Distance education and its potential for the Red Sea nation, Eritrea – a discourse

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Across the world, the distance mode of education is gaining momentum. It is a system in which schools, universities and other educational agencies offer instruction wholly or partly by mail. Eritrea is a newly independent country in Africa and is facing many challenges, particularly in its education sector. It does not have many educational institutions at tertiary level. Thus, distance learning is a valuable option for this country. The distance education program could promote higher education by providing access to large numbers of urban people and disadvantaged groups in rural and remote areas, including working people, fighters, women and other adults. This paper discusses various issues related to the establishment and development of distance education. It presents the distance education programs so far undertaken in the country and explores the potential for distance education in Eritrea.

Introduction

Distance Education is a generic and buzz term. Across the world, it is now evident that the distance mode of education is gaining momentum and becoming popular. Learners in developed countries often prefer distance learning to conventional education. Distance Education is an educational phenomenon that has marked a big educational and structural change in a short duration of time (Harry 1992). It has become a vital issue in education and in strategic planning for regional, national and international development (Keegan 1996). Since school education is cheaper than tertiary education, many countries have developed policy frameworks for the development of distance education at tertiary level for promoting further education to both upgrade and update the skills and knowledge of contact students. In addition, it creates the possibility of increased and more cost-effective access to tertiary education (Evans & Juler 1991, Saint 1999).

Mass education is possible through distance learning as a result of modern technology as the world is no longer confined by boundaries. Technical developments have greatly contributed to the development of distance education (Visser 1994, Daniel & Mega 1996). The modern world has created a new and more effective form of cultural imperialism which has given added incentive to cultivate distance education capacities (Moore 1990, Marrs 1995). Further, distance education is changing with alarming speed, particularly as educational processes become increasingly globalised in terms of physical reach and the scope of courses and programs of study offered. Different viewpoints on distance education are emerging and these reflect the rapidly evolving nature of this increasingly important educational discipline (Khan 1993, Wills 1998).

Encyclopedias of education define correspondence/distance education as 'a system in which schools, universities and other

educational agencies offer instruction wholly or partly by mail'. The dictionary of education defines it in more specific terms:

> It is a method of providing for the systematic exchange between students and instructor, of materials sent by mail for the purpose of instruction in units of subject matter; a set of printed lessons or assignments based on textural materials and/or instructional media with directions for study, exercises, tests, etc., to be used as primary or supplemental aids to learning outside of a regular classroom environment (cited in Keegan 1983).

Distance education, as part of a nation's educational fabric, is being called upon to do more in more efficient and diverse ways than ever before and the people who learn through distance education are becoming increasingly diverse. Distance education encompasses many different styles, it can be anything from mass to 'boutique' (Evans & Juler 1991) while in distance learning, students and teachers find themselves playing very different roles than in traditional education (Denzin & Lincoln 1994). More than any other teaching approach, distance learning requires a collaborative effort between learner and teacher unbounded by traditional limits of time, space and single instructor effort.

The provision of distance education helps learners enhance their acquisition of knowledge and thus skills to lead a better life so governments and private sectors need to work together to lay a solid base for the implementation of the most appropriate distance education programs (Holmberg 1995).

Background literature

Although a relatively young discipline, substantial theoretical contributions were made by various researchers and theorists (Holmberg 1995). During the 1960s and early 1970s, writers such as Otto Peters, Charles Wed Meyer, Borje Holmberg, John Boarth and

Michael Moore started examining the field of distance education and their theoretical contributions have introduced us to some thoughts on distance education.

Various writers (Rumble & Oliveira 1999) describe distance education as an educative process in which a significant proportion of teaching is done by someone who is removed in space, or lives away, from the learner. But it should also be pointed out that even the learners are usually dispersed. Distance education involves the use of a varying range of media, be it print, electronic, written correspondence, audio or computer-based.

Modern electronic technology permits 'live' lessons to be delivered successfully without the teacher's direct presence. Participants can practice 'time shift' instruction at some time after the live lesson and 'place shift' instruction at the same place away from the live teacher (Moore 1990, Harry 1992).

Distance education is not solitary but relational for its concept and mode of delivery may be interwoven with other literatures. It provides a form of education where the act of teaching can take place at the same time as learning delivery or can be separated from learning in terms of time (asynchronous). It is a form of education characterised by (a) physical separation from the teacher, (b) an organised instructional program, (c) technological media, and (d) two-way communication (Moore & Kearsley 1996).

