

**INCREASING TEACHER QUANTITY AND QUALITY USING SCHOOL-  
BASED ODL INSTRUCTIONAL DELIVERY MODE: A CASE STUDY OF  
TEACHER TRAINING AT EGERTON UNIVERSITY**

Francis N. Wegulo  
College of Open & Distance Learning  
Egerton University, Njoro  
fwegulo@yahoo.com

**Abstract**

Kenya is a signatory to the Education for All (EFA) Declaration, which sets specific targets to be fulfilled by all member countries by 2015. Towards the realization of the said targets, the Kenya government joined other African countries in declaring primary education free for those eligible starting January 2003. This move has prompted unprecedented demand for education across the country, and gender lines. Not surprising, the move has elicited numerous challenges, notably inadequacies with teachers, books, infrastructures and related facilities. At the same time the Kenya government has continued to re-examine the primary school curriculum with a view to making it responsive to the societal values and objectives. These dynamics call for support and contribution from public and related institutions, especially in terms of human resource (teacher) training, as well as professional advice that is critically required for the attainment of the targets. It is in view of this challenge that Egerton University, alongside other public universities in Kenya, embarked on a programme to up-grade the knowledge and skills of primary school teachers. This paper based on a desk review of experiences and policy documentation, describes the approach that has been used by this institution in training of hundreds of primary school teachers, who under normal circumstances may have experienced serious difficulties not only in accessing but eventually acquiring university education and degrees. The approach is christened “school-based”, since the students (primary school teachers) use their school-holiday time to pursue their studies in the sciences, languages, and humanities. This is an innovative approach to ODL, a kind of in-service/continuing education that works to the multiple advantages of the learners, the University, the Kenya government, and the larger community. It is a model worth emulating by countries that are pressed with inadequacies of both capital and human resources, but with targets such as EFA to realize.

## **I. Background and Introduction**

Socio-economic progress and socio-cultural development all over the world has, and continues to depend upon education (Teferra and Skauge). The important role that education plays in the process of socioeconomic and socio-cultural development has been further catapulted by what has been referred to as the "knowledge era". Evidence suggests that the said importance has been well embraced by the developed and with increasing vigour the "emerging economies". The same however, cannot be said about Africa, which by all indications continues to grapple with multifarious problems which particularly confound its education systems.

A critical link in the education-development nexus and more specifically the transition between basic and higher education and related research is teacher education. According to Teferra (2002) teacher education lies at the heart of all development schemes. More than any other sector, teacher education has been known to play a critical role in poverty reduction, economic progress and social and cultural development. Teachers also form a key part in the fight against some of the emerging problems in our times, namely HIV/AIDs and environmental degradation. It is thus not surprising that UNESCO's Education for All (EFA), UN's Millennium Development Initiatives, NEPAD, the Commission for Africa, development partners, funding and monetary institutions all affirm the critical importance of education and the role played by teachers.

More than any other stakeholder, teachers play a key in the education-led development process. This role was accurately captured by the former UN Secretary Kofi Annan in his inaugural re-launching remarks during the Partnership for Higher Education in Africa in September 2006. Said Annan:

"We need to train teachers and build up research capacity; we need to strengthen open universities and distance learning programmes. And we need to ensure that African institutions have access to the latest technologies."

Whilst the vital importance that teachers play has been well recognized, teacher education has continued to be treated, in the language of (Teferra and. Skauge 2002). as

“a step-child” of the education sector. The actions taken so far in terms of educational research, knowledge production and publication on teacher education have been poor. More importantly, teacher education has not attracted adequate policy attention commensurate with its importance in the development process.

These challenges, however, do not and should not detract us from pursuing the goal of increasing the quantity and quality of teachers. This is because teachers as shown above are central to the socioeconomic transformation that our nations in SSA desperately need. In a paper by Dladla and Moon (2002) the authors present two interrelated arguments; one is that the nature and quality of teacher education and training is a key element in the expansion educational systems needed to achieve universal primary education (UPE). The second is that the existing institutions of teacher education mostly created in the mid years of the nineteenth century will be unable to meet the needs of the twenty first century. These arguments hold ground for virtually every country in Sub-Saharan Africa, and suggest radical changes in the training of teachers..

