

The Role of Distance Teacher Education in Increasing the Supply of Primary School Teachers in Sub-Saharan Africa

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Abstract

This paper attempts to show that a sustainable supply of qualified teachers required to provide quality education for all children in Africa faces very serious challenges which have not been met by the conventional approaches to teacher education. The current need in the supply of teachers has arisen from the upsurge in school enrolments since the 1990s as a result of the commitment by many countries to meet EFA goals, contributing to the recruitment of high percentages of untrained teachers. Compounding the low teacher numbers is the high toll on the teaching force by the HIV/AIDS pandemic. All these factors have a contributing role in the low levels of pupil achievement and low rates for pupil completion of primary schooling in many parts of the continent. It has therefore become increasingly evident that if Africa has to meet the challenge in the supply of adequate teachers required to provide quality education for all the children, it has to emphasise a shift in the conventional approaches to teacher education to distance teacher education which will reach larger numbers of student teachers. There is need for governments to adopt implementation strategies in line with their national policy on education to set up pre-tertiary distance education institutions to increase access to educational programs. The development of national DE policy frameworks is a crucial step in teacher training/retraining in the light of the changing challenges of distance education, the rise of civil societies and the expansion of trans-national education. Donor funded DE programmes need to ensure their sustainability by being made time-bound and are institutionalized. Furthermore, they ought to be carefully planned to meet urgent demands and need to begin with the necessary initial investment in infrastructure or building capacity through the system rather than operating in a crisis mode.

Key terms: Distance teacher education and increasing supply of primary school teachers

Introduction

It is not the purpose of this paper to venture into a definition of distance education, but to generally perceive it as a broad category of education which strives to overcome the problem of teacher and learner being separated by some physical distance. It is also

said to involve focusing on the special nature of course design, learning and instruction under such circumstances. It is a mode that has the potential to transcend barriers which are caused by distance, time as well as age, hence facilitating lifelong learning. Through distance education, the learner enjoys a high degree of autonomy in deciding what, when and how to learn. The flexibility inherent in distance learning, and the fact that it can be combined with full or near full-time job, makes it particularly appropriate for the often widely distributed force of teachers and school managers and continuous professional development enables teachers to extend existing knowledge and skills and develop new ones (Moore and Thomson, 1990; Komba, 2009). In this paper an attempt is made to focus on the imperatives of teacher education, challenges of distance teacher education, some examples of successful teacher education programmes, key issues in planning and implementation and future policies.

In many countries, while the importance of teachers is given a lot of emphasis, including in international reports, attention given to teacher education and the professional development of teachers often lags behind that given to other levels of the education systems (UNESCO, 1998; UNESCO, 2000; OECD, 2001). While there is a strong recognition that teacher education and professional development need to be integrated in ways that operationalise lifelong learning for teachers, the resources allocated to it are usually inadequate. Consequently, in much of the developing world, teacher education has been in a serious crisis. Inherited systems of teacher education have proved increasingly unable to satisfy the dual demands of higher quality training and substantially increased output demanded by commitments to universalize primary education (Ncube, 1982; UNESCO, 1998). Many education systems still contain large proportions of untrained or underqualified teachers who teach subjects in which they are not qualified and there are many teachers at the primary school level who enter teacher training after completing secondary education and in some systems even primary education. The quality of primary education is such that it lacks the capacity to provide a supportive professional environment for trainees who are fully qualified at graduate level. Donor enthusiasm for new pedagogy, which frequently advocates learner-centred approaches, group work, attention to special needs, reflective teaching and a plethora of methods of training associated with best practice in developed countries, has at times sat uneasily with the realities of the training environment, teacher education infrastructure and different cultural and professional expectations of the role of the teacher in developing countries. A lot of the rhetoric about reform has been increasingly difficult to translate into actual changes on the ground (Kunje, 2002). In addition teachers increasingly face a widening range of demands and roles. National governments, international organizations and specific circumstances continually set new goals and the need for critical thinking, life skills and others which seriously challenge the capacity of teachers to cope with.