Evans and Juler (1991) have found that the world has hundreds of distance education teaching universities, each being born because of a specific social need. The universities are not easy to supply, sustain, improve, plan finance or manage, as each has unique characteristics. They experience many barriers to learning such as: (a) problems and barriers encountered by students, (b) study limitations within and outside the institutions, (c) lack of feedback or contact, (d) lack of supports and services, (e) problems of feeling alienation and

isolation, (f) problems with newer students, (g) lack of organisation – infrastructure, technology, and (h) lack of materials and competent computer staff to support Internet use. Nevertheless, a cursory look at the basic literature on the developments and trends of education throughout the world reveals that education systems in developing countries continue to make unprecedented progress, despite the fact that in many parts of the world where the need for learning is huge, good and sufficient education remains difficult to find.

Keast (1997) has claimed that, if programs of distance education are to become effective, institutions need to:

- equip their target audiences with the knowledge, skills and attitudes required from the diverse courses they pursue
- empower women so that they can actively participate and contribute in economic, social, and cultural life of the community and the nation
- deploy resources for those (for example, fighters, disabled, women, adults) who are deprived from conventional (traditional) in-campus schools for certain reasons
- provide for and upgrade teachers' professionalism and their career development at work
- promote an innovative system of university education, which is both flexible and open in methods and pace of learning
- play a role in the appropriate implementation of government policy in education, to make it available to all qualified prospective learners, and
- deploy lifelong learning that is flexible (while encouraging the learner's experience) and provide choice as to where, when, what and how they learn as well as the pace at which they learn.

The term 'distance education' covers the many forms of study which are not under the continuous, immediate supervision of tutors working with students in lecture rooms on the same premises but, which nevertheless, benefit from the planning, guidance and tuition of tutorial organisations (Holmberg 1995, Keegan 1996). Their teaching behaviours are often facilitated by print, electronic mechanical or other devices (Rumble & Oliveira 1999).

Objectives of the study

The basic question is why has the Government of Eritrea not been able to implement this style of educational program? Implementation efforts were made between 1996 and 1998 but were discontinued. This paper examines the status of distance education in Eritrea as an alternative education system to the existing traditional system. The insights gained will help educational policy-makers implement distance education in Eritrea. They could also open vistas for further research in distance education within the country.

The objectives for this study are:

- to advocate the creation of an environment in which distance education strategies, resources and support systems are taken as the standard system for education
- to promote the development and provision of training and the necessary information to move distance education from the periphery of education and create a separate educational structure for its effective functioning
- to encourage, support and identify opportunities for co-operation in the sharing of resources between public and private distance education providers.

Methodology and data

To meet these objectives, data were collected from different sources related to distance education from the public sector and the private sector (Baumgartner & Strong 1998). Informal discussions were held with the stakeholders of this distance program: government officials (related to this program); students and staff of the College

of Education in Eritrea Institute of Technology (EIT) – Mai Nefhi; Asmara Teacher Training Institute; elementary teachers who are learning their distance education in Asmara University; teachers working in some secondary schools of Zoba Maekel, like Red Sea, Asmara Comprehensive, Barka, Denden, Issak Teweldemedhn; and some students and employees. In total, 10 directors (including heads), 30 teachers and 60 students at all levels were contacted and in-depth interviews were conducted. Data were also collected from relevant documents. The researcher used an open-ended interview format to allow the interviewee to openly discuss issues(Kvale 1996, Merriam 1998). Interviewees were informed that confidentiality and anonymity would be maintained.

The study was conducted during the period October 2005 to March 2006.

This study predominantly used a qualitative approach, which was supplemented with quantitative data where necessary (Merriam 1998). The study was conducted mainly in two localities: Asmara City (the selected secondary schools mentioned above) and the Eritrea Institute of Technology – Mai Nefhi, situated 28 kilometers southwest of Asmara. These two were selected as the relevant persons in those areas could provide the necessary data, documents and insights.

The qualitative research paradigm is suited to dealing with people's attitudes and perceptions about distance education. 'The term qualitative research is an umbrella term referring to several research traditions and strategies that share certain commonalities. There is an emphasis on process, or how things happen, and a focus on attitudes, beliefs and thoughts about how people make sense of their experiences as they interpret their world' (Merriam 1998).

