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Introduction

Adesoji Oni

The issue of teacher education in Africa is indeed critical in influencing any reforms in the education sector. The authors reiterate this point when they assert that the quality of any education system is as good as the quality of its teachers. They further examine the fundamental reforms in teacher education in Africa, with examples drawn from East Africa, Nigeria and South Africa in particular, but other countries as well. Their position is that teachers are products of a professional socialisation system, which determines their effectiveness, to a large extent. The subject is important in helping educationists to re-examine teacher-related challenges that Africa's education systems are facing.

The authors equally have a very strong argument on the need for teachers and teacher educators to adopt new technologies. If this is not done, then little will be expected of an African teacher whose relevance will rapidly fade away. The most important skill for the teacher is how to guide the learner to access and decipher information that is considered important for whatever issues are being studied, i.e. the process of information gathering and processing into meaningful knowledge.

This book will definitely be of interest to prospective teachers, on-service and in-service teachers, teacher educators and policymakers on issues of teacher education. It will enable them to begin the process of introspection about the way teachers are educated and trained in the digital era. With the advent of the digital era, Africa has been forced to make decisions that will either enable it to catch up or remain behind other countries.

This book highlights several issues of teacher education in Africa in eighteen chapters, each of which will be summarised in this introduction.

Re-profiling the Teacher and Teacher Education

This chapter addresses fundamental issues in educational reform, and a series of factors acting as pivotal points are discussed.' Pai Obanya, a retired professor of education, discusses the issue of the teacher factor as one to contend with in reforming education, spelling out paradigmatic shifts on what constitutes a real teacher, what certificate is possessed by the so-called qualified teacher, what pedagogical training has been acquired by the teacher and the level of positive transformation the teacher has had on students.

The chapter equally examines how educational reforms are the insistent aspirations and cravings for reform based on the changing world which is hinged on three major phenomena: globalization, information and communication technologies (ICT) revolution and the knowledge economy with its seven major characteristics. This chapter discusses the need, requirement, implications and curriculum of initial teacher education and also provides an overview of the development of continuing professional education with major emphasis on professional preparation of the teacher education in line with the learning pyramid in diagrammatic form.

Finally, the chapter clarifies the contemporary trends of education and their implications; levels of re-profiling present-day teachers in some contexts, such as the qualities of a good teacher; skill packages of today's teacher; and, the pedagogical profile of a contemporary teacher with some paradigm shifts.

Policy Issues in Teacher Education

This chapter is on the issues that have guided the development and practice of Teacher Education in Nigeria. The authors, Titilayo Dickson Baiyelo and Catherine Oke of the University of Lagos, Nigeria, begin by attempting to operationally define and explain the key concepts – policy, issues and teacher education – showing the relationship between them. In the process, the procedures which lead to the formulation of a policy are chronologically outlined from the problem/ issue and investigation stages to the recommendation and legitimization stages. Linking the historical origin of policy formulation in Teacher Education to educational policies in both the pre-colonial and colonial eras, the chapter enumerates a good number of commissions, constitutions and publications that have directly or indirectly conveyed elements of policy-making concerning teacher education in Nigeria.

Thereafter, the position of the Federal Government of Nigeria on teacher education, as contained in the National Policy on Education (FRN 2004), is elaborately addressed and, in so doing, the goals of teacher education in Nigeria as well as the various institutions responsible for providing teacher education are highlighted. Major areas of emphasis in the policy which concern these institutions, such as the recruitment of staff, admission guidelines, course content, teaching

practice, certification and licensing are then discussed. In addition, the scope of teacher education is properly defined.

Furthermore, outstanding issues challenging the effectiveness of teacher education in Nigeria are explored. The duration of courses, the requirement for professional teachers' registration, threats to capacity building in colleges of education, the inefficient media employed to combat the aversion of the teaching profession as well as low enrolment rates are all among these issues.

