

## **Distance Education : An Alternative Approach to Alleviate the Shortage of Qualified Primary School Teachers in Ethiopia<sup>\*</sup>**

Wossenu Yimam<sup>\*\*</sup> and Befekadu Zeleke<sup>\*\*\*</sup>

### **Introduction**

Distance education is a form of educational program in which most of instruction takes place in a situation where the teacher and the learners are at distance from one another, and some form of technology is used to facilitate communication and to bridge information gap. It gives students the flexibility to learn at home or work place, and offers substantial cost savings. Although distance education is a popular and widely used concept in most of developed and developing countries, it is still at an infancy stage in Ethiopia. One of the reasons for this could be lack of awareness about the contribution of distance education in enhancing social and economic activities in general and in upgrading teachers' qualifications in particular.

The major objective of this paper is, therefore, to create an awareness among policy makers, planners, professionals, and other concerned bodies about the role distance education plays in improving the quality and qualification of primary school teachers, and to raise the issue for further discussion and research. Besides, the paper tries to demonstrate the ways of organizing and administering distance education programs in different parts of the country.

### **Distance Education : Conceptual Framework**

The term distance education has a number of various meanings. It includes the range of teaching learning strategies known as Correspondence Education and / or Open

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<sup>\*</sup> A revised version of the paper was presented at the National Symposium on Evaluating the Curriculum for Teacher Education: Reflecting on Experiences and Charting the Future Agenda, KCTE / Addis Ababa, Dec. 1998

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technologies, the International Council for Correspondence Education was renamed as the International Council for Distance Education in 1982 (Garrison, 1989).

Since then, many definitions have been developed for distance education. Among these, the definitions given by Holmberg (1985), and Keegan (1986) are worth mentioning. Yet, Garrison and Shale (1987) criticized especially the definition given by Keegan as being too restrictive and focused on an independent print-based form of study. They set the following three minimum criteria that characterize distance education process:

- the majority of educational communication between the teacher and students occur non-contiguously;
- involve two way communication between the teacher and students for the purpose of facilitating and supporting the educational process, and
- the use of technology to mediate the necessary two-way communication.

To sum up, distance education is a useful educational program that can reach those disadvantaged within a given short period time. It is not affected seriously by distance or physical disability, and it updates the knowledge base of workers at their places of employment, and provides learners with a chance to pursue higher education.

### **The Evolution of Distance Education**

Informal distance teaching is believed to begin when people first started exchange written letters and gave instructions to other person(s) (Erdos, 1966). However, the exact period when organized distance education started is still debatable. Some writers like Holmberg (1986) say that it is 150 years old.

Among the prominent distance educators, Issac Pitman of England is said to be the first correspondence educator in 1840. In Germany, Charles Toussant and Gustar Langen Schedit founded a modern language correspondence school in Berlin in 1856. In Sweden, Hans S. Hermod founded an Institute for Correspondence Education in 1898. In the USA, a Society to Encourage Study at Home was founded in 1873 by Anna Eliot Ticknor known as the mother of

University in the United Kingdom, as External Studies in Australia, Education a Distancia in Spain, (Keegan, 1990). Other terminologies include: University without walls, Extramural Studies, Experiential Learning, Off-campus Education, Extended Campus, and the American External Degree or University Extension, etc. These are some of the terms used by the institutions conducting distance education in different countries.

Among the terms given above, correspondence and distance education are the two most widely used terms. UNESCO (1979) defines correspondence education as "education conducted by the postal services without face to face contact between the teacher and learner." Wedemeyer (1981) further states that correspondence study is the first formally structured method for independent study. It is the root and foundation of distance education.

In correspondence education, the message was transmitted in the form of print to the distance learners and the mode of delivery was only by mail. The major weakness of correspondence education was its slow communication process (Holmberg 1986). Thus, in order to improve this slow feedback system, educators in the field started to look for the application of the newly discovered technologies as modes of delivery. Especially the audio-tele-conferencing came into being in the mid 1960s in North America as a result of the University of Wisconsin-Extension (Olgren and Parker, 1983), and its later application to this field made correspondence education a more complex area. As a result of this new development, a group method of distance education that could support immediate two-way communication became possible. Thus, discussions among teachers and distance learners across wide geographic areas started (Garrison, 1989).

