

## TEACHER EDUCATION AND THE CHALLENGES OF THE 21ST CENTURY:

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### INTRODUCTION

It is a fact that no educational system can rise above the quality of its teachers, and that no nation can rise above its teachers. Infact. another trusim is that whatever a people, community or nation desires it must first put in the schools. Furthermore it is said that education unlocks the door to modernization but it is the teacher who hold the key to the door. If the child is the center of the educational system, then the teacher is the pivot of the entire educative process in which the child will be exposed. Therefore, the teacher is a key agent in societal transformation.

The main focus of this paper therefore, is an examination of how teacher education can respond to the chaNging scences of disciplinary knowledge, and skills as well as the type of schools which the teacher will work in 21st Century. To achieve this objective, the paper will describe the concept of teacher education, the process of teacher preparation and forecast into the 21st Century.

The concluding part will provide alternatives for teacher education which could equip the perspective teacher to changes in the 21st Century.

### THE CONCEPT OF TEACHERS EDUCATION

Teacher education has been defined in various ways. But for the purpose of his paper, the term "teacher" is used to mean a person assigned to work in schools with the responsibility of providing education for learners. Thus, "teacher education" refers to the structure, institutions, and processes by which men and women are prepared for work in schools for the purpose of imparting knowledge, skills and favourable attitudes. In other words, teacher education is a form of education which is carefully designed to prepare and groom those who teach or will teach or will provide relevant professional service to our schools and colleges.

Kutz and Rath (1985) defined teacher education programme as:

*"A set of phenomena deliberately intended to help candidates acquire knowledge, skills, dispositions and norms of teaching occupation"*

To Fafunwa (1972) teacher education means a set of educational activities and experiences designed to equip a prospective teacher with the skills, competences, knowledge and disposition which help to develop his personality as well as making him a competent teacher.

It is in this context that Plato in the *Republic* described teacher as “a noble act undertaken by noble citizens for the purpose of building a state with knowledgeable people”. Two thousand three hundred years after Plato, Taiwo (1994) and Hallack (1990) confirm the depth of knowledge of the teachers.

We can therefore, assert that teacher education is essentially the training and production of would be teachers encompassing the production of pre-primary, primary and secondary school teachers. It is a preparatory programme designed to equip would be teachers with knowledge, skills and attitude before assuming the role of professional teacher. It covers duration and is aimed at improving both the academic and professional quality of the would be teacher. The education of the teacher therefore, places him or her on points higher in knowledge, attitude and skills than the learner.

### **PROCESS OF TEACHER PREPARATION**

To properly understand the process of teacher preparation in Nigeria, we need to identify the objectives of Teacher education. The National policy of Education in section 58 (e) outlines what the purposes of teacher education should be:

- (a) To produce higher motivated, conscientious and efficient classroom teachers for all levels of our educational system.
- (b) To encourage further the spirit of enquiry and creativity in teacher.
- (c) To help teachers fit into the social life of the community and society at large and to enhance their commitment to national objectives.
- (d) To produce teachers with the intellectual and professional background adequate for their assignment and to make them adoptable to any changing situation, not only in the life of their country, but in the wider world.
- (e) To enhance teachers commitment to the teaching profession.

Furthermore, the same document section 59 sub-section (1) states that all teachers in our educational system, from pre-primary to University, will be professionally trained.

The question then is, what policy provisions have been made in order to realize the noble teacher education objective? The National Policy on Education outlines the curricula which Teachers Colleges should pursue so as to attain the objective of Teacher Education. The following are the component for the production of teacher at primary and junior secondary levels.

- (a) General Studies (*Basic Academic Subjects*).
- (b) Foundation studies (*principles and practice of Education*).
- (c) Studies related to the students intended field of teaching (*e.g English, History, Mathematics etc*).
- (d) Teaching Practice.

The general studies component has been spelt out for the primary level to consist of :-

- (1) Social studies
- (2) Mathematics
- (3) Language
- (4) Cultural and creative arts
- (5) Health and physical Education
- (6) Religious and Moral Education
- (7) Science

such a programme can not produce effective primary school teachers that do not use the concept of specialist teachers.

