

A paper

on

'Issues and Challenges on Education in Africa – the need for a new 'Teacher' :

Case of University of Nairobi's Initiatives in Meeting/Addressing the Challenges'

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## **Introduction**

This paper considers Teachers' Training as critical in making the teacher capable of handling the teaching tasks and challenges which include imparting knowledge, skills and moulding the attitudes of their learners in a changing Educational environment. Their quality would depend on the nature of training they are given that would enable them cope with the demands in their work situation. At times they would require retraining or inservicing to enable them cope with the changing demands in the subject content and pedagogical skills or higher enrolment that would call for more teachers or innovative ways of handling large classes. This paper outlines the challenges to teachers in Kenya and how they have been addressed through the initiatives in Teachers Education undertaken by the University of Nairobi over the years.

## **Policy Changes and Resulting Challenges**

After independence in 1963 there was emphasis on education as was recommended by the Kenya Education Commission Report in 1964 and reflected in the First Development Plan 1966 to 1970. This resulted in opening more schools and higher enrolment in the schools. To meet the teaching demands in the primary schools the government employed untrained teachers who had academic qualifications ranging from Kenya Primary Certificate holders to -0- Level holders but with no pedagogical skills other than what they remembered of their teachers.

At the same time those who were trained with only primary level certificate for lower primary were required to teach subjects in upper primary. This created need for in service training for untrained and upgrading of lower cadre of trained teachers by giving them academic content so as to produce the new required teachers in the class.

The second challenge followed declaration of eradication of illiteracy in December 1978 which resulted in employing school leavers to teach adult classes which require very specialized methods that the school leavers had no knowledge of.

There was need therefore, to train these young people to equip them with skills to teach and handle adults.

The third challenge followed the declaration of Free Primary education in in upper primary in the early 1980s. This increased enrolment and called for more teachers when the output at that time from all Teachers Colleges was only 6000 teachers. The government decided to employ nearly 40,000 untrained teachers to meet the need in the schools. This situation resulted in the second phase of Primary Teachers Inservice course in 1982 which was met by the University of Nairobi's initiative of mounting Inservice programme in collaboration with the Ministry of Education to train these recroutes to enable them perform their duties as teachers in the classroom.

The fourth challenge was the result of using Diploma holders who were being deployed to senior classes in secondary schools yet they were trained to teach in lower secondary classes only. This situation was addressed by the University of Nairobi which mounted External Degree programme whose details will be discussed later in this paper.

The fifth challenge came from the declared Policy statement in the Sessional Paper No 1 of 2005 on A Policy Framework for Education, Training and Research which observed that Primary Teacher training programme is organized in such a manner that cannot produce a competent teacher in any of the seven subjects they take at the college..

Lastly is the concern of inadequacy of science teachers and poor performance of science and Mathematics in the schools by the stakeholders. This challenge has been taken up by African Virtual University in collaboration with universities in ten African countries (Kenya, Uganda, Tanzania, Zambia,Zimbabwe, Ethiopia, Ireteria, Sudan) financed through African Development Bank.

### **The University of Nairobi's Initiatives in Addressing the Challenges**

These challenges called for retraining or inservicing the teachers who were already in employment and cannot leave the classroom for further training in convention Teacher Training institutions. The purpose is to produce the new 'teacher' for the emerging situations and challenges. This has led to the use of distance education to address these developmental issue of improving quality of teachers in the schools as well as giving opportunity for preservice teacher training. The training would be concerned with subject content development and pedagogical skills

The University of Nairobi has been able to address these challenges over the years using distance education mode from 1967 to date.

The first distance education programme established in the University of Nairobi in 1967 was Primary School Teachers Inservice programme. The training was financed by a grant from USAID through the Ministry of Education and technical support too. The first task /objective was to upgrade Primary School Teachers Grade III by giving academic tuition through correspondence and limited face to face support to prepare them for Kenya Junior Secondary Examination. On passing the required five subjects they were promoted to Primary Teacher Grade II which is generally known as P2. Such teachers were able to teach effectively having been improved academically through the inservice..