The poor quality of the teaching force tends to create new challenges for teacher education and continuing professional development. The challenges include, among others; the need to find ways of using existing resources differently, necessity to expand

access to learning opportunities at affordable costs, providing alternative pathways to initial teacher education, attracting more students into the teaching profession, using technologies appropriately to enrich teachers' contexts and practice, stimulating and supporting teachers' reflective learning and reconceptualising the traditional organization of teacher education and continuing professional development.

It is becoming increasingly acknowledged that distance education is particularly appropriate to reach widely dispersed populations without disrupting their personal professional and social lives. It suits best the countries where face-to-face institutions cannot respond urgently and adequately to increasing demands for teacher education due to lack of space and facilities following the introduction of free primary education. The high enrolment rates call for a critical examination of the role of distance education in primary teacher development (UNESCO, 2001). For these reasons, among others, distance education as a delivery mode was recommended by the World Conference on Higher Education (Paris, 1998), the World Forum on Education (Dakar, 2000) and the ILO/UNESCO Committee on the Application of the Recommendations concerning the Status of Teachers (Geneva, 2000)

It is gratifying that some governments have recognized the role of distance teacher education in addressing this challenge. For example, in a white paper, the Department of Education in South Africa in 1997, stressed the role of distance education as follows:

Distance education and non-campus resource-based learning have a crucial role in addressing the challenges of expanding access, diversifying the body of learners, being responsive to the needs of non-traditional students, for example, those already in employment or who need to earn in order to meet study costs, and enhance quality within the context of limited resources (Department of Education, 1997:26 cited in Welch, 2008: 325).

The Challenge of Distance Teacher Education

The supply of adequate numbers of quality teachers, required to provide quality education for all children in Africa faces many serious challenges which are not met by the conventional approaches to teacher education. Many countries in the Sub-Saharan region are among the countries which like other regional blocks that have committed themselves to the achievement of UNESCO's Education for All (EFA) goals and the UN's Millennium Development Goals (MDGs) which include the achievement of completion of universal primary education by all by 2015. As result of commitment to these goals, various initiatives have been launched to provide free primary education, which have led to an upsurge of school enrolments since 1990s. For example, enrolments in early childhood care and development increased from 5 million in 1999 to 9 million in 2006, although gross enrolment ratio remained low at 14 percent. The net enrolments at the primary school level rose from 81 million to around 116 million children in 2006, which

was a dramatic rise from 54 to 70 percent. The forecast is that by 2015, the target year of EFA, school age children in the Sub-Saharan region would increase by 34 million or by 32 percent (UNESCO, 2004). With the high upsurge, the number of out of school children across the region also dropped by 10 million, from 45 million in 1999 to 35 million in 2006, although this represented a third of the school-age population who were not enrolled in school. Most countries also recorded above 80 percent transition rate to secondary education, with the regional transition rate rising from 54 percent to around 65 percent. Enrolment in secondary education grew from around 21 million to 29 million. Following the multiplier effects of enrolment expansion at the lower levels, tertiary education enrolments have also witnessed a progressive expansion over the years (UNESCO, 2007).

The UPE policies in many countries seem to have reduced an economic burden of primary education for the disadvantaged groups as well as decreasing delayed enrolment and hence boosting increased participation. Consequently, UPE policies have had positive impacts on the poor in improving access to schooling. In this respect, these policies have contributed significantly to access and equity in primary education. However, the push for UPE in many countries has come to be identified with increasing deterioration of the quality of primary education right from the provision of physical facilities, teaching and learning materials, deployment of teachers, performance and transition from primary to secondary education (Sawamura and Sifuna, 2008). There seems to be strong evidence of internal inefficiency, due to enrolment of over-age children, high rates of repetition and dropouts rates, and use of unsound pedagogical approaches. On the whole in a majority of the Sub-Saharan African countries, the primary education sector is quite inefficient, with very high attrition rates reaching an average of over 60 percent, especially in the Lusophone and some Francophone countries. The completion rates even in many Anglophone countries is hardly 50 percent and has consistently remained below that mark (Sifuna and Sawamura, 2010).