The new approach to teacher education preparation for the primary school levels should therefore focus on the skills and knowledge required to teach only at this level. Since primary education is the central object in the education for all concept, with emphasis on literacy, numeracy and life skills, the teachers of these pupils should therefore, be sufficiently prepared both in content and pedagogic processes. The NCE programme in Colleges of Education should be strengthened to prepare the teachers for the role of giving literacy, numeracy and basic life skills to our children. This could be done by rich and suitable content in life skills and also course in life skills methods. Both courses should reflect knowledge in the science, home-economics and social studies. While the life skill methods should be devoted in the process of how the teacher could teach the school children life skills topics.

More importantly, the skill of Teaching of production improvisation should be given greater attention in the teacher since the problem of inadequate facilities, lack of materials and absence of pedagogical support will persist in our Colleges of Education. The focus should therefore be how to produce teachers who will be more resourceful in their primary assignment.

Preservice of primary school teacher should generally be blend of general studies in the four basic areas of primary education namely:-

- (1) Language Arts.
- (2) Social Studies.
- (3) Science and
- (4) Mathematics with a more indepth study of one of them.

At present, and apart from few Colleges of Education, the degree programmes in education for the production of Secondary School teachers are undertaken in the University Faculties of Education. According to Ukeje (1995) Universities in Nigeria are not adequately equipped to produce effective first degree holders in education. He further went on to identify the areas of defects in the production of teachers for the secondary level by University Faculties of Education. The defects are in three basic areas :-

- i. The University Education Students hardly ever have enough time and suitable supervision for teaching practice;
- ii. Education students are invariably discriminated in the University Academic Departments some not really know where they belong; and
- iii. The academic subject lecturers are invariably not professionally qualified teachers with all the necessary implications to teacher education (Ukeje, 1995).

The above are fundamental problems and they have serious implications on teacher education programme. The products of this teacher education have been found to have low content knowledge, high pedagogic knowledge (*usually theoretical*) and low pedagogic content knowledge. This combination results in teachers who know a lot about theories of child development, different methods of teaching history of education; and philosophical foundations of education, they know relatively little about the practice of education and are poorly prepared in the knowledge of concepts in their teaching subjects. The shallowness of knowledge of content makes the teachers to be poor teachers in their various teaching areas.

Thus, the above curriculum prescriptions have guided the various processes of teacher preparation at various levels of teacher production. For example, the minimum standards document for the Nigerian Certificate of Education and that of the National Teachers Institute, all are guided by the provision of the National Policy on Education both in preparation and quality control. At the University level, (which produces teachers for the senior secondary level), the minimum standards produced by the National Universities Commission for Faculties of Education were influenced by the same principles.

From the above course contents prescribed by the National Policy on Education, we could identify three knowledge base components. These are content knowledge, the pedagogic knowledge and the pedagogic content knowledge. Okebukola (1995) described these three knowledge base components as follows:

That *content knowledge* implies the knowledge of the subject matter or the content of the teaching subject. Simple put, it is the extent of the teacher's mastery of the teaching subject which he specializes. *Pedagogic knowledge* implies the knowledge of the art of teaching basic principles of teaching e.g. the process of use of chalkboard, questioning technique, write lesson note and evaluate teaching. *Pedagogic contents knowledge* is the knowledge of how to teach contents, usually taught during subject methodology classes. This constitutes the bridge between content and pedagogy.

The trend in teacher education is to run the trainee through a regular course of instruction and a period of teaching practices. The would-be teacher is prepared in such a way that he or she master two subjects called the major teaching subject at the N.C.E. level. There is also a minor teaching subject. The minor is a subject that the would be teacher takes a few course in and would be prepared to teach after graduation as a second option. Training activities of the teacher education is geared specially to preparing teachers need to contemplate not only instruction on the curriculum and specific teaching procedures, but more importantly the development of the ability to reason "pedagogically" on the part of would-be teachers in order to convert substantive knowledge into teachable knowledge and experiment with how this can be done.

As earlier stated in this paper, emphasis in teacher education programme should be placed on education which could provide the why purposes of education, what, education content, and how helping children to learn, such emphasis combines general, academic and professional training of the prospective teacher into an education programme for the realization of the stated objectives for teacher education.