Consequently, the former definition of correspondence education given by UNESCO was criticized since it did not include the new delivery modes like print, audio, video and computers that were used in the field of distance education. The use of audio-tele conferencing as a mode of delivery was the first and the basis for the change in the concept of correspondence education to distance education (Garrison, 1985). To reflect this influence of new

technologies, the International Council for Correspondence Education was renamed as the International Council for Distance Education in 1982 (Garrison, 1989).

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American correspondence study, and later, William Rainy Harper developed the concept of distance education to the extension division of the University of Chicago (Erdos, 1967; Verduin, Thomas and Clark, 1991; Agasiz, 1971).

### **Rationale for Teaching in a Distance**

Today, while teaching in a distance is being used in many countries in the world, there is even a greater need for such a program in developing countries like ours to expand educational opportunities to cover a larger proportion of the population. Kuhanga (1981), Forman and Richardson(1977), and Srisa-An (1981) provide the following reasons for using distance education as an alternative approach.

- Developing countries need (trained) manpower to carry out their social and economic activities, and the opportunities for education in the traditional system are limited. Thus, a complementary approach to the traditional system of training manpower should be the focus of attention in order to alleviate the problem.
- There is a high need for the vast majority of working people to have access to education on an extensive and egalitarian basis and at the same time to have a career opportunity available throughout life. Thus, distance education can reach a wider student audience and meet the needs of students who are unable to attend on-campus classes.
- There is a marked increase in cost-effectiveness, particularly in capital expenditure. A distance learning system is potentially more cost effective than a conventional system while teaching similar subject matter to a massive and ever increasing numbers of people who are widely dispersed and of low density.

### **Is Distance Teaching as Effective as Conventional Teaching?**

Many educators question whether distance students learn as much as students receiving traditional face-to-face instruction. Especially, at the initial stages of developing distance education, there was a great deal of opposition from academic staff, administrators and planners in conventional universities. The major grounds for their opposition were:

- Distance learning leads to the deterioration of academic standards in the subjects dealt with and in the quality of the teaching;
- Subjects like Medicine, Science, Technology and Engineering can not be learned satisfactorily through distance education;
- the over-production of people with diplomas and degrees;
- The massive drop-outs of distance students will make the distance learning system cost ineffective.

The proponents of distance education, on the other hand, say that if proper attention is given to the following points, the fear of the conventional universities will be decreased.

- ◆ the creation and production of learning materials of exceptional quality;
- ◆ the use of well-conceived teaching styles, teaching methods and student support services clearly designed to promote effective independent learning;
- ◆ the design of curricula manifestly relevant to specified and real needs for education;
- ◆ the avoidance of excessive unorthodoxy or adventurousness, while maintaining a prudently innovative approach to curriculum design; and
- ◆ the careful evaluation of student performance and the consistent analysis and use of feedback information to improve the system (Srisa-An,1981).

Research, comparing distance education with traditional face-to-face instruction, indicates that teaching and learning in a distance situation can be seen as effective as traditional instruction, when the method and technologies used are appropriate to the instructional tasks, when there is student-to-student interaction, and when there is timely teacher-to-student feedback. Furthermore, without exception, effective distance education programs begin with careful planning and a focused understanding of course requirements and student needs. Effective distance education programs evolve through hard work and dedicated efforts of many individuals and organizations. Successful distance education programs further rely on the consistent and integrated efforts of students, faculty, facilitators, support staff, and administrators.

## **The Application of Distance Education to Upgrade Teachers' Qualification: Lessons from Kenya and Tanzania**

Some of the major missions which the distance education systems try to meet are the increased need for qualified teachers, enlargement of the teaching force, improved professional standards, and modernization of teachers' methods of teaching mainly for the in-service training of the existing teachers. Almost all universities teaching at a distance in different countries have teacher education as a major component of their program. For instance, in Beirut, the UNRWA Institute of Education used correspondence courses for in-service teacher training. In the USA, the University of Wisconsin designed a correspondence course in Mathematics to help teachers to adopt the new method of teaching Mathematics in 1961. In Sweden, the University of Lund, in India the University of Delhi, and in Australia the University of England, started training teachers by correspondence teaching in the 1960s and 1970s.

To attain the purpose of this paper the experiences of two African countries, i.e. Kenya and Tanzania, are considered on the ground that they have considerable similarities with our country. Lessons from their efforts to overcome shortage of qualified teachers and to provide education to their citizens through distance education will help us in the organization and administration of an in-service teacher education through distance education.