The school situation described above creates an urgent need for the African countries to devise and implement policies to meet the demand for trained and resourceful teachers, among others, in order to meet the increase in pupil enrolment, participation and reduce the attrition rate. In many countries there has been a steady improvement in the training of primary school teachers since independence, with the proportion of professionally unqualified teachers declining by as high as 30 percent. However, the UPE intervention has contributed to the increase in numbers of unqualified teachers. In Malawi, for example, the government responded to the increased demand by recruiting around 18,000 untrained teachers, but these were both insufficient to provide classes of an acceptable size and also meant that a large proportion of the teaching force were inexperienced and unqualified (Kunje, 2002). In Tanzania, the increased enrolments arising from UPE was to the extent that there were not enough secondary school graduates to supply the demand. Primary teachers were therefore, drawn from populations who had not attended secondary school and trained through distance programmes (Wedgwood, 2007). The problem of poor professional qualification is compounded by the inadequacy

of teachers. Due to unequal distribution of teachers in the countries and within schools, the class size is considerably larger in the earlier standards in Malawi, ranging from 113 pupils per class in standard one, on the average, to 27 pupils per class in standard eight (Kadzamira and Rose, 2003). In addition to proportions of untrained teachers, continued teacher development through in-servicing, in both pedagogy and management, which in the literature on school effectiveness is considered a necessary condition for sustaining and improving achievement is neither regular nor systematic.

The demographic and practical realities facing teacher supply and demand accentuates the need for teachers. The increase in pupil enrolment has raised pupil-teacher ratios in Sub-Saharan Africa from 41:1 to 45:1 since 1999. The pupil-teacher ratio, for the region could increase further to about 58:1 if the 35 million primary school-age children not in school are enrolled. The situation generally varies from one country to another. In Mozambique and Rwanda, for example, it was 67:1 and 66:1 respectively, while in the Congo it was 83:1. Following the free primary education interventions since the 1990s, the entire Africa region faces severe shortages of teachers to meet its needs. For example, nationally, Ghana has a quarter of the teachers it needs, while Lesotho has a fifth of them. However, the national figures tend to mask the serious disparities in teacher distribution within countries due to poor decentralized education planning systems (Anamuah-Mensah and Wolfenden, 2008).

Table 1: Pupil teacher ratio in primary education in Africa, 1999-2005

| Country | Primary education | |
|----------------------------------|-------------------|------|
| | 1999 | 2005 |
| Angola | 53 | 47 |
| Benin | 27 | 25 |
| Botswana | 49 | 47 |
| Burkina Faso | 57 | 49 |
| Burundi | 52 | 48 |
| Cameroon | 29 | 25 |
| Cape Verde | 68 | 63 |
| Congo | 61 | 83 |
| Cote d'Ivoire | 43 | 42 |
| Democratic Republic of the Congo | 26 | 34 |
| Eritrea | 47 | 48 |
| Ethiopia | 64 | 72 |
| Gabon | 44 | 36 |
| Gambia | 33 | 35 |
| Ghana | 30 | 35 |
| Guinea | 47 | 45 |
| Kenya | 32 | 40 |
| Lesotho | 44 | 42 |
| Madagascar | 47 | 54 |

| | | |
|-----------------------------|----|----|
| Mali | 62 | 54 |
| Mauritius | 26 | 22 |
| Mozambique | 61 | 66 |
| Namibia | 32 | 31 |
| Nigeria | 41 | 37 |
| Rwanda | 54 | 62 |
| Sao Tome and Principe | 36 | 31 |
| Senegal | 49 | 42 |
| Seychelles | 15 | 14 |
| South Africa | 35 | 36 |
| Swaziland | 33 | 32 |
| Togo | 41 | 34 |
| Uganda | - | 52 |
| United Republic of Tanzania | 40 | 52 |
| Zambia | 47 | 51 |
| Zimbabwe | 41 | 39 |

Source: UNESCO, *Education for All by 2015: Will we make it?* Paris, UNESCO Publishing and Oxford University Press, 2007, pp. 289-290.