Mapping Teacher Education Institutions for Excellence

In their chapter on 'Mapping Teacher Education Institutions for Excellence', Fabiyi Anne and Sule Seidu of the University of Lagos, Nigeria, posit that at present, the teaching profession is faced with the challenges of excellence, revitalization and professionalism. For the twenty-first century teacher to be relevant in this age, a well planned training programme is essential. This chapter discusses functional education which plays a pivotal role in the production of citizens that would turn things around for good. The adoption of teacher education institution mapping is required for excellence and ensures a significant change in the method of planning and implementation of education.

The chapter highlights the institutions that have been saddled with the responsibility of providing balanced training for teachers in a professional manner. The training institutions across the federation should adopt teacher education institution mapping. The personnel that will prepare and implement the school map should be well trained. The authors argue that school mapping is a veritable tool for setting up a school programme that will adequately meet the future educational needs of the people.

The chapter summarizes the challenges to effective teacher education mapping, ranging from inadequately trained personnel to corruption, and concludes with the strategies for resolving the challenges.

Teacher Education in Open and Distance Universities in Africa

Adams Onuka of the University of Ibadan, Nigeria, in his chapter titled 'Teacher Education in Open and Distance Universities in Africa' submits that open and distance education plays a vital role in reducing the gap between the formal mode of education and its accessibility. It bridges the gap by providing a handy opportunity and a substitute to the actual formal education system carried out within the four walls of a definite formal school setting, with the aid of virtual tutors. This chapter points out the distinctions between the two terms – Open Learning and Distance Learning – which are most often used interchangeably but with different meanings. While Distance learning centres on time and space as major factors, Open learning concerns itself with availability of teaching/learning

materials. This works also points out the widely accepted reception of Open and Distance learning as specified in the Nigerian National Policy on Education.

The chapter also examines some practical issues such as Open/Distance learning marketability in the recent world of current knowledge commoditization, availability of self-explanatory and formidable learning materials, application of modern ICT facilities, application of contemporary evaluation technologies in Open and Distance learning, effective management of Open and Distance learning, provision of support and counselling services, admission process, record management and client services, among others. Furthermore, the chapter delves into the various ways of carrying out inter-Open/Distance learning programmes such as training, material development technology, common workshops, joint conferences, joint professional associations, ICT facilities and a host of others, while concurrently pointing out the various benefits associated with the collaboration exercises, such as building of mass ICT centres, library services, provision of unwavering power supplies and lots more.

In addition, this chapter accentuates on the relevance of the constructivism theory of teacher education, whose underlying principle of electronic media compliance perfectly matches the Distance learning mode of teacher education. In summary, this chapter discusses the principles involved in Open/Distance learning, teachers' preparation as a tool for quality marketability, and synergy as a way of maximizing the benefits of Open/Distance learning.

Teacher Education in South Africa: Issues and Challenges

In this chapter, M.B. Ogunbiyi and E. Mushayikwa of the University of the Western Cape, South Africa, critically examine the impact of the changes that have taken place in the South African education system in order to understand the challenges faced by teacher education in South Africa. To do this, the writers divide the stages of education reform into three, namely: the colonial era (1800s-1940s), apartheid era (1950s-1994) and from the beginning of the democratic era in 1994. During these periods, changes in the educational system have impacted greatly on the teacher education system in South Africa. Unfortunately, in the beginning, changes which are supposed to reflect societal hopes, aspirations, values and norms were constructed upon the whims and caprices of the ruling class. This is why the educational system of the apartheid regime was based on the principle of segregation and racism with its product that depicted the discrimination between white and black. However, the post-independence government redressed this educational imbalance by granting equal opportunities to all South African learners to pursue their intellectual interests. The major aspects of educational policies in the South African post-independence era are: the establishment of a single Ministry of Education which classifies all higher education and training institutions under the same educational system 'to ensure unity of

purpose and standards across the sector', the development and establishment of a National Qualifications Framework (NQF) which has a particular transformative purpose as reflected in its five objectives. Others are the merging of education and training institutions together and the introduction of a new educational curriculum with constructivist philosophy. The impacts of the change in the policy of the South African education system include opportunities for teachers to upgrade themselves and the creation of incentives for professional development, among others.

The Delivery System in Teacher Education

In this chapter, Kayode Ajayi and Adeyinka Adeniyi of Olabisi Onabanjo University, Ago-Iwoye, Nigeria, argue that teacher education takes centre-stage in Africa and most especially in Nigeria today. The authors highlight the various skills that are important in equipping teachers to deliver as the best professionals in the classroom.