The second objective of the Primary School Teachers In-service programme was to provide professional training for untrained Primary School Teachers so that they can be qualified teachers of different grades depending on their academic qualification at registration time for the training. With professional training they were able to meet the new classroom challenges.

The teacher/training in these programmes involved a collaborative arrangement of three institutions: Correspondence Course Unit of the University of Nairobi which prepared

the self-instructional print materials, Kenya Institute of Education which prepared radio programmes and Primary Teachers Colleges which provided face to face tuition especially practicals in Science Subjects and Teaching Practice.

This programme resulted on development of both print and audio materials and human resource development in distance education practices.

By 1994 when this first phase ended, approximately 11,000 teachers had been trained.

The second Challenge of training School leavers who had been employed to teach adults in 1979 was addressed by developing training materials which were distributed to learners' Districts where they collected them as they went for their salaries. They were also provided with limited residential session and field support by departmental officers. It was financed by the Ministry of Culture and Social Services where the Department of Adult Education was located. Most of the literacy teachers had secondary education except for a few recruited from the marginal areas in Eastern and North-Eastern Provinces. The trainees were examined by the Kenya National Examination Council and awarded Adult Education Teachers Certificates which were equivalent to Primary School Teachers Certificates P1 or P2 or P3 based on their academic entry levels.

The third Teachers Education Challenge was due to the declaration of Free Primary in the Upper Primary classes. This policy led to the employment of untrained teachers to cope with higher enrollment in upper primary. The 1<sup>st</sup> enrollment of this category in December 1982 had 3,500 untrained teachers. They graduated in 1985 leading to the second intake of 5,000 In service Teachers. The breakdown by grades and gender was as follows.

**Table 1 1885-1988 in-service teachers enrolment.**

<b>Grade</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
P I	1108	510	1618
P II	1808	919	2727
P III	275	313	888
<b>TOTAL</b>	<b>3191</b>	<b>1742</b>	<b>4933</b>

The third intake of 5857 trainees who were enrolled in December 1988 was the largest intake in the in-service programme.

The distribution of this particular group was as follows:

**Table II 1988-91 In-service Teachers Programme**

<b>Grade</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
PI	1503	818	2321
PII	1940	1068	3008
PIII	280	242	522
<b>TOTAL</b>	<b>3723</b>	<b>2128</b>	<b>5851</b>

The materials developed in academic subjects were used to offer academic continuing education to people who wanted to sit Kenya Junior Secondary Examinations.

The fourth Challenge that Kenya has faced is upgrading diploma holders to degree level. Specific challenge was that teachers who were trained to teach the junior classes at secondary were required to take upper classes to 'O' level. This was addressed by launching of the External Degree programme of Bed. Arts, in 1985 by the University of Nairobi. This programme was sponsored by Overseas Development Agency (ODA) which provided resources for local training ,print materials and Audio cassette production through the British Council. Audio cassette blanks, equipment for recording and dubbing of programmes for the student were also provided through this British assistance.

It also provided technical assistance for post graduate training at master's and short courses in United Kingdom in different aspects of distance education delivery. This enhanced the capacity of staff of the Faculty of External Degree Studies to undertake the the courseware development and running of the degree programme by distance mode.

As in the other earlier programmes of the College the teaching systems comprised the printed self-instructional study materials as the main medium of instruction supported by audio cassettes developed for all course units and limited face to face tutorials during the residential sessions.

The writers of the instructional materials were recruited from internal subject departments with competence in their own subjects. However, they were given orientation training on writing self-instructional materials and developing audio materials for distance learners.

The main areas that the training programmes for printed materials were concerned with involved the following:-

- Overview of distance education
- Characteristic of distance learners and their implication to writing
- Objective writing and their role to students and writers
- Unpacking the syllabi for Course Outline I development
- Content presentation focussing on language and providing for interaction in the module
- Reviewing and editing and
- Sharing characteristics of good self instructional study materials.

Those trained were able to apply the techniques given to them in writing self-instructional modules in their subject areas. The subjects in the B.Ed (Arts) degree programme were as follows:

- Educational Foundations,
- Educational Administration and Planning,
- Educational Communication and Technology,

- Educational Psychology
- Geography
- History and Government,
- Linguistic,
- Kiswahili,
- Literature in English,
- Philosophy and Religious Studies, and
- Mathematics,
- Business Studies and
- Economics.