The urgent need for more qualified teachers is exacerbated by the presence of a high percentage of untrained primary teachers in many of the African countries. It is estimated that half of the existing 2.6 million teachers in the region are unqualified. In some countries, there are high proportions of untrained teachers who are often thrown into their jobs with little or no induction. Multi-grade teaching is quite common, but most teachers are not adequately prepared for the special demands of this type of teaching (UNESCO, 2004). Poor quality in-service training compounds poor pre-service training and induction in many countries. As Matson (2006) observed in many countries, legislation for UPE has introduced a “fire brigade approach” to teacher training and deployment with entry requirements and minimum qualifications being lowered and the training period reduced in order to meet the growing demand with inevitable result of declining teacher quality.

The already bad situation of the teaching force is further exacerbated by the HIV/AIDS pandemic. Teachers are also believed to be a “high-risk” occupational group with respect to HIV and AIDS infection. This has a major impact on teacher motivation in high prevalence areas of Sub-Saharan Africa. Apart from the obvious impact of teachers who are living with HIV and AIDS, working with colleagues who are sick and who may eventually die is also demoralizing. The extra workload of covering for sick teachers is also a key factor. HIV and AIDS is now said to be a major cause of absenteeism among teachers as well as other educational personnel even if they have not reached the terminal stage of the disease. The disease affects teachers’ absenteeism in two ways, namely: teachers themselves become infected and are unable to travel to school to carry out their teaching duties; and teachers become care-givers to members of their families who become infected (Benavot and Gad, 2004).

Teachers, who usually represent a younger and more mobile workforce, are said to be more likely to be infected by the pandemic than other workers (Bennell et al., 2002). An estimated 860,000 children in Sub-Saharan Africa are said to have lost their teachers to HIV and AIDS. The high level of infection and death rates among school teachers undercut the ability of schools to find suitable replacement teachers. In Congo, for example, the lack of teachers due to the pandemic resulted in many school closings (Kelly, 2000; UNESCO, 2000). Evidence from several African countries suggests that the number of newly trained teachers graduating from teacher training colleges does not approximate the quantity of teachers no longer working in the profession due to death, morbidity or new conflicting responsibilities within the family. This also reflects the escalation of death rates among teacher trainees. Despite this critical situation, few responsible ministries of education have adequately addressed the problem; and even fewer have developed feasible intervention strategies (Kelly, 2000; Benavot and Gad, 2004).

Such a situation is partly due to the fact that there is lack of reliable census data and functional educational and information systems in most African countries which tends to suggest that the data on numbers and statistics should be approached with some caution. Most figures obtained from UNESCO, UNICEF and the World Bank and other organisations which are also dependent on data provided by governments are only correlated or replaced with other data when available from more credible and up to date sources. The poorly understood and largely unmeasured impact of HIV/AIDS makes existing data even less reliable, particularly when it comes to projections of teacher supply and demand. It is important to note that projections provided by national ministries are often a reflection of political goals and interests rather than an accurate synthesis of the regional or provincial actual figures. Figures on supply and demand of qualified teachers are generally difficult to come by and vary from source to source depending on what models and variables which have been used.

Another major constraint to the supply of teachers tends to lie with the existing teachers' colleges. The inability of many African countries to provide enough teachers over the years, to meet their needs has been attributed to teacher education's reliance on conventional campus-based or college-based teacher training. Teacher colleges are characterized by relatively low student capacity, lack of expansion, limited teaching and learning resources, college-based upgrading of teachers and predominantly theory-laden training programmes with their consequent influences in student teachers' teaching styles (Anamuah-Mensah and Wolfenden, 2008).

Colleges of teacher education due to their physical and intellectual isolation from the schools they are expected to serve, along with conservative and inflexible practices has made it difficult for them to reach many untrained and underqualified teachers already in schools or provide the in-service training and continuing development required by new national strategies. As a result, teachers' colleges in many countries are facing a serious credibility crisis. Research in Africa seems to suggest that many teachers' colleges are barely functional institutions held down by the weight of tradition, by lack

of vision and poor management instead of being the powerhouse of change to capitalize on their geographical distribution across school systems to become centers of support and innovation. Few colleges if any have administrative or financial autonomy to develop a new vision. Most are administered through national ministry offices and are subject to bureaucratic regulations and inefficiencies (Matson, 2006).