It is thus clear that there is urgent need to increase the supply of adequate numbers of quality teachers required to provide quality education in Africa. This noble objective is, however, faced with serious challenges. According to Anamuah-Mensah and Erinosh (2002), these include but are not restricted to the following. First, is the tremendous upsurge in school enrolment since the 1990’s following the global declaration on “Education for all” and the Millenium Development Goals, and the related adoption of the policy of Universal Primary Education (UPE).

Second, teacher numbers across most Sub-Saharan countries are generally too low, and pupil-teacher ratios very high (for instance, the median PTRs are 43 in SSA in comparison to 14 in developed countries. In addition, education systems face the problem of inadequate teacher qualifications and training. UNESCO (2000) argues for instance, that large proportions of primary school teachers in developing countries lack adequate academic qualifications, training and mastery of content.

Inadequacies in teacher numbers is further compounded by the high turn over which is

occasioned and exacerbated by the increasing trends in emigration of teachers to more lucrative jobs, and the impact of HIV/AIDS which has everywhere taken a heavy toll on the teaching workforce. Estimates indicate that 860,000 pupils in SSA lost their teachers to HIV/AIDS in 1999, and that 260,000 teachers could be lost to the pandemic in the present decade (UNICEF 2000).

It is further argued that budgets in many developing countries have not adequately responded to these trends in terms of increasing allocations commensurate with expansion in teacher training in such a manner as to match and or cope with school expansion. Moreover, lack of resources has constrained untrained teachers' in terms of allowing them time off their teaching schedules for training.

What therefore is the way forward given the above scenario? In a paper "Teacher Education Beyond University Four Walls" Anamuah-Mensah and Erinoshio (2002) argue that if Africa is to meet the challenge in the supply of adequate teachers required to provide quality education for all children, then it must emphasize a shift in the conventional approaches to teacher training. The authors suggest moving the university out of its four walls to reach larger audience. Open and distance Education offers the way out for teachers to receive higher education and/or upgrading of their professional status as well as a flexible pathway to teacher training without causing interruptions in the school system. One approach which seems to be attractive across many countries in Africa is the "school-based".

In corroboration, Dladla and Moon (2002) in a paper entitled "Challenging the assumptions about teacher education and training in Sub-Saharan Africa: a new role for open learning and ICT", argue that School-based is essential for all teachers. The unqualified and under qualified clearly need training opportunities. The authors argue further that the qualified need career-long opportunities, not least to understand how but to implement the new curriculum policies being pursued by most countries. Indeed, in the primary sector the increasing emphasis on literacy, numeracy and a range of life skills is making new demands on teachers. In this regard, they suggest six key elements that must be included:

- The need for a clear articulation of the expected outcomes of training with a clear focus on the improvement of classroom practice.
- School based support from more experienced educational staff
- Clear assessment and quality assurance structures so that the teachers know what they have to do and the system is self-monitoring in terms of effectiveness.
- Material resource support that explicitly guides the teachers in trying out and experimenting with improved strategies within the classroom.
- School and principal guidance to ensure that teacher training contributes not just to individual performance but to school improvement as a whole.

## **II. The Challenge of Education in Kenya**

Like in other countries, the Kenya considers education and training as fundamental to the success of its overall development strategy (RoK 2005). The long-term objective of the government is to provide every Kenyan with basic quality education and training. Further education aims at enhancing the ability of Kenyans to preserve and utilize the environment for productive gain and sustainable livelihoods. In addition, development of quality human resource is central to the attainment of national goals for industrial development. Moreover, the realization of universal access to basic education and training ensures equitable access to education and training for all children. Education is also seen as a requirement for the development and protection of democratic institutions and human rights.