### **A. Kenya**

Kenya attained its political independence and formed a democratic republic in 1963. One of the challenges that Kenya faced after its independence was the need to develop facilities for primary and secondary education, which in turn required to enhance facilities for the training or upgrading of teachers. In order to attain the immediate needs, the Ministry of Education had to employ a large number of under-qualified or even unqualified teachers. In spite of the different progress achieved to improve teacher education, the total number of graduates from the training colleges could not cope with the increasing demand for qualified teachers. Thus, the Ministry launched an in-service teacher training and upgrading program as the only way to produce more qualified teachers (Mackenzie, Postage and Scupham, 1975; Hawkrigde et.al. 1982).



It was with this rationale/justification that the Kenyan Education Commission led by Professor Simeon Ominde (commonly known as the Ominde Commission) was formed to look into the educational system and come up with recommendations for policy making. Consequently, the Commission recommended that the Kenyan MOE should establish radio/correspondence education in the country so as to meet the urgent need for qualified teachers. After this recommendation, the Kenyan Government sought technical assistance from the USAID to establish the Correspondence Course Unit (CCU) in the Institute of Adult Studies in the University of Nairobi. Furthermore, in 1967 three specialists came from the University of Wisconsin Extension to assist in the training of Kenyan teachers for the first three years (Mackenzie, postage, and Scupham, 1975, Hawkrigde, et.al.1982)

The Government of Kenya provided the physical facilities, printing and postal office equipment and supplies, and allowed the free use of the Voice of Kenya. Instead of dealing with four different organizations: USAID, the University of Wisconsin Extension, MOE, and the University of Nairobi, the Correspondence Course Unit (CCU) was set up within the University of Nairobi. This helped the Unit to get easy access to the facilities of the university. The CCU was inaugurated in 1966 with the objectives of helping primary school teachers who had access to radio lessons, correspondence courses and face-to-face teaching. The Program began in 1968 with the following two major tasks.

- 1) To increase speedily the overall number of qualified teachers to cope with increasing demand, and
- 2) To provide unqualified teachers with a chance to upgrade their level of education and thus to be qualified while they stay in their posts as teachers.

In 1968, there were 37,923 teachers employed in Kenyan primary schools, out of which 10,438 had no professional qualifications, and 16,992 had qualifications only for the lowest grade. During 1969-1973, over 19,000 unqualified teachers had successfully completed their upgrading courses through radio, correspondence and residential study and were awarded certificates.

The learning package of the instructional program provided by the CCU consisted of:

- Correspondence study guides, textbooks and other teaching materials such as maps, mathematical instrument sets, science-experiment kits, etc.
- supplementary radio broadcasts covering the material in one or more lessons of the study guide,
- marking of students' lessons by qualified secondary and university teachers,
- Occasional face-to-face teaching during residential courses.

The CCU offered courses like: English, Kiswahili, History, Geography, Modern Mathematics, Biology and Physical Science. A one year education courses program was also offered in three short residential courses in collaboration with the Kenyan Institute of Education since 1969 (Mackenzie, postage and Scupham, 1975; Hawkrige et.al.,1982).

## **B. Tanzania**

Tanzania gained its political independence in 1961. The country's economy largely depends on agriculture in which about 85% of the population is engaged. Educationally, the country has made great achievements, and the gross enrollment ratio for primary school was 86.5 in 1986. These achievements are the results of the national campaigns for universal primary education and the eradication of adult illiteracy (Mahlck and Temu, 1989).

In Tanzania, there were two types of trained teachers before independence: grades I and II. The grade I teachers were required to teach from standards five to eight while grade II teachers taught in lower grades. After 1961, the teachers were re-categorized as Grade B and C respectively, and other Grade A teachers were assigned to teach in secondary schools, and teacher training colleges (Mahlck and Temu, 1989).