The chapter takes a critical look at effective delivery system in teacher education. In this era of globalization, digital technology holds sway. In order to compete effectively with the rest of the advanced world in terms of teacher education, there is need to take advantage of the technological gadgets and other facilities it offers.

Technology makes teaching a lot easier. It offers a number of education media that are useful in effective delivery of teacher education, as the quality of a nation's teachers presupposes the quality of its educational system, which in turn presupposes the nation's quality. In conclusion, the authors posit that attention must be directed at providing modern equipment and trained personnel, especially at the primary and secondary levels of education in Nigeria. This will boost our educational development and place the education system at par with the very best in quality and standards anywhere in the world.

The Delivery System in Teacher Education in Nigeria: Traditional Practices and New Paradigms

More about the issue of delivery system in teacher education may be found in this chapter, written by Simeon Dosunmu. According to the author, education is accepted all over the world as a process of transmitting cultural heritage, stabilizing the present and improving the future. It also provides interaction between the students and the teachers on subject-matters. The history and roles of teacher education are also discussed. This chapter equally enumerates some goals of teacher education as (a) Producing highly motivated, conscientious and efficient classroom teachers for all levels of our educational system; (b) Encouraging the spirit of enquiry and creativity in teachers; (c) Helping teachers fit into the social life of the community and the society at large and be committed to national

goals; and (d) Enhancing teachers' commitment to the teaching profession. This chapter also examines some issues to be taken into consideration in finding the way forward, such as, creating a learning environment that promotes active learning, critical thinking, collaborative learning and knowledge creation.

Sociological Perspectives for Skills Development in Teacher Education

This chapter by Adesoji Oni and Titilayo Soji-Oni opens with an exposition on the major concerns of Sociology and the application of the discipline to education, pointing out the central place of the latter in societal or national development; and showing that since education performs such an important function, then teacher education is necessarily a focal point as far as national development is concerned. This is because adequately trained and motivated teachers who are dedicated and loyal are indispensable to the success of any educational system.

The authors define teacher education in the light of the goals it seeks to achieve, and spells out the need for it to be reviewed in consonance with the competitive demands of the digital world. In addition, the roles of teachers from a sociological point of view are examined. Specifically, two broad perspectives on this issue are discussed – the theories which put the teacher in a conflict situation by holding that teachers are political weapons for perpetrating oppression in society (the reproduction function) or that they are agents of social and cultural transformations (the productive theory); as well as the position of the structural functionalists in which teachers are seen as part of a skilled labour force that prepares learners for unequal social stratification in order to maintain the capitalist appropriation of profit.

The benefits of providing digital empowerment for teachers and the challenges that bedevil skill development in the digital era with specific reference to the African continent are discussed. Finally, the evidence in knowledge, morality and technology as important skills for teachers to acquire and utilize is explicated and the chapter closes with the argument that African teachers must become self-directing professionals if they must wield any political influence and contribute meaningfully to social change in this digital era.

Counselling Perspective for Skills Development in Teacher Education

The thrust of this chapter by A. A. Sulaiman of Lagos State University, Nigeria, is that the teaching of counselling skills and techniques to prospective teachers should not be limited to how these may be used to help children and their parents but should be extended to how they can be constantly employed in the classroom. Thus, after emphasizing the need for education to develop the whole child in terms of the affective, cognitive and psychomotor domains, and after lamenting

the fact that educational stakeholders have continuously restricted the learning process to the development of the child's mental aspect, to the gradual neglect of the affective and psychomotor aspects, the chapter provides insights into a wide range of counselling skills and techniques that can be used by teachers in everyday classroom activities.

The concepts of counselling, skill and technique are explained in the chapter. Then Listening, Questioning, Summary, Solution-Focus, Rapport, Empathy, Role Playing, Shaping, Chaining, Prompting, Reinforcement, Token Economy, Punishment, Extinction, Assertive Therapy, Self-control Therapy and Cognitive Restructuring are discussed as techniques and skills that should form part of a teacher's methods of instruction and relations with students in the classroom. In conclusion, it is conceded that teachers are certainly not trained counsellors and hence cannot truly act in such capacity. However, these skills will be of assistance in classroom teaching and in ensuring that all types of learning take place considering the fact that guidance counsellors are not readily available in many schools.