These objectives have been underscored by education policies enunciated through Commissions Committees and Task Forces established by the Kenya Government from 1964 a year after independence through to 2000 (c.f. The Ominde Report, 1964; The Gathachi Report, 1976; The Mackay Report, 1981; The Kamunge Report, 1988, and the Koech Report, 2000). The thread that runs through these reports is the desire to have education playing specific and concrete functions towards societal transformation. These reports therefore underscore the core values of education for national unity, human resource development for economic and social transformation.

The current policy thrust in education in Kenya is to achieve EFA in order to give every Kenyan the right to education and training. It is the Government's expectation that this goal will be achieved through provision of an all-inclusive quality education which is accessible and relevant to Kenyans. This policy goal is in tandem with the Economic Recovery Strategy (ERS). The latter is a framework that provides a rationale for major reforms in the current education system in order to enable all Kenyans to have access to quality lifelong education and training.

In pursuant of EFA the Narc Government in 2003 declared primary education free starting with standard One. This move ushered in tremendous hope especially among the poor households whose children had been closed out of formal education given the high cost of schooling. In doing this the Kenya government was signaling its intention to abide by the declaration it had signed against the backdrop of the EFA, and the Millenium Development Goals. However, as it has turned out to be, this decision has ushered in a host of challenges, not least of which are: inadequate space and facilities, inadequate teachers to cope with increased pupil numbers, insufficient learner support. The combined effect of these problems has been a decline in the quality of learning, especially among public primary schools where these problems have been most felt.

The Kenya Government is well aware of these challenges as evidenced in the Sessional Paper No. 1 of 2005 (RoK 2005 p.12). It is clearly admitted here that "the sector (education) still faces major challenges especially access, equity, quality, relevance, efficiency in the management of educational resources, cost and financing of education, gender and regional disparities, and not least teacher quality and teacher utilization.

Part of the solution to the challenges mentioned lie in the provision of Open and Distance Learning programmes. About fifty thousand Secondary School leavers qualify for university admission annually in Kenya. However, public universities admit about ten thousand students. A similar number joins private universities, which however experience serious limitations in physical facilities such as laboratories, capacity of lecture halls and in some cases accommodation. Admission into distance learning programmes is not subject to these limitations hence would expand access to higher education at a more

affordable cost compared to residential programmes.

In the particular case of teacher education, distance learning has the potential to raise the number of teachers trained annually and thus contribute to raising the number of qualified teachers desperately needed. This also provides an alternative pathway to initial teacher education and would improve the quality and access to education. These suggestions are of course underpinned by appropriate investment by Universities in desirable and relevant technologies such as e-learning as well as other media teaching approaches, including print and audio-visual to support distance learning programmes.

It is in the context of the said limitations that the initiative by The African Development Bank (ADB) is most welcome. The Bank is in the process of funding Teacher Education through Open, Distance and e-Learning (ODEL) in 10 African Countries, Kenya included. The objective is to enhance the capacity of teachers in the use of Information Communication Technology (ICT) in the teaching and learning of mathematics and science. Indeed, distance learning education programmes are a panacea to the challenges facing teacher education in Africa today and in the future.

### **III. Teacher Education in Kenya and Experiences from Egerton University**

The training of teachers in Kenya is undertaken at three different levels: Certificate; Diploma and at Degree levels Teacher training programmes include Pre-service, In-service and professional development of teachers at all the three levels. Those qualifying with at certificate level end up teaching in primary schools while those qualifying with diploma and degree are recruited to teach in secondary schools.

Currently Kenya has twenty one (21) Public Primary Teachers' Colleges and four (4) Diploma Colleges. There are also nine (9) private Primary Teachers' Colleges. Graduate teachers are trained in the Faculties of Education in nearly all public and in some private Universities.

Admission into the 2-year teacher education programme is open to students who have a

pass at Kenya Certificate Secondary Education (KSCE). Trainees are exposed to all the academic subjects taught in Primary Schools and are expected to teach all of them upon successful completion of their course. Students admitted into the three (3) year Diploma and four (4) years Degree teacher education programmes, specialize in one or two teaching subjects.