The changing nature of knowledge and skills within educational system and in a discipline demands that the preparation given to the teachers in the system should respond to such changes. Evidence has shown that the rate of change will be quicker in the 21<sup>st</sup> century. This implies that our system of teacher preparation must change in order to meet the challenges of the coming century. This observation was confirmed in a UNESCO document entitled the "Recommendation concerning the status of Teacher" which says that :- The purpose of teacher preparation programme should be developed in each student in general education and personal culture, his ability to teach and educate others an awareness of the principles which underline human relation, within and across national boundaries, and based on responsibilities to contribute, both by teaching and by examples, to social, cultural and economic progress".

We can therefore, assert that our teacher education programme in teachers Colleges do not meet the challenges of the UNESCO documents. For our teachers to be prepared for the challenges of the 21st century school environment a total approach in the production should be looked into.

### CHALLENGES OF 21ST CENTURY

The Teacher of the Nigeria child of tomorrow (21st century) will be faced with unprecedented challenges. The 21st century will be marked with rapid transformation both in population growth and advances in technology. These changes will have great bearing on education and more specifically the schooling industry.

The phenomena change expected in the area of education in the coming century is that learners into every level of the education system will be much younger than the 20th century.

As of now, many learners enter the primary and secondary schools at a much younger age. For example children enter primary school at the age of five or four and half years rather than the recommended six years of age in the National Policy on Education, at the same time they leave school in class 5 rather than class six at a tender age. The same goes with the secondary school level (both the jss and the sss). Also the same thing is happening at the tertiary education level. The policy of admitting 16 years old into the University is breached by 14 to 15 years olds.

With this trend in the 20th century, the 21st century will witness much younger learners from pr-primery to University education. The challenge for the teacher within this situation is how to cope with the level of development of these younger children given the type of preparation he received. Therefore, the teacher would need to be prepared to teach and handle effectively children with maturity and readiness problems.

Another challenge of the 21st century expected of the teacher is that he will be teaching a class of children whose parental and environmental backgrounds will range from the fifteenth century to the twenty first. In this case, some children will have astronomical knowledge of the moon, rocket and similar experiences, while others in the same class will be saddled with the superstitions beliefs of their parents. This implies that the teacher will have to contend with class of a wide range of abilities the high level abilities, the issue of gender equity and the under age groups.

The problem of poor attitude to work by young learners will be a source of challenge to the teacher by the 21st century. Recent studies Nwana (1995) and Okebukola (1995) have shown that the students attitude to work over the past decade has become worse. Definitely this trend will continue far into the 21st century. This situation will make the teacher to cope with children with delinquency and truancy problems and also non-challant attitude to school work in general.

With the present campaign of "Education for All" in the year 2000, the consequence to the 21st century teacher is enormous. The teacher is expected to face the problem of large and crowded classes who are also undermotivated. The real challenge to the teacher will be how to manage successfully the problems associated with individual needs, interest and aptitude. And of much importance is what type of pedagogical approach will be adopted in this kind of situation in order to optimize learning? If the teacher is not adequately prepared he will encounter frustration and that is the nature of the challenge of the 21st century.

The task of the teacher will be further complicated in the 21st century by lack of adequate tools. The present economic problem of the nation which has seriously affected the education industry with resultant effect on infrastructure and equipment in our school will be a feature in the 21st century. With the problem of underfunding of education, the teacher will face the challenge of teaching materials and thereby resulting into the use of lecture method as a mode of instruction. Apart from this problem, the teacher will face the challenge of new technological devices that are computer driven and multimedia which will find themselves into some of the classrooms. This implies that training in the use of these devices will therefore be essential to the teacher.

Another challenge of equal significance is that of meeting the demand of the curricula of the next century, which is expected to be rich with newer concepts in response to social changes occasioned by the evolution in information technology as well as changes in the various discipline. Population growth and advances in technology are the key factors in the anticipated rapid transformation.

Teacher education in Nigeria is oblivious of recent advances in the area of telecommunication and digitisation of information technology. For the teacher to operate within this context in the 21st century so as to improve the quality of instruction, they, the existing teaching force nation wide, a situation is ripe for a "paradigm shift". While even poorer countries than we are, are talking about intergrated system, digital network, e-mails, telefax, audio-video-tele-computer-conferencing etc, as a means of improving teacher education for reaching out to large clientile, we are compelled to make to do with paper-based materials and cassette tape recorders. This tendency does and shall never support innavations in teaching, curriculum construction and new designs in learning environments (Tahir, 1995).