Some Examples of Successful Distance Teacher Education Programmes

Teachers remain key to the ongoing educational expansion and improvement. In many countries there is a dire and urgent need for numbers of both primary and secondary teachers. In the same vein, there is an equally important need to improve the quality of teaching. To achieve the twin goals, it is clear that new approaches to teacher education are essential. Existing institutions of teacher education will continue to play an important role, but alone, they will not meet the stated goals for achieving education for all by 2015. In response to the shortage of qualified teachers as a result of the inability of face-to-face training institutions to adequately fill the gap, many countries have begun to adopt distance teacher education programmes.

Distance education is being utilized to enhance professional development to enable teachers extend existing knowledge and skills as well as acquire new ones. Some countries use distance education to provide a route to initial qualifications for significant numbers of teachers both new entrants to teaching and experienced unqualified teachers. Distance education is also used to raise skills, deepen understanding and broaden knowledge of teachers. Programmes are taken either by individuals or by groups of teachers who are encouraged to participate. There have also been a few programmes tailored to curriculum reform or the process of education. There have also been programmes aimed at career development or promotion to the next level or hierarchy in educational management. Of course the different categories inevitably overlap as career development may be regarded as part of continuing professional development (Rumajogee, et al. 2003).

Suffice to briefly discuss a few examples of successful distance teacher education institutions which have been exemplary as they show the potential of distance learning in addressing the problem of increasing qualified teachers to improve the quality of education. Among the outstanding examples is the University of South Africa (UNISA). The university has been a major provider of distance education and teacher education at tertiary level throughout the southern Africa region from the 1940s and is one of the largest distance teaching universities in the world. It is also important to point out that distance education has played a very prominent role in teacher education in South Africa, as a good number of primary and secondary school teachers were involved in distance learning by the turn of the century. The university has a well established center and structure with regional offices in major cities and towns. The programmes began as in-service ones, but later diversified to include a pre-service target group in response to government policy and an increasing demand for teachers (UNESCO, 2001).

In terms of cost, student fees for each individual module (in 2000) were US \$67. Given that each qualification comprises 40 modules, the total cost to a student for a complete Bachelor's programme is about US \$2,682. Similar modules at residential universities are around US \$128 each. The annual pass rates for the individual modules vary between 40 per cent and 65 per cent. Almost 70 per cent of all enrolments ultimately graduate though taking more than the minimum time allowed to do so (UNESCO, 2001).

The National Teachers' Institute in Nigeria is another successful story in distance teacher education as it provides an alternative but equivalent route to initial teaching qualifications for working primary teachers in the country which is experiencing a serious shortage of teachers and conventional college output cannot meet the demand. In 1976, an acute shortage of primary school teachers led to the establishment of the National Teachers' Institute (NTI), a distance education college for teachers. Its mission was to provide initial teacher qualifications and upgrade the quality of teachers through distance education. Its courses and qualifications were equivalent to those of conventional teacher colleges. It started as a parastatal organization with headquarters in Kaduna and offices in 36 states. It has made a very significant contribution to teacher supply with 48,204 graduates between 1990-1999 and is now an institutionalized part of the teacher education system. Although there is little government policy on distance education and no direct ministry section with overall responsibility for it, distance education has played an enduring role in Nigeria's teacher education and EFA targets (UNESCO, 2001).

In terms of cost, although limited data was available on costs, the evidence suggests that of 5,167 students completing in 1999, 2,872 passed the examination at a unit cost of US \$203 while the other 2,295 graduated, after retakes, at a unit cost of US \$259. This produces an average cost per graduate of US \$ 228 which includes loss through drop-out. This compares with a unit cost per graduate in a regular college of education of US \$317 (1998), US \$469 (1999) and US \$529 (2000) (UNESCO, 2001).