Institutions that award teaching certificates and diplomas are controlled by Ministries of Education or Government agencies. These institutions lack flexibility in admission criteria, teacher education curriculum design and assessment procedures. These limitations have potential to negatively impact quantity as well as the quality of teachers. University based-teacher education on the other hand is more flexible owing to the autonomy of Universities in deciding on admission criteria, teacher education curriculum and assessment procedures. Undergraduate teacher education programmes take four years, Diploma take 3 years and certificate courses take 2 years in Kenya. The length of teacher education influences the supervision of student-teachers during practicum, curriculum to be covered, and the training process (Avalos, 1991).

Egerton University is one of the 7 public universities in Kenya, and a major player in the training of teachers. In the past teacher training was focused on producing secondary school teachers. However, the accelerated demand for teachers at the primary school level has prompted an expansion in demand for primary school teachers. In addition, there is the emerging concomitant requirement for quality and relevance which place demands for re-training and equipping of teacher in new content and skills.

Broadly teacher education seeks to contribute towards the following objectives: improvement of the general educational background of trainee teachers, increase the knowledge base and broad understanding of the subject matter of the trainee teachers, increase of the pedagogy skills, provide a deeper understanding of the pupils, improve on instructional skills and thus contribute to better and effective learning. Teacher training also seeks to contribute towards the development of practical skills and competencies of the trainees. These objectives are achieved through the following programmes: Bachelor of Education, Bachelor of Education (Science or Arts), Bachelor of Science in

Agricultural Education and Extension, Diploma in Agricultural Education and Extension, and Postgraduate Diploma in Education (PGDE). Each of these programmes is briefly discussed below.

(i) Bachelor of Education (Primary Option)

This is a unique programme in Kenya in that it is the only teacher education programme that prepares graduate teachers for primary schools. This programme is designed to last for the equivalent of four (4) academic years and seeks to prepare graduate teachers for teaching at the primary school. Teacher trainees are expected to specialize in either of the following four options: Mathematics, Science and Agriculture, Languages (English or Kiswahili) or Social Studies. This programme is designed to prepare an efficient and effective primary school teacher, leader and manager capable of adapting to the ever-changing environment. The programme prepares the students to think deeply in the practice of their profession and exploit opportunities for further education and training.

The programme is currently offered in a semi-distance education mode. They also cover some of the work on their own during the school term. This mode is now termed a School-Based Teacher Education Programme. The teacher trainees attend lectures (face-to-face) during the school holidays in April, August, and December. This school-based programme was started as a transitory phase towards launching fully-fledged distance education programmes.

The College of Distance Education (CDE) is at an advanced stage in developing learning materials for this programme. Since its inception in 2002 it has attracted well over 1500 Primary School Teachers who hold Primary One (PI) Teaching Certificate. For the first time in Kenya this programme allows primary school teachers to specialize in either one or two subjects. This is a most welcome departure from the traditional training in which primary teacher trainees do not have the opportunity to specialize. It is expected that such specialization will greatly contribute towards raising the quality of education in primary schools.

Enthused by quality of the first product, Teacher Service Commission (TSC), the major

employer of teachers in the public schools, has recently recruited some of the initial crop of graduate from this programme to boost its inspectorate and supervisory divisions for ensuring quality in the teaching and management of schools.

(ii) Bachelor of Education (Science or Arts)

This is an undergraduate teacher education programmes in which students take four years of study and specialize in two teaching subjects in either Sciences or Arts. They also study all the professional components of teacher education. These programmes equip the trainees teachers with appropriate technical and professional knowledge, skills and attitudes in either Sciences or Arts thus enabling them to teach two academic subjects in Secondary Schools, Teacher Training Colleges or work in the Ministry of Education Science and Technology (MOES & T) departments. Some primary school teachers with the necessary credits from KSCE are eligible for admission in this programme.

(iii) Bachelor of Science in Agricultural Education and Extension

This programme prepares teachers of agriculture for Secondary schools and Extension Staff for a period of four years. Students study content in Agriculture, basic Sciences, Professional courses in Education and Extension. Egerton University is the only one offering this degree programme in Kenya and has attracted students from many other parts of Africa. This programme equips trainees in technical and professional knowledge, skills and attitudes in both agriculture and extension. It enables them to teach agriculture and biology in Secondary schools, Institutes of Agriculture and carry out research and plan and execute extension programmes.