There were some problems because of time constraints with dispersed full-time interviewees and time-sensitive communication services. A few of the respondents were not fully aware of and knowledgeable

about distance education, it being a relatively new concept. However, the data were collected from reliable sources and from interviews with persons of high calibre in many walks of educational spheres so their views and opinions could undoubtedly help distance education program implementers in open and distance institutions.

Distance education is indeed a relatively new concept in Eritrea, although it has been practised for many years in other countries. It is with a great hope that this study will make a significant contribution to the existing educational literature in Eritrea. It is believed that the outcome would be useful to the needy and those ready to continue their further education through distance education. The researcher justifies its importance for the disadvantaged, disabled and other persons unable to pursue their studies in conventional institutions. One alternative to the traditional mode of education is distance learning, which could satisfy the need of modern education by providing advanced media where the learners are. Since it is a new area of study, there is room to conduct further research and many studies could help make all learners aware of the limitations and strengths they may encounter as distance learners. In sum, distance education implementation could undoubtedly add something to the educational development of Eritrea. Thus, this paper explores the desired implementation of distance education programs in Eritrea and deals with factors leading to the establishment of distance education programs at tertiary level and open and distance education program initiatives in Eritrea. It highlights the experience of distance education programs for elementary teachers in Eritrea, and University of South Africa (UNISA) experience of distance education programs in Eritrea.

The paper is structured in five sections. The second section provides a brief note about the educational background in Eritrea. Section three discusses the distance education programs implemented in the country. Section four delves into the potential for distance education

in Eritrea, and also analyses the perceptions of the respondents about the program. Section five presents the concluding remarks.

The educational sector in Eritrea

Eritrea is strategically located in the horn of Africa, sharing borders respectively with Sudan to the north and west, Ethiopia to the south, Djibouti to the south east, and the Red Sea to the east. It has a human population of about 4 million. It covers an area of 124,320 sq. kms., stretching from 18.22 to 12.42 degrees longitude. Eritrea's coastlines extend about 1200 kms., flanked by coral reefs and 354 islands, including the important Dahlak Archipelago (Killion 1998:1.) The war devastated nation fought bravely for 30 years (1961–1991) to obtain its *de facto* independence on 24 May 1991 and its official independence on 24 May1993 after a United Nations supervised referendum in which 98.8% of the people voted in favour of independence (MoE 1999, Rena 2005[b]). Peoples' instability in the long war for independence and the recent border dispute with Ethiopia have severely affected the economy, political and social development of the country. Eritrea is recovering from the ruins of war, destruction, conflict, colonial rule and oppression and it is now on its way to a new era of order, stability, recovery and reconstruction (MoE 1996).

Eritrea has utilised many different types of educational systems. The history of modern Eritrean education can be divided into various periods on the basis of social and political conditions. The objectives of education were in general based on colonial requirements and a policy that placed emphasis on indoctrination and subordination (Taye 1992:25, Rena 2005[b]). Indeed, Eritrea inherited its educational system from a variety of sources and so the education system reflected the ideological interests of the colonising powers of the time. Contrary to the above, colonial educational policies in the government of Eritrea believed that education was not only a fundamental human

right but also as a vehicle for national development and poverty reduction initiatives (Rena 2005[c], MoE 2006).

It is understood that, during the armed struggle, most of the Eritrean youth were engaged in the struggle and quite a number of those remaining were forced to leave because of the repression by the Ethiopian government. As a result, in the aftermath of independence, there was an acute shortage of trained manpower in all fields of economic and education because so many Ethiopians who were working in Eritrea left home (Killion 1998, Rena 2004). At that time, more than 60% of the employees in Eritrea were Ethiopians who fled back to their homeland (Rena 2005[b]). It was a severe jolt to the whole education system of the country. Access to education is a fundamental right of all individuals in any country. To realise this fundamental right of all individuals, Eritrea committed itself to the coveted goal of 'education for all' (EFA) by 2015 but many challenges remained. Access to schools in some remote localities in the six zobas, a zonal division of the country, are difficult as the new nation inherited heavily damaged infrastructure and badly affected people in education (MOE 2006).