ICT and Teacher Education in East Africa

Olukayode Emmanuel Fagbamiye of Kampala International University, Uganda, discusses the relevance of teachers in East Africa in relation to ICT. According to him, teachers will remain relevant and cannot be displaced by technology, no matter its innovations. Even when new technologies are introduced, the effectiveness of their use will depend on the knowledge and the skill of individual teachers to integrate them into the teaching-learning process. Teaching as a profession in many countries is a product of the last 100 years with different practices through the ages. Most of the time, teachers are poorly remunerated – with the consolatory assertion that their reward is in heaven. The profession is usually populated by females who are found at the lower levels of education while the males populate the higher levels. In this age, teachers are generally better educated and more militant, but the question of comparatively low salaries persists in African countries and will continue as long as the nations' populations remain youthful with a high dependency ratio. Quoting Ryan and Cooper (1996), the author observes that the use of technology in the classroom is gaining increased attention as an issue in education, but there is the need to equip teachers with these ICT skills and bring the skills to bear on the teaching-learning process. Definitely, help would be needed from various sources before teacher trainees and serving teachers are equipped with the know-how to integrate ICTs into the teaching- learning process in schools in this sub-region.

Resistance to the use of new technology is real but it can be overcome if all stakeholders – school leaders and teachers – are jointly socialized and acculturized. The greatest challenge in the use of ICT in East Africa is going to be sustainable funding, which must be continuous and renewable, for the provision of infrastructure, computers, software and training of users.

Integrating Technology into Social Science Teacher Education

In this chapter, Biodun Ogunyemi and Alaba Agbatogun of Olabisi Onabanjo University, Ago Iwoye, Nigeria, explore the challenges of integrating technology into social science teacher education, in view of its philosophical and pedagogical foundations. Social science deals with social phenomena that are sometimes difficult to express, explain and describe effectively without the support of pictorial, graphic, audio and audio-visual materials and equipment. Technology-driven social science classrooms have a great potential of exposing the students to a myriad of academic opportunities to explain and understand these phenomena. Social science educators have advocated the integration of ICT within the spectrum of social science instruction. A learning environment complemented by the use of technology facilitates social interactivity and reflective community practice.

To effectively integrate technology into the teacher education programme, there is a need for practicable implementation plan that puts into consideration the actual instructional needs. Manson et al (2000) suggest the following principles: extend teaching beyond what could be done without technology; introduce technology in context; include opportunities for students to study relationship among science, technology and society; foster the development of the skills and knowledge necessary for students to participate as good citizens in a democratic society. The chapter concludes by enumerating the challenges for promoting successful technology integration and ways of tackling them.

Pedagogical Integration of Technology into Science, Technical and Vocational Education

More about the integration of technology may be found in this chapter by Blessing Adeoye of the University of Lagos, Nigeria. The chapter stresses the relevance of technology to the modern world vis-à-vis the need for technology integration into the educational system. It highlights what technology can do to advance the teaching-learning process.

Along with Dockstander (2008), the writer defines technology as the incorporation of technology resources and technology-based practices such as the computer, internet, e-learning, instructional media, etc., into the daily routines, work and management of schools, with greater emphasis on teaching. The author lists the benefits of technology as, *inter-alia,* the development in teachers, a strong desire for professionalism, skill and confidence in using technological tools and in increasing students' capacity for comprehension. Technological tools also serve as valuable sources of information, motivation and presentation. These factors, among numerous others, allow obvious and dramatic changes in classroom organization and management.

However, according to the writer, while the incorporation of technology into education exposes students to the concept of globalization, it faces some challenges. These include: lack of confidence, incompetence, inaccessibility of resources, negative attitudes and slow pedagogical thinking – all these on the part of the teachers. Others are insufficient funds and erratic power supply. In proffering solutions, the writer calls for the provision of ICT resources, sufficient time and technical support for teachers. Furthermore, the chapter mentions three learning theories related to technology integration, namely, behaviourism, cognitivism and constructivism. In conclusion, the writer observes that technology is now linked to the reform movement in education since it has proved to be a successful tool in the hands of educational reformers.