The programme steadily rose in enrolment rates: 7,324 (1994-97 cohort), 7,581 (1995-98), 8,398 (1996-99) and 8,521 (1997-2000). However, these are matched by significant drop-out rates: 27 per cent (1994-97 cohort), 30 per cent (1995-98), 35 per cent (1996-99) and 39 per cent (1997-2000). Of those completing the course, only 56.5 per cent passed in the 1994-97 cohort, 66 per cent in 1995-98, 61.4 per cent in 1996-99 and 55.6 per cent in 1997-2000. Several reasons are given for high drop-out rates: the inability of trainees to afford course materials; the time needed for other income-generating activities; the disruption to the studies of female trainees as they follow a re-located husband; the demands of busy farming periods at examination time (especially in the northern states like Sokoto and Kano); late delivery of materials because of poor postal services; long distances to travel to study centres; failure to participate in the practical teaching element (a compulsory part of the course) and low pass rates in assignments and tests. Some problems in the quality of learner support play a role. Study centres are under-resourced and overstretched, dealing with more students than planned for when established; appropriate local tutors are difficult to recruit; and the activities provided at

study centres tend to mimic the formal practices of conventional colleges or traditional ways of teaching, eroding the intention of providing opportunities for interaction between learners themselves and learners and tutors. Despite the problems, the NTI's NCE programme has made a significant numerical impact on teacher supply in Nigeria. 21,000 trainees graduated with the NCE qualification in 1994, a number comparable with the total admissions of the 58 regular colleges of education (UNESCO, 2001).

A more recent intervention to supply qualified teachers through distance education has been in Malawi. The increasingly high teacher attrition rate due to a change of jobs and HIV/AIDS, a prompt and effective solution to the shortage of qualified teachers had to be put in place. The Domasi College (Malawi) with an annual intake of more than 900 distance teacher-learners is now catering for more than all conventional colleges in the country where continuing professional development of teachers can only be ensured through the distance mode because of lack of bed space in the regular face-to-face colleges. The dual mode institution uses distance education for teacher education to enhance quality of education in less privileged community schools, to increase equity and access, to reduce gender disparity, and improve the efficiency of the school system (Rumajogee, et al. 2003).

Mauritius also presents one of the most successful stories in the area of distance teacher education in Africa. In February 1991, the first (Advanced Certificate in Education (ACE) Program was officially launched at the Curriculum Development Centre at Beau Bassin. Some 600 general purpose teachers and 100 Asian language teachers were selected to follow the program. A mixed mode approach was adopted which required trainees to undertake self study of course materials and to attend face-to-face sessions at the Mauritius Institute of Education (MIE) campus for 12 full days every year. A survey of 19.4% teachers representing (2 462) trained through the ACE from 1993 to 1998 was carried out in 1999 (Rumajogee, et al. 2003).

Given that quality learning outcomes cannot be expected without effective instruction processes and, therefore, without quality teacher education (initial and continuing), an assessment of the effectiveness of the Advanced Certificate in Education offered through the distance mode to upgrade the professional knowledge and the pedagogic competency of primary school teachers was proposed. The study was completed by an analysis of the training offered to primary school teachers. The analysis of teachers' perceptions of the program, in general, and of its various aspects, including the quality and relevance of the course materials, the face-to-face sessions and the tutoring services as well as their perceptions of their own difficulties as distance learners was based on a study of the responses which they had been provided on a 4-point scale from "strongly disagree" to "strongly agree". Their open responses to two items of the questionnaire related to the strengths and weaknesses of the program, and suggestions for improvement as well as the content analysis of fifteen 30 – 45 minute semi-structured interviews conducted with other teachers (5), and Head Teachers/School Inspectors (10) on the overall contribution of the ACE program sought to obtain their views on:

- the potential of distance education methodology for teacher education
- the extent to which the ACE had contributed to the enhancement of learning outcomes in the classroom situations (Rumajogee, et al. 2003).