The second aspect of the teaching system was made up audio cassettes which were developed for every unit and supplied to all students registered in the programme. The planned specific roles of the cassette programmes were that they may serve the student in one or more of the following:-

- Introducing the course units to the students in addition to what they get in the residential sessions.
- Highlighting important aspects of the subjects treated in the units
- Providing concrete examples or case discussions and
- Addressing specialized areas that print cannot present satisfactorily

To facilitate the script writing for audio cassettes, the subject experts were given basic training in writing for the ear.

The training of the academics who were to write the audio scripts and accompanying frames included the following areas:

- Role of audio materials in the instructional process.
- Techniques and Styles involved in the writing for the ear.
- Process of scripting content for audio cassette production.
- Role of frames in audio cassette use and
- The specific roles that the cassettes were to serve in the specific course units.

The script were produced and recorded by experts to meet the National Broadcasting requirements and distributed to the students as per subjects they were registered in.

The third aspect of the Teaching System as mentioned earlier in this paper is face to face instruction during residential sessions. There were three sessions per semester and each focuses on the following aspects respectively:-

- Introduction of the courses by the course lecturers/tutors by highlighting the key aspects.
- Further tutorials on courses at the middle of the semester and
- Revision towards the end of the semester before the examinations.

The programme was designed to take a minimum of six years and a maximum of ten years. It admitted 604 students during the 1<sup>st</sup> intake in 1985. By 1992 a total of 258 students satisfied the Examiners for the award of the 1<sup>ST</sup> Bachelor of Education (Arts) Degree of the University of Nairobi by distance mode.

The 2<sup>nd</sup> intake in 1995 admitted 1580 out of whom 1374 registered for the B.Ed course.

By November 2000 the first group of 191 from this number satisfied the Examiners for the award of B.Ed Arts degree of the University of Nairobi.

The rest of the students graduated in subsequent years as soon they completed the required courses as the programme allows students to move at their own pace.

The total current enrolment in this programme in September 2009 is approximately 3200 students in B.Ed.Arts, 300 in B.Ed Science and 30 in Postgraduate Diploma in Education.

The table below shows graduation of students in this programme in the last ten years.

NUMBER OF GRADUANDS 2000 TO 2008				
DEPARTMENT OF EDUCATIONAAL STUDIES				
GRADUATION	B.ED (Arts)	B.ED.(Sc)	PGDE	TOTAL
28 <sup>th</sup> Graduation (11/11/2000)	191	-	54	245
29 <sup>th</sup> Graduation (26/11/2001)	341	-	42	383
30 <sup>th</sup> Graduation (04/11/2002)	53	-	22	75
31 <sup>st</sup> Graduation (07/05/2004)	320	-	46	366
32 <sup>nd</sup> Graduation (11/03/2005)	174	-	13	187
34 <sup>th</sup> Graduation (09/12/2005)	265	-	17	282
36 <sup>th</sup> Graduation (01/09/2006)	284	-	22	306
37 <sup>th</sup> Graduation (07/09/2007)	536	-	23	559
39 <sup>th</sup> Graduation (17/10/2008)	1551	45	16	1612
40 <sup>th</sup> Graduation (19/12/2008)	39	12	2	53
<b>TOTAL</b>	<b>3754</b>	<b>57</b>	<b>257</b>	<b>4068</b>

The study materials developed for this B.Ed programme helped in the development of Bed Arts at Makerere University in Uganda, Post graduate Diploma in education at the Center for Distance Education of the University of Zimbabwe in 1992 which has developed to a full Open University of Zimbabwe. The greatest use of these materials was seen at the Open University of Tanzania where materials were adopted and used in the establishment of four degree programmes and a postgraduate diploma namely B.Ed (Art), B.Com (Ed), BA, B.Com and a Post graduate Diploma in Education.

Following the concerns expressed by the stakeholders in education of fewer teachers of Science and poor performance in Mathematics and Sciences at Kenya Secondary Certificate Examination, the University launched a Bed(Sc) degree by distance mode in 2003. This was done through collaboration between the School of Continuing and Distance Education (SCDE) and Faculty of Science at the College of

Biological and Physical Sciences within the University of Nairobi.