Low learning achievements, handling large classes, a lack of qualified teachers and poor facilities in the schools remain the cause of unsatisfactory quality in education. To bring drastic change, the Ministry of Education introduced educational reforms in 2003 and started to prepare a standardised curriculum for schools (Carrol 2004). Problems remain: the participation rate of women is very low at all levels of schools, most of the schools in the country work on a shift system. To conduct free time (all day) schools is difficult for the government, as it requires an adequate number of school buildings. Many people who are living in both urban and rural areas of the country need to learn. Some of the elementary schools are situated outside the vicinity of approximately seven kilometres in some localities (Rena 2005[a]).

To provide education to all and to make further education accessible to those who are interested in continuing their studies, to extend learning beyond the regular system and provide cost-effective education, the only alternative mode is distance learning. First, distance education programs should aim for teachers at all the three levels who are trained; this will help achieve quality education at the school level. Then, distance education must be provided for matriculation and degree courses. Taking all these issues into account, the Ministry could initiate distance education programs to alleviate the major concerns of the lack of highly skilled professional and technical manpower. To upgrade teachers' professionalism and work esteem, the government institutions in cooperation with various development partners have been sending their staff members to both short- and long-term overseas training programs, in addition to what technical, vocational and managerial education was provided at home. In line with this, curricula makers and designers in Eritrea always strive to maintain an efficient education system in schools: conventional and distance to serve as an effective means of accelerating and promoting economic, social, scientific and technological progresses (MoE 2006, Rena 2006).

Eritrea inherited a ruined infrastructure, which has tried to be healed by massive mobilisation and agitation of people under the *Warsay Yikealo Development Campaign* mobilised to ensure the economic reconstruction of the war-devastated nation.[1] After independence, the government has been trying to practise a policy regarding education that is the ultimate right of every Eritrean within and without. The motto 'education for all' means obligatory education from first to seventh grade, and free education up to secondary school. Moreover, regular students who scored high results at secondary school could gain the opportunity to enter Asmara University and/or Eritrea Institute of Technology-Mai Nefhi, and other recently established colleges in the country. The remaining mediocre students who scored less highly (Grade Point Average 1.25) are all enrolled in other

vocational schools such as Asmara Commercial College and Pavoni Technical Institute (Rena 2004, Rena 2005[a]). It is to be noted that the educational policy of Eritrea was designed to fulfil and extend educational opportunities to all Eritreans irrespective of their age, sex and geographical location in Eritrea.[2]

In Eritrea, education has become an indispensable catalyst for economic and social developments: (a) tertiary enrolments of the nation will undoubtedly expand rapidly in the years to come; (b) tertiary education as viewed by some educators in the future will be based less on academic disciplines and more on trans-disciplinary issues (Rena 2005[c]). Great emphasis is placed on ability to learn independently, to communicate effectively with others, to collaborate productively in teams or groups, to be culturally and socially sensitive, to be flexible and to accept social responsibilities (Saint 1999).

Distance education in Eritrea

At the beginning, although there were no established schools, education was carried out under trees or rocks. With the liberation of wider areas and more people, education spread fast. It is to be noted that disabled fighters who were residing in Port Sudan under the umbrella of Eri-clinic were also conducting education. These disabled had very serious injuries and were using the Eri-clinic for both treatment rehabilitation and also some basic education. They were thirsty, and later quenched their thirst through distance education learning. Had it not been for their strong yearning, they would not have learned successfully. Most of them started school in the field. No wonder they became literate. Therefore, it is believed that the revolution (freedom struggle) has been the greatest university for Eritreans.[3]

About 80% of Eritreans depend on agriculture and its allied activities. These peasants are busy the whole day with their agriculture profession and hence do not have access to school. Moreover, there

was a lack of teachers and teaching materials. Because regular classes were difficult to maintain due to such various constraints, other alternatives had to be found. All of these factors facilitated the emergence of the distance mode of education as an acceptable alternative. The first task of the committee responsible to run distance education in Port Sudan and Suakin was to undertake research in order to know levels of academic status; these were grouped as follows:

- Foundation course for students from grades 1 to 7
- Refresher course for students from grades 8 to 9
- O – level course for students from grades 10 to 12

Within these groupings, learning was conducted in two centres in Port Sudan and Suakin for many years, although it ceased after independence due to some constraints.