This challenge has implications for improvement on the teacher education programme both in terms of content and methodology of instruction. Because the teacher will have to be prepared to cope with the demand of such new concepts. In this respect, the future teacher will have to benefit from competency-based teacher education rather than the present system which places greater emphasis in experienced-based curriculum, Tahir, (1995).

## **OUR TEACHER OF THE 21ST CENTURY**

### **Their Characteristics and Preparation**

As we have stated earlier in this paper, the task that faces this nation in the area of teacher education is two-fold; firstly, the problem of up-grading and undating the present teaching force and secondly, the need to train teachers for the challenges of the 21st century.

If the Nigerian teacher is to cope effectively and efficiently with the task ahead in the 21st century, he has to posses some traits or characteristics which we believe are imperative to tasks of teaching and learning. But we need to explain the concept of "teaching" before we could identify the needed traits or characteristics expected of our 21st century teachers. Teaching is now regarded as a sytematic, rational and organised process of transmitting knowledge, skills, attitudes and values in accordance with certain professional principles (Ukeje, 1995). Those who do not perform the teaching act in accordance with acceptable professional principles are not teachers. Other-wise they may be technicians, quacks.

Charters and Douglas (1929) approached the problem of determining the requirement for good teaching by exhaustively tabulating what teacher did. They further studied the skills, abilities and knowledge required in order to perform those duties successfully, effectively and effeciently.

From the findings of Charters and Douglas (1929) we assert that for the teacher of the 21st century to be seccesful, we would need to be tolerant of pupils who will be poorly motivated and those who have poor attitude to work. Also the teacher must be willing to share new information and skills with the fellow teachers, to seek more knowledge on his own initiative and above all, be flexible and willing to experiment and not be afraid of failure.

This is the kind of teacher that Nigeria needs for the 21st century classrooms. The question then is, how do we prepared and educate the teacher in order to cope with his task in the 21st century school environment ?

The production and preparation of teachers to face the monumental challenges in the 21st century would need to be undertaken very seriously at both the pre-service and inservice level. Although, Hallak (1990) has replaced these two concepts with "Initial" and "Continuing" teacher education programmes.

Preservice (*Initial*) teacher training is traditionally designed for the untrained and unqualified teachers, It includes all the stages of education and training that precede the teacher's entry into paid employment of a school system. While inservice education is designed to promotr the continuous development of the teacher after he enters the teaching profession by providing palanned and systematic instruction within educational setting. The need of the inservice training of the teacher is directly related to the ability of a teacher to perform his teaching tasks. Even the best of preservice teacher education programmes can do no more than produce the beginning teacher. So, it is the inservice progreammes that will continue to give the teacher necessary tonic for the enhancement of his job.

The more the nature of his role changes, the more frequently the teacher must receive inservice education. This type of training fills gaps and equips the teacher with skills necessary for improved performance on present job or for the higher training and /or administrative position in the profession.

The preparation of teahers to face challenges in the 21st century would need to be undertaken at both preservice and at the inservice levels. Our task at this point will therefore be to examine how the two training modes could aid teachers for future challenges.

#### **Pre-service (*initial*) Teacher Education:-**

Today there are primarily two types of institutions for teacher education in Nigeria, and consequently broadly two types of programmes for teacher education. The Grade Two Teacher Training Colleges are in their way out since, according to the National policy on Education (1981) the N.C.E. will ultimately be the minimun qualification for entry into the teaching profession in Nigeria. This means that the future primary education teachers would all be holders of the N.C.E. on the strength of this policy by the Government of Nigeria; the discussion on the type of preservice teacher education would be in the direction of NCE level for Primary school teachers and the Bachelor of Education (*B.Ed*) and B.A./B.Sc. (Ed) for secondary school teachers.