The teaching subjects in this programme are Mathematics, Physics, Chemistry, Meteorology, Biology, Geology and Geography.

The subject experts were given orientation on writing for distance learners by the staff from the School of Continuing and Distance Education and the Centre for Open and Distance Learning. A total of 87 course modules have been developed. These are supplemented by Education materials developed for BEd(Arts). A total of 54 students were admitted in 2003 and 45 of them graduated with Bachelor of Education (Science) degrees in the 39<sup>th</sup> Graduation (17/10/2008) ceremony of the University of Nairobi.

Another initiative of the University to meet the teacher education challenges was its submission of its bid to the African Virtual University Management Board justifying its ability to be the lead institution for coordinating African Virtual University initiative of mounting Science, Mathematics and ICT, Teacher Education Programme for the universities in 10 African countries. The University of Nairobi was awarded the task of coordinating the development of the courses and implementation of the programme in the participating universities.

Currently the materials which have been developed by academics from the participating universities are under trials. Facilities for disseminating materials on-line have been put in place at the College of Education and External Studies of the University of Nairobi.

This is a further indication of the University's initiative of meeting the teacher education challenges not only in Kenya but in East and Central Africa Region.

With declared policy of the country as contained in the Sessional Paper No. 1 of 2005 on A Policy Framework for Education, Training and Research that education delivery should embrace ICT, the University has developed a platform for on-line delivery known as Wedusoft.

Through the Center for Open and Distance Learning in collaboration with e-learning unit of the School of Computing and Informatics University of Nairobi has embarked on converting the instructional materials in its programmes to e-learning mode. The table below shows by degree programmes the e-learning materials already developed and available on-line and off-line and those in progress which will be on line October 2009.

**Summary of e-Learning Materials**

<b>Programme</b>	<b>Uploaded e-Learning Units</b>	<b>In Progress</b>	<b>Total</b>
BA+B.Ed Arts	78 Common Units	53	131
B.Com	40 Units	24	64
B.Ed Sc + B.Sc	61 Common Units	-	61
<b>Total 5 Degree Programs</b>	<b>179 Units on-line&amp; Off-line</b>	<b>77</b>	<b>256</b>

**Conclusion**

From the discussions above it is evident that University of Nairobi has addressed the Teacher Education Challenges with definite outcomes. These initiatives have resulted in the following outcome:

Primary Teachers In-service programmes conducted between 1967 and 1985 resulted in nearly 40,000 teachers obtaining professional and academic qualifications that enabled them to be more efficient in the classroom and handle higher classes.

The Literacy Teachers In-service programme enable 3500 Literacy Teachers to obtain professional certificates in the teaching of adults and management of literacy programme.

The undergraduate programme of B.Ed Arts has made good contribution by producing approximately 4500 qualified teachers with the current enrolment standing at 3200 students distributed over the six levels of the course.

The B.Ed Science has graduated 57 teachers from their first intake and approximately 300 students are currently enrolled in the B.Ed. Science programme.

These initiatives have produced a large pool of experts who have been used in expanding distance education locally and beyond in Uganda,Tanzania,Botswana, Swaziland,Zimbabwe and establishment West African Distance Education Association.

In addition the course materials have addressed Teacher and Higher Education

Challenges in other institutions like B.Ed Arts at Makerere University, Post Graduate Diploma in Education at the University of Zimbabwe and B.A., B.A. Education, B.Com, B.Com. Education and Post Graduate Diploma in Education at the Open University of Tanzania where the materials were adopted for offering degree programmes. It should be possible too for Kenya to use the capacity in the University of Nairobi to facilitate the Establishment of a National Open and Distance University as they have done in other countries.

Finally it would be concluded that distance education would not only address challenges in teacher education but would address challenges of access and equity in education as a whole due to cost effectiveness when applied in large scale. To this end the University of Nairobi has established three non educational degrees namely Bachelor of Science, Bachelor of Commerce and Bachelor of Arts all being offered by open and distance learning modes through the collaboration of the Centre for Open and Distance Learning and the relevant Schools and Faculties where these degrees are offered.

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