Distance education is an important means of helping learners to achieve more educational reform goals as well as of expediting the process of reaching the unreached and improving the quality of education and ultimately stimulating the future educational and economic development of Eritrea. In that context, upgrading teacher education both in a pre-service and in-service context is a priority concern. Staff authorities in the Ministry of Education believed distance education could add more potential in delivering precious resources of knowledge to some of the most destitute areas and people, while at the same time stimulating the growth of fledging telecom and educational infrastructures in the country (Ministry of Education, UNESCO and the Government of Italy 1996). The government of Eritrea recognises the need and importance of improving the education system in Eritrea through distance learning to enable the country to enter the modern technological world.[4]

In line with this, there is a need to accommodate an increasing number of candidates such as fighters, disadvantaged adults,

women and teachers in distance learning, an issue that will be used to extensively reinforce the formal education system (Rena 2006). Eritrea is willing to share a spectrum of varied experiences relevant to its commitment to attaining its goals. It is to be acknowledged that there are many other programs that have been organised – for example, UNISA, home or independent study in USA, external studies in Australia, *tele enseignment* in France; *Fernstudium* or *Fernunterricht* in Germany; education at a distance or *ensenanza a distance* in Spanish-speaking countries and *tele educanas* in Portugal – which have succeeded as the result of their materials, logistics, and human resources potential. It is therefore interesting to see the developing distance learning programs in Eritrea's institutions taking new initiatives to promote and expand human capital in the country. In line with this, the Ministry of Education is ready to tackle the problems mentioned above by supplementing proper distance education programs in the schools that it aims to establish during 2007 (MoE 2006).

Prior to the Open Distance Learning program, Asmara University was given the mandate, via a committee decision by the President on 21 October 1991, to study the feasibility of expanding its current program to include distance learning programs. Hence, Asmara University, given the responsibility, has had its tertiary education carefully and exhaustively given distance education offerings from the other countries like South Africa (UNISA) and UK to suit its needs. The role of Asmara University in the establishment of distance education at tertiary level has been to (a) conduct a feasible study of this project, (b) secure the necessary budget for implementation, and (c) carefully implemented the project (University of Asmara 2002). In order to extend the present limited service to all Eritreans, as indicated clearly in the educational policy, Asmara University wants to discharge this responsibility by opening a distance education tertiary level program.

The Open Distance Learning program

The Open Distance Learning (ODL) program was launched on 29 March 2006 at the Asmara University Main Building. The program is a collaborative project between the Ministry of Education and the University of Asmara, and is offered to upgrade the capacity of middle school teachers throughout the six zobas in Eritrea. During the launching ceremony, the Minister of Education, Ato Osman Saleh, said that the government, realising education is the basis for economic growth, has given priority to education and is actively working on it. He added that the Ministry of Education has been working on capacity building by organising distance learning and other forms of training.

Some 590 junior school teachers, holding certificates and wanting to upgrade them to diploma level, are participating in the Open Distance Learning program. The teachers are guided by around 150 faculty members from the University, in addition to staff from the Ministry of Education. The training of tutors, who are middle school English and Mathematics teachers from different Zobas, has been a component of the preparation ahead of the launching of the Distance Education Diploma Program.

The collaborative program is a three-year diploma course for teachers, and 26 information centers have been established around the country. Meanwhile, the University of Asmara, in collaboration with the Ministry of Education, has offered a week-long training of tutors' course from 17 – 23 February as a part of the preparation for the Open Distance Learning Program. It is reported that the second batch in this program is expected to start in 2007 and will target the remaining 1,400 certificate-holding junior school teachers.

Mr. Tedros Sium, Director of Human Resource Development in the Ministry of Education, stated that the rationale and objectives of the establishment of the Open Distance Learning program for middle school teachers are basically related to the ongoing transformation of the overall education system, and also to the government's plan to transform its education and training system through a comprehensive program of human resource development and revised approaches to teaching and learning. He also pointed out that a plan to establish a Distance Learning Program is one among the major measures taken to alleviate the acute shortage and constraints of qualified teachers at the middle school level:

> The Ministry [of Education] believes that the commencement of open distance learning will play a very useful part in Eritrea's Education Sector Development Program, said Tedros. It is also important to note that a good and effective system of open distance learning depends on the existence of a good system of learner support.