Preservice for primary education of the 21st century at the Colleges of Education level should focus on preparing teachers who will give sound basic education to primary school-age children. But since some of the NCE teachers may continue to teach in the secondary schools, at least at the JSS level and particularly in some parts of the country, there should be careful blend in the NCE programme in order to produce teachers who can function effectively both in the primary schools as well as in the secondary schools. For example, in the minimum standards documents of the National Commissions for Colleges of Education and under Arts and Social Sciences, the goals were stimulated *inter-alia* thus: To produce NCE Teachers of Arts and Social Science subjects who are capable of contributing meaningfully to the production of teachers of *these subjects* for the primary and Junior Secondary classes in Nigeria. This provision has clearly overlooked the fact that primary school teachers, teach all the subjects. Thus

To correct the above situation, we propose two schemes. One of these is to allow Colleges of Education only to handle all first degree programmes in education. This will, of course, require improvement in the quality of the human and materials resources in such colleges. The implication of this is that the training period will change. So we suggest a five-year training programme. The first four years should be for the teaching of the Academic content areas while the fifth year is for acquiring pedagogic knowledge and pedagogic content knowledge.

The other scheme that we propose is to drastically reduce the load of Education Courses in the present 4 years degree programme in University Faculties of Education. The teacher education programme at this level should consist of a satisfactory blending between:

- (a) The general education of the teacher.
- (b) His academic preparations, and
- (c) His professional training.

Generally, the training should enable teachers innovates. They should have good knowledge of psychology of motivation, how to plan, effectively deliver and evaluate instruction, and to how to improve teaching materials. Moreover, our teachers should be trained to cope with the bright, the slow and the average pupils.

**INSERVICE EDUCATION :**

The transformation of the beginner into the competent professional and continuing need for that teacher to keep abreast of changing needs and resources have expanded teacher education programmes far beyond the level of basic preservice preparation. Generally, inservice training can be obtained at workshops, seminars and short courses. The courses offered should be of such intrinsic value and relevance that teachers will feel impleeled to participate. The nature of the inservice programme and the frequency of participation should depend upon a teacher's ability, performance, and year of service. In this regard, inservice courses should evolve from the carefully identified needs of staff numbers/members within a school system. Such course should be flexible, continually responsive to the teachers changing needs and development, and dedicated to clarifying the practical applications of theory, so that teachers classroom may become a laboratory for testing ideas and methods suggested in course.

Furthermore, inservice programme should be concerned with the teachers humanistic development, his behavioural skills, the organizational setting in which he performs, and his role in expanding school relationships. Little has been done during preservice training to help the teacher understand his own nature, motives and behaviour. In this regard, inservice programmes should provide more oppurtunities for teachers to explore their attitudes, values, and beliefs through smaller group counselling, sensitivity training, and individual guidance.

Apart from the preservice and inservice component of teacher education, we hold that the establishment of 21st century classrooms by Colleges of Education and University Faculty of Education should be the focus in teacher prearation. The vogue in teacher preparation institutions in many developing countries is to have what is known as "21st century classroom". These are centres where the anticipated classrooms climate of the 21st century are stimulated. Teachers in training are taken through this climate and are taught techniques, research, administration and evaluation. The typical classroom display multi-media equipment. In our situation the 21st century classroom





should also have such characteristics as over-crowding, poorly motivated students and facilities for handicap. The 21st century classroom will serve as a good laboratory for the preservice training of teachers for the future.

It is obvious that the basic responsibility of a teacher is teaching. The administrative and community service components are not given any prominence. However, in the school setting, the teacher ought to be more than just a teacher. He is a policy maker, an academic administrator and a counsellor. Hardly does the curriculum of the preservice of the training package provide experiences that can adequately satisfy these needs. We therefore hold that adequate attention should be given to those shortcomings in the future teacher education programmes.

There is a growing awareness that if teacher education is to be effective there must be a closer relationship between preservice and inservice training. The component of the inservice training and re-training of teachers must be done on a continuous basis with a mind to improving their effectiveness in the classroom.

### **CONCLUDING REMARKS**

In this paper we have attempted to predict the future trends in education in Nigeria in the 21st century. We highlighted the anticipated challenges and the role which the new teacher must play in the education of the child in the 21st century. We emphasised that our teacher of the 21st century must be well trained, he must be flexible and also willing to experiment and not afraid of failure.

Within this important venture called education, the key actor is the teacher, A poorly trained and unsure teacher will likely reproduce a poor doctor, engineer, architect, fellow teacher and the like. Planning of the education of this actor to face the task of 21st century is indeed worth while. Those concerned with teacher production should work hard in creating viable structure and enabling environment for the emergence of a national teacher education that shall be a pride of the nation. A teacher who will have greater depth knowledge, increased skills of teaching, right attitudes and improved human characteristics and relations.