Teacher Education and Process Skills in the STS Classroom

In this chapter, Francis M. Isichei of the University of Lagos, Nigeria, considers teacher education from the perspective of science education, which has always articulated a need to have students develop their thinking and reasoning skills. There is a need to reform the way science is being taught in our schools. Students need to be taught science in a way that makes it more relevant and meaningful to them. In this digital age, technology – including digital technology – is seen as being very important. Science Technology Society (STS) has been called the current megatrend in science education (Roy 1984), and others have called it a paradigm for the field of science education (Hart and Robottom 1990). It is therefore the thinking that process skills enhancement in the STS classroom, with other skills such as critical thinking, education for critical thinking and action research in teacher education, would be worthwhile in Africa's educational system in the digital age.

Critical thinking is self-correcting. Turning the classroom into a community of inquiry, with moral and intellectual integrity, would enable students correct one another through inquiry. Critical thinking also displays sensitivity to context, and action research must be integrated into teacher education in Africa as elsewhere across the globe.

Obstacles to the Domestication of ICT in Humanities Education

Antonia Maduekwe of the University of Lagos, Nigeria, carried out a survey on the domestication of ICT in humanities education. Two research questions were raised in the study. The samples of the study were lecturers from four Nigerian universities, two from south western Nigeria and two from south eastern Nigeria. The study sees information and communication technology (ICT) as playing a significant role in the teaching-learning process. It is used to open new opportunities for progress, the exchange of knowledge, education and training and for the promotion of creativity and inter-cultural dialogue.

This chapter discusses the roles of ICT in higher education and reiterates that institutions across the world have been adopting ICT in an effort to create an environment for both learners and their instructors to engage in collaborative learning and gain access to information. It also examines the theory of domestication which was propounded by Chigona, Kayonago and Kausa (2010) who submit that domestication consists of three main processes, namely, commodification, appropriation and conservation. This chapter also discusses the perceived obstacles impinging on domesticating ICT in the pedagogy of humanity education in Nigeria universities.

The results of the study revealed that four major variables – power, economic, political and socio-economic factors – ranked highest and combined among the obstacles affecting lecturers' domestication of ICT in humanities education. The chapter concludes by recommending that:to revamp the humanity system, there is need to produce a technologically literate workforce that is competent to rise up to the challenge of technological innovation. ICT must be given the necessary attention by institutions to ensure that it is integrated and domesticated into our educational system.

Curriculum Theorizing and Practice in Teacher Education

Bade Adegokge of the University of Lagos, Nigeria, affirms that a proper curriculum of teacher education should primarily focus on arriving at a competent and effective teaching-learning process. Based on this assumption, an advocacy for curriculum theorizing is stirred. This chapter attempts to define 'curriculum theorizing and practice' as that which provides answers to practical curriculum field of uniqueness and has its roots in Philosophy, Arts and Science. Also, some major pointers were exposed as fundamentals in the field of curriculum theory in teacher education. Accordingly, while expounding on curriculum planning, implementation and evaluation, this chapter discusses some domains mentioned by a few authors as noteworthy in terms of ideological and technical issues – especially the seven different traditions of curriculum research, namely: analytical, evaluative, interpretative, model, predictive and theoretical studies – while also spelling out three major paradigms dominating inquiries in today's curriculum research.

Furthermore, this chapter outlines some roles of curriculum specialists since the conception of curriculum theory as a field and also the place of curriculum challenges in teacher education which can better be understood by studying the objectives of drawing the curriculum. In addition, various characteristics of teachers are pointed out in the chapter's review of relevant models of teacher education, such as the instructor-centred model, the student-centred model and the community-centred model, all of which are categorized under the models for teaching and learning. The chapter also attempts to propose the needs and procedures to derive an eclectic, holistic, worthwhile, competent and effective

teacher education model as they reflect a huge expectation in educational achievements based on several unique assumptions and eleven major phases of curriculum design.