UNISA experience of distance education programs in Eritrea

South Africa has developed a policy framework for tertiary distance education which could possibly complement Eritrea's specific content based on its national conditions. The overarching objective has been to improve the capacity of government institutions in a sustainable fashion, and this would be done by resolving the major problem posed by the acute shortage of skilled and professional manpower.

A total of 889 trainees from 34 public sector entities were originally enrolled in 44 areas of specification in the UNISA program (see Table 1). As indicated in the table, the attrition rate was quite high. While 213 (24%) failed, another 276 (31%) had to withdraw before completing their respective training modules. The main beneficiaries of the UNISA programs were the Ministry of Education and the Ministry of Defence which employ 53% of the participants, followed by the Ministry of Local Government (University of Asmara 2004).

Table: 1 Students of UNISA program

Status	Number
Passed	358
Failed	213
Withdraw	276
Others	42
Total	889

(Source: Consultancy Training and Testing Center, University of Asmara – Records)

For the UNISA program to operate effectively, investing in the creation and functioning of a mentoring system was required. There was initially a high level of enthusiasm among public sector employees (PSEs) to enrol in distance learning with over 2,800 applications received from almost all government institutions. Following screening conducted by the Consultancy Training and Testing Centre in Asmara University to determine eligibility, about three-quarters (BA = 170, MA = 381) of the applications were submitted to the UNISA, leading to the enrolment in 2002 of PSEs from 37 Government of Eritrea institutions in BA level degree programs. An additional 50 applications for master's programs were processed in 2003. Of the 889 PSEs enrolled in 2002, 40% passed their training modules and 60% either failed or withdrew; by the second semester academic year 2002/03, only 404 PSEs were enrolled, and of these, 46% failed.

The high attrition rate was reportedly due to the following reasons:
- students had difficulties in managing their study programs while also coping with their work pressures, and were encountering logistics and transportation problems
- some students lacked the discipline to pursue their studies independently

- lack of computer skills and communication problems with instructors and tutors
- students considered that tutorials and support systems were inadequate
- delays in dispatching materials for exams, assignments (materials come, on average, in three weeks time by courier – South Africa – via Kenya to Eritrea)
- students complained that there was less feedback given to them
- students were provided with material guides only – other books and references needed to be purchased and they faced several inconveniences.

Eri-British Institute

This organisation is a new distance learning institute established in the private sector by an Eritrean and Edexcel, a UK institution, which is closely supervised by the Ministry of Education in country and the British Council Library, Eritrea. The institute provides various courses at undergraduate to postgraduate level. It has very cost-effective study fees compared with other overseas costs for the same programs. So far, many distance learners have already enrolled.

Eri-Tutorial College

Within Eritrea, new distance education institutions are emerging. The School of Modern Consultancy Service launched the Eri-Tutorial College to nurture educational opportunities. The Modern Consultancy Service established a local school of distance learning in 2003 in order to help those students who, for whatever reason, find it inconvenient to attend the normal College courses. According to the owner of the College, the distance learning courses are written in his institution in clear and easy ways in English. The manuals are also written to the level of education of the contact learners so that they can pursue their studies successfully:

- some courses are modified and prepared in such a way as to acquire Eritrean styles to encourage the contact learners to continue their studies
- the College has employed some experienced tutors to help distance learners learn the different modules it offers
- the College is established to upgrade learners' knowledge, skill, professionalism and standard of education, which undoubtedly will contribute to the development of the learners professionally and technically. This will help to upgrade the manpower of the country.

Furthermore, the Eri-Tutorial College has already helped more than 700 citizens to complete their international correspondence studies and registered 50 local distance learners in the academic year 2005–2006.

Potential for distance education programs

Why distance education in Eritrea?

The curriculum designers, while trying to publish quality school books for all grades, had as their main pre-occupation how to increase the number and improve the quality of the 'learning force' against the daunting background of:

- the acute shortage of teachers after liberation in 1991 to staff the schools
- the limited capacity of the one teacher training institution (ATTI) and its subsidiary branch, the Eritrea Institute Technology (EIT)
- an enormous increase in elementary school enrolment and therefore the construction of many new schools
- a two-year university diploma has for long been a technical requirement for being a middle school teacher in the country
- the reluctance, because of cultural or religious reasons, of females and members of some ethnic groups to move away from their homes and families for training purposes

- the economic and domestic difficulties that prevent many teachers, particularly in remote regions, from taking up training away from their localities
- the need to educate the disadvantaged, irrespective of age, sex and place.