(iv) **Diploma in Agricultural Education and Extension**

The diploma programme is a three year training that seeks to equip teacher trainees with competencies in the following area:

(a) Teaching Agriculture and Biology in Secondary Schools and other Tertiary Institutions.

- (b) Planning and executing Agricultural Extension Programmes.

In addition, the programme lays a foundation for those they may wish to pursue further education in Agriculture, Agricultural Education and Extension at bachelor's level.

- (v) Postgraduate Diploma in Education (PGDE)

Students who hold a BA or B.Sc. degree and who wish to teach in Secondary Schools are admitted to the University's Faculty of Education and Human Resources to undertake a one year Diploma in Education Programme. The course covers professional education courses including Educational Foundations, Educational Psychology, Educational Management, Curriculum Theory, Design and Development, Instruction and Research Methodology.

#### **IV. Challenges and Implications**

Egerton University has been training primary and secondary school teachers on the school-based model for the past six (6) or so years. So far two cohorts of trainees have graduated and been re-absorbed into the teaching or administrative echelons of the Ministry of Education, Science and Technology. In this section we examine the experiences gained and the challenges for the future.

We observe in the first instance that if well coordinated the School-based model can significantly contribute towards increase in the quantity and quality of teachers. It is important to note that there is a large pool from which to recruit potential trainees. Many of these ended up training at PI Certificate level mainly because of the limited space in both public and private universities. The response from primary school teachers desirous of increasing their knowledge and skills is enormous. This is fueled partly by the desire for university education, as much as better remuneration and better conditions of service for those who successfully go through degree work.

Having stated this, it is noted that for the time of its existence, the School Based programme has tended to rely rather too heavily on the model and structures used in the

traditional pre-service teacher training approaches (Dladla and Moon 2002). For instance, translating a 45 credit hour course into a school based model has presented a number of logistical problems. Attempts to overcome this hurdle at Egerton have included use of compulsory and voluntary consultations as well as take-home assignments to make up for the “lost” time.

It is further observed that the knowledge that teachers bring in from their teaching experiences is not adequately incorporated in the planning and design of courses they undertake in their university training. Instead there has been a tendency for Universities, Egerton included, to indiscriminately apply their conventional university based courses to school based courses. Trainee teachers have enormous experience that should be recognized and built upon at the University level.

A related challenge relates to relevance of the materials used for teaching. Far too often, educational theory or subject matter is taught without making it meaningful to the daily task of the teacher. This is another opportunity lost in building upon the teacher experience and increasing the relevance of the programme.

Further it is observed that there have not been enough efforts geared towards increasing the range of media choices available for training teachers. Limitations associated with ICT have precluded use of computer based media in increasing access and improving on the quality of teaching. According to Filip (2000), 53 countries in Africa have access to the internet but with confinement to the capital cities. The Africa ratio of 1:5,000 internet users compares poorly to the 1:40 worldwide ratio, 1:6 ratio in Europe and North America. Moreover the average total cost of using a local dial-up internet account for five hours a month in Africa is about \$ 60 without telephone rental. Internet Service provider (ISP) charges vary greatly between \$ 10 and \$100 per month reflecting different levels of maturity of the markets, the presence or absence of competition, varying tariff policies, and different national policies on access to international telecommunications bandwidth (Dladla and Moon 2002).

## **V. Summary and Conclusions**

There is no doubt that the School Based model represents an innovative approach in using limited resources to contribute towards increased numbers of teachers and in raising the quality of their training. Egerton University and other universities keen on training teachers using this model will do well to seriously consider these challenges as they plan for the future. In designing the curriculum for the primary school teacher serious efforts should be taken in incorporating the knowledge, skills and experiences of the trainee teacher. In addition, the training will greatly benefit from use of valuable learning materials available on the internet. Universities should therefore work closely with relevant government ministries and private sector organizations to make available affordable and reliable internet services to the trainee teachers.

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