In summary, this chapter describes the concepts of teacher and teacher education and analyzes some paradigmatic shifts in teacher education. This work concludes by agitating for competent teachers, action research-oriented teachers, and competency-based curriculum as a blend of these is expected to yield creative, intelligent, self-reliant and productive learners.

Entrepreneurship in Teacher Education: Issues, Trends and Prospects

Victor Owohtu of the University of Lagos, Nigeria, discusses entrepreneurship in teacher education, beginning with the definition of entrepreneurship education as 'education aimed at providing students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings'. The efforts of the Nigerian government in developing entrepreneurship education in Nigeria are discussed. The chapter highlights the activities of different agencies and international organizations at promoting entrepreneurship education in Nigeria, including the GET IT training centres initiated by the United Nations Industrial Development Organization (UNIDO) and Hewlett Packard (a foreign company).

The chapter dwells on the dilemma facing teachers in the teacher training institutions. While there is huge economic potential in the educational sector, and the teachers have been equipped with the entrepreneurial mindset through taking courses in entrepreneurship in the training schools, should the teacher now leave the classroom to start his or her own business or should the teacher tap into the huge private teaching market at the expense of his or her effectiveness in the class and at the risk of being at loggerheads with his or her employers? The chapter also raises a pertinent question: While doctors and lawyers in the academia have found a way to successfully combine private practice with their normal work in school, can teachers also be allowed to do likewise?

The chapter concludes by calling for full implementation of entrepreneurship education in African countries through appropriate information and communication technologies.

Integrated Pedagogical Approaches for a Productive Teacher Education

Cecilia Olubunmi Oladapo of the University of Lagos, Nigeria, carried out a survey on 'Integrated Pedagogical Approaches for a Productive Teacher Education'. Her study provided answers to four research questions. Three federal universities and three state colleges of education in southwest Nigeria were used

for the study. A total of 600 subjects (50 lecturers and 50 students from each of the three universities; 50 lecturers and 50 students from each of the colleges of education) were randomly selected from southwest Nigeria; and all these constituted the sample size for the study. A researcher-constructed questionnaire captioned 'Integrated Pedagogical Approaches for a Productive Teacher Education' which was used for the study.

From the research carried out, the study concluded that 'direct teaching' or 'whole-class teaching' approach is the most common approach used by teacher trainers in our faculties and colleges of education, causing negative effects on the productivity of teachers. Also, the fact that many teachers believe the approach is better for achieving goals and objectives in teaching subjects quickly makes it more prevalent in teacher training institutions, thus affecting the educational standards and levels of productivity of teachers in the society. In conclusion, the author recommends a more eclectic and creative approaches to teaching.

Strategic Planning for Quality Teacher Education

The focus of this chapter by Ayo Alani of the University of Lagos, Nigeria, is on processes involved in developing a strategic plan for a quality teacher education. Strategic planning is a process that includes a set of interactive and overlapping decisions, leading to the development of an effective strategy for a given system. The chapter lists the major strategic planning process commonly adopted by organizations – SWOT (acronym for Strengths, Weaknesses, Opportunities and Threats). In concluding; the chapter calls on teacher training institutions to adopt strategic planning before drawing out their budgets, so that all strategic objectives are covered, rather than the usual myopic areas which current budgets cover. The chapter also admonishes teacher training institutions to engage all stakeholders, such as students, lecturers, teacher associations and international partners before spelling out their vision and mission statements so as to benefit from the experiences of all concerned.

The book consists of eighteen chapters by twenty-three authors from six universities across Africa: the University of Ibadan, Nigeria; University of Lagos, Nigeria; Lagos State University, Ojo, Lagos, Nigeria; University of the Western Cape, South Africa; Kampala International University, Kampala, Uganda and Olabisi Onabanjo University, Ago-Iwoye, Nigeria. The scholarship in this book is quite sound and the authors have presented their arguments very clearly with supporting evidence from countries across Africa. This diversity of institutional and authors' viewpoints enrich the book's scope and make it a particularly useful source of knowledge about teacher education in Africa in this digital age.