While spending on educational provision has increased greatly, there are limited budgetary means to cater for the financial costs that a new nation has to face when rebuilding infrastructure, expanding medical and welfare services, and advancing economic and business opportunities. No system of distance education is likely to remain efficient if it remains static. It needs to be sensitive to trends and changing needs in education, and have the flexibility to modify its programs and practices, and to expand in response to the needs of the community it is serving. The Ministry of Education has recognised the above issues and is working on the significance and importance of improving the education system in Eritrea. Its vision is ultimately to attain quality of education, access and relevance. Distance learning, a new mode of delivery, will undoubtedly help to promote educational quality and relevance in many ways.

The need for lifelong learning to enable workers to upgrade their skills and maintain competitiveness within rapidly evolving economies is becoming significant worldwide. The aspiration of learned people and staff authorities in the Ministry is to help and equip people by means of education through distance learning. Tertiary education needs to be extended beyond on-campus institutions to satisfy the educational needs of different employees, fighters and women in Eritrea. Eritrean scholars believe that distance education will be used extensively to reinforce the formal education system, which is often hampered by deficient quality and lack of capacity to accommodate the ever-growing demand for schooling in Eritrea.

The need to accommodate growing numbers of candidates in distance learning, especially for teachers, is a crucial issue in order to increase

existing manpower and develop Eritrea with adequate infrastructural facilities. Distance education, as a new mode of delivery, provides systematic exchange between student and instructor and materials sent by mail for the purpose of instruction in units of subject-matter: a set of printed lessons or assignments based on textural materials and/or instructional media with directions for study, exercises and tests. Distance education may be the latest fashion in education, but it is here to stay as a modern model of teaching and learning.

The Ministry of Education in Eritrea therefore plans to build the nation's educational level and potential using the distance education mode of delivery to the needy and the ready, and providing the required certificate, diploma, bachelor of education, master of education and MBA courses where necessary. The ultimate aim of the Ministry is to create capable employees, having a trained workforce by providing the conducive atmosphere for learning and training opportunities they ought to have at all levels of studies (MoE 2003). It has made many changes to enable implementation of a standard system of education in schools at different levels. The teachers in return are given professional training in workshops, seminars, short- and long-term refresher courses to enhance their professionalism and work esteem. Many schools are built equipped with modern teaching and learning facilities. At the same time, the Government is (a) significantly expanding integrated, low-cost and community-based early childhood programs; (b) aiming for universal access and quality primary education for all by 2015, reducing male illiteracy to about 10 percent by 2010 and achieving female literacy of at least 60 percent; and (c) expanding 'lifelong' learning to achieve a modern cultural transformation among disadvantaged groups in rural and urban areas through distance education delivery (MoE 1999, Rena 2006).

Modern training could be conducted in the existing kindergartens and elementary, middle and secondary schools, having in mind particularly the disabled, disadvantaged rural youths including girls

who have been deprived of formal education and training because of various social, religious and economic reasons. Scholars in the study propose that teachers' career development will be achieved through implementation of distance education after the background factors outlined above are worked out. The focus will be on teaching teachers who could bring about change in the development of education. Basically, it will target kindergarten teachers, uncertified elementary teachers and elementary teachers who are promoted to middle level (MoE 2003, Rena 2006).

The aim is that all teachers at all levels will pursue academic and pedagogical studies parallel through distance education lessons in addition to conventional courses. Similarly, through distance learning, directors, supervisors and even Ministry staff who are not teachers will be expected to upgrade and improve their leadership and management roles. MBA courses may also be offered to senior Ministry staff to help them become more aware of and sensitive to changes in the training and education field, as well as the benefit in investing in people with high potential to expedite the process of teaching and to improve the quality of education.