During the second phase of independence (1970-1979), different policy decisions to expand education created an impact on the training and supply of teachers in Tanzania. Especially the 1974 the Musoma Directive (the directive of the ruling party) urged the Government to implement universal primary

education (UPE) by Nov. 1977 which was planned for 1979. The problem of shortage of teachers reached its climax. Regions were unable to pay for Grade A teachers (highly paid) and were looking for the Grade C teachers with lower salaries. This called for the need to train and supply large number of teachers with Grade C level. Therefore, the MOE was forced to supply a large number of primary school teachers to meet the demand. The strategies followed by the ministry were: introduction of new courses, temporary employment of forms four and six levels, re-employment of retired teachers on contract and shortening of the existing teacher training programs to increase teacher output. Another strategy was the introduction of village based teacher training program (Kuhanga, 1981, Mahlck and Temu, 1989).

The major aim of the Distance Teacher Training Program was to train a sufficient number of teachers so as to implement the UPE program. It was planned to train about 40,000 teachers within a five year period at a distance learning (Kuhanga, 1981).

The Distance or Village Based Teacher Training Program was of three years duration. It was an amalgamation of face-to-face instruction, correspondence lessons, practical teaching, radio-broadcast, audio cassette programs and six weeks residential training in teacher training colleges at the end of the final year. In order to supply the 40,000 teachers, the MOE enrolled 45,454 candidates to give chances for trainees attrition (Mahlck and Temu, 1989, Kuhanga, 1981).

The trainees were supposed to learn four compulsory subjects: Foundations of Education, the Teaching of Kiswahili, Mathematics, and Syllabus Design. The materials for the correspondence course were jointly developed by the Institute of Education, the Institute of Correspondence Education, tutors from colleges and the Ministry. Thus, during the first five years of the training program, Tanzania managed to get 35,028 and a further 2,970 teachers in the following four years, bringing the total number of teachers to 37,998 (Mahlck and Temu, 1989, Kuhanga, 1981).

## **Teachers Demand & Supply in the Second Cycle of Primary Schools and the Need for Distance Education in Ethiopia**

Since the downfall of the Derg regime in 1991, the education sector has become one of those sectors with priority. Consequently, the allocation of the national budget to the sector has increased from 9% to 16%. The Education and Training Policy has been formulated and is in the process of implementation since 1994. Furthermore, the decentralization of the education system, the provision of primary school instruction in the local languages, the development of primary level textbooks and other instructional materials at the local level, and the training of primary school teachers in the local languages reflect the degree of attention given to the sector. In addition, through the five-years Education Sector Development Program(ESDP), the Government has planned to achieve 50% Gross Enrollment Ratio at the primary level. According to this new program, about 2500 new primary schools will be built in rural areas and 3000 schools that are being upgraded will offer a full eight years of primary education (MOE,1996).

The demand for schooling is now increasing rapidly and the existing enrollment rate for primary school (grades 1-6) has reached 35%. In 1995-96, there were 9,704 primary schools with an approximately 90,000 teachers throughout the country (Tilson and Getachew,1998). Moreover, among 10,551 teachers in the first cycle of primary schools, about 1372 (13%) of them are unqualified. From 23,881 teachers teaching in the second cycle of the primary school, 18,481 (77%) do not have the required qualification (diploma) to teach in these grades. Among 11,235 teachers in the secondary schools, 6726 (59.9%) lack the necessary qualification (Bachelor degree) to teach in these grades (Getachew,1997).

From the above figures, one can realize that the problem of unqualified teachers is acute in the second cycle of the primary schools (77%); then in the secondary schools (59.9%), and in the first cycle of the primary schools (13%).

Another problem that makes the need for teachers in the primary schools urgent is that about 5000 primary schools will be upgraded, and 2500 schools will be constructed in the five academic years, i.e.1997-2001 (MOE,1996).

Yet the training capacity of the existing teacher training colleges (TTCs) is too limited to provide all these teachers - those without qualification and those who are planned to be equipped with the necessary skills necessary training in the regular, extension and summer in-service programs. Therefore, an effective route to enhancing the capacity of the existing programs of training teachers is a program of distance education. It could be planned as an alternative means to upgrade teachers in the field so as to minimize the acute shortage of qualified teachers prevalent in the second cycle of the primary schools.

### **Organization and Administration of Distance Education in Ethiopia**

Successful distance education programs require effective organization and administration. The organizational plans must be set followed by an administrative structure to carry out the day-to-day activities. Furthermore, effective communication throughout the designed process is the major determinant to achieve successful distance education.

