review:

Miss Nighat Bashir	Four months training in London from 11th April, 1988.
Miss Nomana Anjum	
Mr. Shahid Waheed	Three months training in London from 9th May, 1988.
Mrs. Z.Z. Mahmood	Eleven weeks training in London from 4th June, 1988.
Dr. Muhammad Tufail Hashmi	Six weeks training in London from 4th June, 1988.

Seminars and workshops

Seminar on educational planning and management

A three-day seminar on educational planning and management was held from 10th to 21st March. Eminent educationists and experts on planning, drawn from different universities and other related institutions, participated and reviewed the M.A. Educational Planning and Management programme of the university. Opening session of the seminar was presided over by Professor Sheikh Imtiaz Ali, Chairman, University Grants Commission while concluding session was presided by Professor Laeeq Ahmed, Director-General, Academic of Educational Planning and Management.

International seminar on promotion of Arabic

A three-day international seminar on promotion of Arabic was held from 27th to 29th March. Thirty-five scholars from Pakistan and different Arab countries participated. The seminar covered all aspects of Arabic Language Teaching including syllabi, teaching methodology and training needs of Arabic teachers. The seminar recommended establishment of a high-powered eleven-member council to organize activities for the promotion of Arabic and Islamic culture in Pakistan. Dr. G.A. Allana, Vice-Chancellor, AIOU was elected chairman of the council. The opening session of the seminar was presided over by Dr. Ezzudin Ibrahim, Cultural Adviser to the President of UAE while concluding session was presided over by Dr. Muhammad Afzal, Rector, International Islamic University.

Bureau for University Extension and Special Programmes launched primary education course for non-literate employees of the University in February. The course designed by the university itself will enable the learner to complete primary level syllabus in eighteen months.

M.A. in Educational Planning and Management workshops

M.A. (EPM) which provides specialization in the field of educational planning and management comprises ten courses. All courses, as an academic requirement have a one-week workshop at the end of each semester. Workshops are held for all courses offered in the semester. Workshops Autumn' 1987 semester were held from 2nd to 14th April and from 25th May to 13th June for EPM-501, 504, 506 and 507.

Relief camps

AIOU students set up two relief camps for providing assistance to the victims of Ojhari Camp accident.



SIR SYED AHMED KHAN:

AS AN EDUCATIONIST

by

Miss Shamim Anwar Annoor Printers & Publishers, Lahore 1987, PP-87, PB-Rs.40/-

After the upheaval of 1857, the Muslim community of India came under the ghastly grip of destruction and demoralization. All the signs of monarchy and merriment had been turned to ashes. The British became the master of our sacred soil and the ex-rulers of the region were drastically ruined. Under such changed circumstances, western way of life spread its roots all around India engulfing the whole aspects of time-honoured traditions. The Western mode of education was introduced along with an imported language i.e. English. All these phenomena appeared to be a hip of horror for the Muslims and they emerged as severe opponent to the new commers. On the other end, Hindus went ahead welcoming both the British and their methodologies. Thus they benefited a lot from the English Empire through knowing the new language — a key to all modern knowledge.

It was the socio-economic scenario when Sir Syed Ahmed Khan emerged on the horizon of Muslim society as a reformer to play a vital role in the awakening of Indian Muslims and introduced them to western ideas, thus shaping their destinies in a modern world. Among greatest contributions of Syed, the biggest one was in the educational sphere which has been chosen as main topic of research by the talented author of the book, Miss Shamim Anwar.

Written originally for Master degree at McGill University, Montreal, Canada, this book has been published at a time when we regard Sir Syed only as a champion of Urdu literature, and nothing else than that. The learned writer has tried her best to highlight the real and far-reaching aspect of Syed's educational set up which had moulded the Muslim community into a developing nation.

Based on twelve chapters, the book under review, comprehensively elaborates the gigantic services of Sir Sved towards his nation. After going through the text, we logically come to know that to Sir Syed the advantages of "western education" were twofold - firstly, through learning the English language, maximum understanding between the English and the Muslims could be obtained and, secondly. through the acquisition of such a knowledge, scientific and materialistic progress seemed more possible in the demoralized nation. According to the deliberation of Miss Anwar, Sir Syed emphasized the learning of such subjects which were useful in life. He felt the need of inclusion of more scientific subjects in the curriculum as these were essential for the scientific progress, resulting in the materialistic betterment. It was because of this trend of thinking that when Sir Syed opened the Mohammandan Anglo-Oriental College in Aligarh, he formulated such a curriculum for it.

The learned author has emphatically emphasized that Sir Syed rendered unparalleled services to the nation in the field of education. He successfully achieved his goal of awakening his nation and directing the then Muslim mind towards western culture and knowledge. He attempted the reconstruction of his people through proper education which met the needs of the times and paved the way for progress for the days coming ahead.

Miss Shamim Anwar's commendable effort should be of value to both our college and university students and to the general readers. The publication of this book fulfils the long-felt need of the time in the field of education with special reference to an old educationist Sir Syed Ahmed Khan.