The respondents' perceptions

The main points from the respondents were as follows:
- most were not in a position to differentiate between correspondence and distance education programs
- many did not have a clear understanding of distance education and the various programs implemented by the Government of Eritrea
- almost all respondents agreed that distance education programs are essential for Eritrea, particularly to encourage mass education and coordination of education for all citizens
- some respondents believed that distance education has nothing to do with the size of the country and its geographical barriers, provided that proper transportation and communication are

developed that will lead the success of distance education programs

- respondents could differentiate between distance and regular modes of education by their methods of interaction, but were not aware other differences
- most of the respondents were not aware of programs which are not being offered by the Government of Eritrea, so unless the Government focuses on distance education, the program will not be successful
- the thirty years' freedom struggle, border dispute and lack of financial resources have forced the Government to concentrate on the provision of food and health of its citizens
- all respondents firmly agreed that good tutors should be employed on a worthy salary for the effective conduct of distance education programs
- many respondents suggested that effective postal services, e-mail, video/audio, TV, radio newspapers, ICT finance, logistics, distribution of study materials and effective organisation of study centres are essential for the effective implementation of distance education programs.
- almost all the respondents suggested that the Government should spend a huge amount of money on distance education in the beginning
- respondents agreed that the community should also contribute its share for the growth and implementation of distance education programs
- almost all the respondents agreed that negligence on the part of the relevant authority would spoil the distance education programs, so for their success, personnel with sound knowledge, skills and expertise are required
- though the Government of Eritrea is concentrating on developing the regular system of education, it has to concentrate on distance education programs.

Developed countries have succeeded with this new mode of distance education because they have had in place the necessary infrastructure to guaranteed fast, reasonably priced access to the internet. In the case of developing countries like Eritrea, service providers of the new mode of delivery need to take into account the limited access to relevant internet sites and adjust their services accordingly. For Eritrea, it is therefore important and helpful to examine other countries' experiences with implementation of distance education. In the light of the above conclusions, the Government of Eritrea should spare a considerable amount of money for the development of distance education programs at levels appropriate for its citizens. It can also encourage the private sector like the Modern Consultancy Service which has the zeal to establish distance education institutions (interview conducted with the owner of the Eri-Tutorial College).

Concluding remarks

Distance education institutions could promote, socialise and democratise higher education by providing access to large numbers of urban people and disadvantaged groups in rural and remote areas, including working people, fighters, women and other adults in Eritrea who want to upgrade their knowledge and/or skills in various fields in the country and thus complement more formal opportunities. Borderless education through the internet and other modes of education has the capacity to create a revolution in access over the next few years in Eritrea because of the huge changes in technologies like satellites, fibre optic cables and devices such as mobile phones and computers.

Distance learning has become a major issue in education and in strategic planning for regional development. It is a possible means for developing the human resources of a small and young country like Eritrea. The establishment of distance education should be simple but is complex, time-consuming and requires substantial resources. Therefore, particular attention needs to be paid to its

overall structural and administrative development and teaching material preparation. Eritrea needs to draft its own approach to the establishment of tertiary distance education programs and institutions. To do this, it can learn considerably from the worldwide experiences of distance education policy-making and planning. To understand distance education, it is necessary to have a theoretical framework that encompasses the whole area of education.

This new mode of learning has assisted in the development of education worldwide. In Eritrea, it needs to be established with the required logistics, quality material, student support and trained manpower. Therefore, constructive and effective measures have to be taken by the authorities in Ministries to enhance economic, social and educational development in Eritrea. If Eritrea was to set up a strong base for distance education, it is hoped that this study may establish a foundation for researchers as a guide for conducting future research.

Notes

[1]   The *Warsai-Yikeaalo* Development Campaign was launched in May 2002, and after just two years, assessment of what has been accomplished has been rated commendable, although much remains to be done. The Campaign has been focusing its developmental programs on the following major undertakings: infrastructure renovation and development, agricultural intensification and modernisation, raising industrial output, mining schemes, the tourism sector and human resource development.

[2]   See the Provisional Government of Eritrea (2 October 1991), Department of Education Policy Document, Asmara, Eritrea.

[3]   In the town of Nackfa, a revolutionary school that was popularly known (*Tsabra* school) was set up and provided education and training for many children and fighters in 1970s and 1980s.

[4]   It is observed that the Distance Education Programs for Elementary Teachers in Eritrea (DEPETE) program has succeeded in improving elementary teachers' work esteem and professionalism. This program was monitored by staff authorities in the Ministry of Education, the Italian government and UNESCO, and every effort was made to make it successful. However, the program was discontinued after six years due to lack of expertise, lack of experience, logistics, quality materials

and student support services. For further details, see Ministry of Education (1996), *Brief description of DEPETE: tasks and achievements,* Department of National Pedagogy, Ministry of Education, Asmara, Eritrea.

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