Moreover, the success or failure of distance education program largely depend<sup>167</sup> on the personnel available, especially the academic staff. In Ethiopia, some of<sup>168</sup> the TTCs are those recently upgraded from TTIs while others are new<sup>169</sup> constructed to meet the demand for teachers in the second cycle of the primary schools. Apparently in these colleges, there is a shortage of well qualified and experienced teaching staff in different fields. If the development of personnel is a key to success, then cooperation among the higher education institutions in the country in the sharing of resources and expertise is very important so as to enrich the knowledge and experience of the teaching staff and provide them with new technical know-how. Great emphasis should be placed to such a cooperation in the organization and administration of distance education in Ethiopia.

One of the key issues in planning distance education is how to design and develop courses so that they reach a large and varied number of students, allow for the experience and knowledge held by students, utilize most effectively the various instructional media, provide flexibility to help meet the needs and interests of learners, and provide a high-quality learning experience. Any distance education program can only be as strong as the courses it develops. In Ethiopia, the courses for all the TTCs are developed at the center. There is a

common curriculum and all instruction is given in English in all the colleges. The problem to develop courses for the distance learners is to make these course materials appropriate to the learners. This further needs specialists in the methods of adult teaching, subject area specialists, experts, professionals in the field of curriculum, and specialists from Educational Media Agency. Given these requirements, the TTCs are unlikely to develop their own materials for distance education. Therefore, the cooperation among the higher institutes in the country especially in the development of textbooks for the distance education is imperative. The coordination and cooperation among these institutes should be as follows:

- 1) At the MOE level - establish a unit for distance education under the Educational Media Agency (EMA) with the following main duties:
  - facilitate the activities of Distance Education Units of Regional Education Bureaus and/or TTCs;
  - coordinate the production of the course materials including audio and video programs;
  - disseminate the course materials to the Regional Education Bureaus and/or TTCs;
  - organize workshops and seminars on distance education;
  - contact international bilateral organisations for both financial and technical support to run the program;
  - allocate funds to the program.
- 2) Involve Addis Ababa University and Kotebe College of Teacher Education in the writing of the course materials. This will be helpful in creating easy access to the resources of the institutes such as the use of high caliber professionals in the different faculties, research and publication centers. Besides, the Institute of Educational Research can participate in the follow up studies of the program in collaboration with the TTCs.
- 3) At the regional level - establish a distance education unit under the adult and non-formal education division with the main duties to
  - recruit and select the distance learners;
  - send their lists to the TTCs;
  - distribute the learning materials received from the center to the consultation centers; and

- make follow-up studies and provide the necessary support to the TTCs and distance students.
- 4) At the TTCs - organize a Distance Education Unit under the Continuing Education Division to
- develop course materials in collaboration with EMA;
  - accept and register the distance learners selected by the regional education bureaus;
  - prepare mid and final examinations for each course.
  - prepare and provide diplomas to the distance learners who have successfully completed the program; and
  - follow up the overall activities of the distance education program of the college.
- 5) Consultation Centers - secondary schools nearer to the distance learners can be used as consultation centers:
- select teachers with BA/BSC as tutors to the distance learners;
  - receive and disseminate the teaching materials from the REBs and distribute to the distance learners;
  - conduct classes to distance learners;
  - provide students with different information provided by TTCs and REBs;
  - correct and mark the assignments of the distance students; and
  - provide the necessary guidance and counseling services.

Furthermore, student to student interactions could be organized in the rural schools where the distance learners themselves can come together and discuss about their progress and difficulties in their study.

### **Concluding Remark**

Distance education is a cost effective educational program that can facilitate the development of teacher education in our country. It is easy to say this but difficult to put it into action. Nevertheless, hard as it may seem, we all agree that it is both a mission that all concerned have to accomplish and a

challenge that educators should face. Hence, it is necessary to consider the following factors so as to run the program smoothly and implement it effectively.

*Political Support* - In order to introduce effective distance education program, there must be a strong political will behind the move. Unless the leaders understand and accept the concept, the purpose for which the program is to be used, and the ultimate results of its application, any effort to put it into practice could be futile.

*Financial Support* - It is true that in the long run it becomes cheaper to run a distance- teaching program as recurrent expenditure is reduced. But still substantial investment is needed initially to get the program started.

*Technical Assistance* - Initially some technical assistance will be needed to start the program especially for higher level training.

*Monitoring and Evaluation* - It is essential that the program be started by phases, followed by both formative and summative evaluations, so as to detect the strong and weak sides and to improve the program in the future.

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