Dr. Mahmudur Rahman Incharge Daftri Urdu Project

DATA BANK

STATISTICAL GLIMPSES OF

ALLAMA IQBAL OPEN UNIVERSITY

BY

Waqar Ahmed Siddiqi Allama Iqbal Open University Islamabad — Pakistan

Established: :: :: :: :: :: :: :: :: :: :: 1974 Course enrolment from 1975 to Summer 1988 semester : 772,346 Courses offered from 1975 to Summer 1988 semester: : 197

Glimpses of Spring/Summer 1988 semester

Courses offered: : : : : : : : : : : : : : : : : : :	151
Course enrolment : : : : : : : : : : : : : : : : : : :	
Student enrolment: : : : : : : : : : : : : : : : : : :	
Course enrolment: Overseas : : : : : : : : : : : : : : : : : : :	*
Student enrolment: Overseas: : : : : : : : : : : : : : : : : : :	
Male Female	
Course participation ratio: 62% 38%	
Student participation ratio: 63% 37%	

Programme-wise enrolment and courses

Fields of study	Enrolment	Full- credit	Half- credit	Non- credit	Total courses
1. Functional courses (N.C.)	2330	-	_	9	9
2. Intermediate	29988	23	12	-	35
3. B.A.	20034	25	17	-	42
4. Postgraduate		~	0		15
programmes	1781	7	8		15 5
5. M.Phil Programmes	221	5	-	-	-
6. Teacher Education	26265	5	15	-	20
7. Matric	6312	5	6	-	11
8. BFEP (1987-88)	2800	-	-	8	8
9. IFL (1987-88)	892	-	<u> </u>	6.	6
Total:	90623	70	58	23	151

N.C. - Non-credit

BFEP - Basic Functional Education Programme

IFL - Integrated Functional Literacy

* - Overseas enrolment is not available.

Region	Male	%	Female	%	Total
Bahawalpur	1637	74	579	26	2216
D.G. Khan	1244	73	466	27	1710
D.I. Khan	892	80	227	20	1119
Faisalabad	6671	54	5600	46	12271
Gilgit	1382	70	588	30	1970
Gujranwala	3535	63	2076	37	5611
Hyderabad	4353	79	1165	21	5518
Islamabad	4151	68	1917	32	6068
Karachi	2861	48	3136	52	5997
Lahore	4470	62	2739	38	7209
Mirpur (AJK)	2847	54	2420	46	5267
Multan	6595	66	3343	34	9938
Peshawar	2939	61	1881	39	4820
Quetta	2705	85	474	15	3179
Rawalpindi	6003	49	6152	51	12155
Sukkur	1432	77	421	23	1853
Turbat	27	90	3	10	30
Total:	53744	62	33187	38	86931
BFEP		-		-	*2800
IFL	- 100	-		1.1.2.2.0	* 892
Overseas Enrol	ment -	-	-	-	** -
Total:					90623

Region-wise and sex-wise course enrolment (Spring and Summer 1988 semesters

* Sex-wise enrolment is not available. ** Overseas enrolment is not available.

Media support

1 Radio programmes presented upto Spring 1988 semester: 6697 2 T.V. programmes presented upto Spring 1988 semester: 1029 3 Radio programmes presented in Spring 1988 semester: 686 4 T.V. programmes presented in Spring 1988 semester: 67

Regional services

	1	
1.	Regional Offices:	13
2.	Subregional Offices:	12
3.	Regional Coordinating Official	5
4.	Study Centres:	448
5.	Model Study Centres:	78
6.	Tutors:	2651
7.	Regional Coordinators:	6
8.	Regional Libraries:	18

Staff

.

BPS	Academic	Administrative	Regional	Total	
22	_	1	-	1	
21	-	-	-	-	
20	13	2	3	18	
19	13	10	5	28 34	
18	20	14	-		
17	49	48	11	108	
Tot	tal: 95	75	19	189	

Supporting staff

																	Total
Nos.	 75	 35	 4	<u> </u>	 33	 64	 4	 12	1	 58	 6	 208	 1	1	 12	 264	 777

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ALLAMA IQBAL OPEN UNIVERSITY

SPECIAL PUBLICATIONS

	Iqbal Bachchon Aur Nojawanon Kay Liye	e	
	ar - I	(Urdu)	Rs.17.50
1	Harf-e-Iqbal	(Urdu)	Rs.40.00
	Role of Distance Teaching System in Development with special reference to (En	n Rural to AIOU nglish)	Rs.30.00
1	Taqaareer Bayad-e-Iqbal	(Urdu)	Rs.18.00
I	Tasheel-e-Khutbaat-e-Iqbal	(Urdu)	Rs.31.00
	Mutaaliya-e-Bible Wa Qur'an	(Urdu)	Rs.18.00
	Urdu Main Aalmi Adab Kay Tarajim	(Urdu)	Rs.18.00
1	Allama Iqbal Aur Baluchistan	(Urdu)	Rs.65.00
1	Iqbaliat Ka Mozuaati Tajzai Aasharia	(Urdu)	Rs.90.00
1	Zaban Aur Saqafat	(Urdu)	under print

These books can be had from:

- Print Production Unit, Allama Iqbal Open University, Islamabad, Pakistan. Tel: 856676 & 854315
- All Regional Offices of the University.
- Special concession to Educational Institutions, Libraries, Students and Booksellers.