A large majority of the teachers (70.6%) opined that the Educational Core of the ACE program had contributed to improve their teaching skills. Among them, 17.2% strongly agree with the statement of the questionnaire to that effect. Although a lesser percentage (64.1%) was of the same opinion concerning the Subject Areas, they represented almost two thirds of the respondents. Similarly, 70.4% of the teachers strongly agree/agree that the Educational Core of the course had helped them introduce new teaching techniques in their classes compared to only 38% for the Subject Areas. The dissenting opinion on the two components of the programme could be explained by the fact that the Educational Core and Subject Areas focus respectively on pedagogic and content knowledge (Rumajogee, et al. 2003).

Both components of the program were reckoned to have helped the teachers relate properly to their students. The contribution of the Educational Core which included courses on “Factors affecting achievement”, “Social, Personal and Cognitive development”, “Learning difficulties”, “Evaluation and Assessment” had been useful in providing teachers with a better understanding of their students (69.1%) and in helping them with their learning difficulties (70.4%) (Rumajogee, et al. 2003).

Studies on comparative costs of conventional and distance based teacher education point to the cost-effectiveness of distance education where the critical mass of students exists. According to Perraton (2010), research suggests that distance education programs for teachers can be developed at a cost between one to two thirds of conventional programs. In Tanzania, for example, the cost per DE successful trainee is half of that for an equivalent residential course. It is argued that although very few studies have been carried out on distance education for teachers and still fewer have compared the teaching effectiveness of both approaches, comparative studies in non-African countries (Sri Lanka and Indonesia) suggest that the distance and conventional modes can be equally efficient for training teachers. In some cases distance based programs are more effective, except in changing attitudes.

In a number of cases the cost data make it possible to draw a direct comparison between open and distance learning and conventional teacher education. They show that, with the relatively large audiences attracted to teacher-education programmes, and high success rates, costs per successful student have often been lower than those for conventional teacher education, giving open and distance learning an economic advantage. While there is significant variation, we can summarise that costs per successful student have been achieved at between one third and two thirds of those for conventional teacher training (Perraton and Potashnik, 1997).

Key Issues in Planning and Implementation of Programmes

Although distance education in the Sub-Saharan African region dates back into the 1970s and in spite of its high potential, its training method has only met with partial success as regards government policy in teaching and organization at the institutional level. Initiatives for enhancing pupils' learning and teacher competencies have generally been implemented before the establishment of national policies. In Mauritius, for example, the use of audiovisual materials and correspondence courses for improving teaching and learning was advocated as early as 1971 when the Mauritius College of the Air was set up before the government's policies on distance education were spelt out more than 20 years later in the Master Plan for Education 2000 and Beyond. However, while the development of a national policy framework for distance education is still envisaged in most countries, Botswana has been one of the few countries which has adopted implementation strategies in line with its national policy to set up pre-tertiary distance education to increase access to educational programmes (Rumajogee, et al. 2003).

In general, with regard to a lack of policy framework, while in terms of pedagogical and professional efficiency on the job training, continuing training through distance education optimizes the opportunity to apply knowledge and skills acquired immediately in classroom situations, in many African countries, distance education is generally considered as a second best or second chance education and in a few cases, as "face-saving" strategy in response to an educational crisis. The long tradition of face-to-face training of teachers has little doubt contributed to the mixed feelings about distance teacher education. Quality assurance of both the products in terms of learning materials, infrastructure, personnel and the process, the face to face with teaching, tutoring and counseling remains the best advocacy for distance based teacher education. Consequently, according to the Teacher Education in Sub-Saharan Africa's (TESSA) evaluation, the quality of the majority teacher education programs using distance in Africa is poor in terms of improving practice (UNESCO, 2004, Rumajogee et al. 2003). In many countries in Africa, teacher education by distance is promoted as an inexpensive quick fix solution without governments realistically budgeting for the high costs of student support and assessments.

A good number of distance teacher education projects have been donor-funded. While such projects have more scope of being innovative in bypassing the inertia of traditional systems and demonstrate the feasibility of distance education, they are quite vulnerable through their dependence to external funding. Their sustainability depends on whether the projects are time-bound and are institutionalized. Furthermore, because so many donor-funded distance education projects tend to be hastily planned to meet urgent demands, they seldom begin with the necessary initial investment in infrastructure or building capacity through the system. Many operate in a crisis mode rather than accordingly to systematically evolved plans. As a result, delivery, administration and support systems have failed in highlighting the necessity for complimentary infrastructure and capacity

building for intermediate field-based structures (Robinson, 1997).

The introduction of ICTs in distance learning has created possibilities for interactive learning and opportunities to provide learner support that takes into account many aspects of learner experiences and needs. New communication technologies, particularly the computer appears to offer exciting possibilities for overcoming geographical barriers. However, the implication of ICTs for education transformation in developing countries are poorly understood and difficult to predict. There is a tendency in the literature for unrealistic assumptions that poor countries will leapfrog to widespread connectivity such that advocacy precedes the demonstration of benefits to learners under realistically available conditions. This problem is sometimes exacerbated by self-reporting of project outcomes and the projection of local findings to continental levels. Current trends seem to indicate that African countries are likely to experience increasing marginalization and dependence when it comes to ICTs, except for a few small pockets of users who can be reliably connected and can act as intermediaries, sharing the benefits of online services. Problems in ICTs include; weak developed national policy contexts, lack of online materials relevant to the African context, low levels of computer literacy, insufficient staff development and training among others (Woherem, 1993).

Summary Conclusions

This paper has shown that a sustainable supply of qualified teachers required to provide quality education for all children in Africa faces very serious challenges which have not been met by the conventional approaches to teacher education. The current need in the supply of teachers has arisen from the upsurge in school enrolments since the 1990s as a result of the commitment by many countries to meet EFA goals contributing to the recruitment of high percentages of untrained teachers. Compounding the low teacher numbers is the high toll on the teaching force by the HIV/AIDS pandemic. All these factors have a contributing role in the low levels of pupil achievement and low rates for pupil completion of primary schooling in many parts of the continent.

It has therefore become increasingly evident that if Africa has to meet the challenge in the supply of adequate teachers required to provide quality education for all the children, it has to emphasise a shift in the conventional approaches to teacher education to distance teacher education which will reach larger numbers of student teachers. The flexibility inherent in distance learning, and the fact that it can be combined with full or near full-time job, makes it particularly appropriate for the often widely distributed force of teachers and school managers and continuous professional development enables teachers to extend existing knowledge and skills and develop new ones.

With well planned teacher education programmes distance learning and teaching however, have a high potential in meeting the demand of qualified teachers in Africa. This calls for African governments to change their negative perceptions about its role and initiate education policies which integrate it in the mainstream education systems in which

case it should not be seen as “the quick fix” to a mammoth problem of supplying teachers. Future programmes ought to be based on feasibility or baseline studies of existing institutions, capacities and decentralization services.

There is need for governments to adopt implementation strategies in line with their national policy on education to set up pre-tertiary distance education institutions to increase access to educational programs. The development of national DE policy frameworks is a crucial step in teacher training/retraining in the light of the changing challenges of distance education, the rise of civil societies and the expansion of trans-national education. In many countries of SSA, new policy guidelines are required on institutional development, organizational structure, capacity building, resource allocation, shared use of expertise and facilities, admission procedures, technology application, intra/inter-institutional collaboration, partnerships with private providers, quality assurance/control, accreditation of courses, credit transfer, award of qualifications and mainstreaming of distance education.

Donor funded projects like other long-term projects, raise questions about sustainability, and yet international experience has demonstrated that open and distance learning can be effectively deployed for teacher education. While it has often been regarded as a temporary expedient, adopted, dropped, and sometimes readopted, the evidence on its effectiveness is in fact robust enough for it to be developed and treated instead as a regular part of national systems of education. Donor funded DE programmes need to ensure their sustainability by being made time-bound and institutionalized. Furthermore, they ought to be carefully planned to meet urgent demands and need to begin with the necessary initial investment in infrastructure or building capacity through the system rather than operating in a crisis mode.

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