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Teacher Education: Revamping Professionalism in the Teaching Profession through ICT and Socio-cultural Approaches

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Abstract:
Education is known to be a lifelong process capable of transforming positively the behaviors of individual members of the society. It therefore becomes imperative for Information and Communication Technology (ICT) as well as social-cultural factors to be harnessed in meeting the desired goals of education. No doubt, since the past few decades, ICT has become an essential component of the education system used in building skills and competencies of students as well as the use of native languages, signs and symbols. Unfortunately, review of various research findings has shown the poor utilization of ICT and social-cultural approaches such as native languages, cultural tools, as well as Zone of Proximal Development (ZPD) in the education system which has in turn affected education. This is due to poor knowledge on the use of ICT devices and programmes as well as the inability of most teachers in the application of social-cultural theory in education. This paper discusses the integration of ICT and socio-cultural factors in teacher education. The contribution of this paper to knowledge is on the current debates on bridging the gap between qualified and unqualified teachers which has become a bane for future development of knowledge by harnessing ICT and socio-cultural opportunities. The paper recommends among others the introduction of professional programmes specifically designed in batches to help equip teachers on the best way to influence learners' cognitive development through ICT, use of native language, as well as how various cultural practices and norms in the educational environment can be managed in meeting the goals of education.

Keywords: Teacher education, professionalism, teaching profession, ICT, social-cultural approaches

1. Introduction

African pioneers are aware of most of the challenges faced by the educational sector even as recent happenings in the world calls for the need to reevaluate key sectors of the global economy especially the education sector. In the words of President Moi of Kenya in Spring, (1998:193) and Bitzer, (2002)

'We should progressively look towards training to assist with tackling such issues as joblessness, populace development, declining agrarian creation, and the harm caused to our current circumstance'.

Education in Africa is confronted with some critical issues which have hindered efforts in meeting the goals and educational demand of the 21st century coupled with the increase in population. Thus, this implies that at the primary, secondary and tertiary institutions, those seeking access to educational opportunities will increase. Regardless of this reality, educational institutions in Africa are not growing enough in terms of basic infrastructure, facilities and personnel that will address the rise in the number of students seeking access to education. In a bid to ensure that every individual gets equal access to educational opportunities that will be more receptive to most of the challenges faced by the society, states, and the continent at large, hence the exploration of other opportunities.

Interestingly, from April 25th to 27th 2018, there was a 'Pan African High-Level Conference on Education' (PACE2018) meeting in Nairobi, Kenya. One of the reasons for the Nairobi Declaration of 2018 which had in attendance top government officials, Ministers of Education of Africa, Civil Society, representatives of Pan-African and sub-regional organizations, United Nations organizations, as well as the African Union (AU), in the 'Call for Action on Education in Bridging the Global and Continental Education Frameworks for the Africa We Want' was to develop unified aims and objective towards the transformation of education to achieve the global 2030 Agenda for Sustainable Development and 2063 Agenda for the Africa We Want. The declaration also aimed at developing skilled citizens in the African continent

who would act as a change agent, and establishment of a conducive learning environment. These as stated by UNESCO (2018) are to be achieved through some of the following;

Utilizing relevant and diverse methods of learning with flexible paths betweentraining models, in-formal, formal, and non-formal education to promote quality lifelong learning for learners at all levels as well as provide for all out-of-school children, youth and adults through strengthened systems of recognition and equivalence.

Enhancing the need for educational policies and practice towards fostering a peaceful, healthy and sustainable environment and improvement of necessary skills and competencies for individual and collective development in an interconnected global society and focus on:

- Leverage technological opportunities through incorporating Open Educational Resources and assistive technology, partnerships in support of ICT in education, integrating ICTs into education policies, Internet safety within curricula, and Media and Information Literacy (MIL), establishment of training platforms for the provision of equal access every learnernotwithstanding their challenges, creating mobile and online education towards encouraging the creation of digital skills and capabilities at all levels through;
- Provision of more relevant and effective literacy programmes for youth and adults towards integrating skill development for a decent life and work, improving functional proficiency levels, health and responsible citizenship;
- Modifying education curricula/programmes, qualifications and pathways offered and also including the informal sector in labour market information systems and to improve evaluate and predict the dynamics in the need for skills, encourage the development of skills, strengthen and assess training and education in the open economy, and also boost Public-Private Partnerships (PPP);
- Improvement in terms of quality and access in all forms of Technical and Vocational Education and Training (TVET), and understanding that TVET education and programmes should be crosscutting, bordering on lifelong learning towards skill acquisition, capacity building, employability, retraining and adaptability.

Identify the need for strength towards the transformation of Africa in building acknowledge-based society by the development of research and higher education with special attention on fostering research, importance and equal access and teaching and learning of STEM. We are dedicated to:

- Strengthening a concerted, coordinated, articulated and effective activity and partnerships towards the achievement of the 2063 objectives for Science, Technology, Engineering and Mathematics, to create and implement policies that promote Science, Technology, Engineering and Mathematics at all levels, especially among girls and women, and to foster Science, Technology, Engineering and Mathematics strategies for solving concrete problems such as renewable energy, food security, emergency response, climate change, epidemics, and calamities.
- Ratifying the Addis Ababa Convention and allocating necessary resources, and encouraging national quality assurance systems.

Recognizing that one of the greatest challenges in the African continent borders on quality and access to education and training at all levels with many children, youths and adults who do not have basic abilities and needed competencies for lifelong learning and development in the international community, we are dedicated to:

- Ensure healthy, inclusive and safe teaching and learning environment through prompt and immediate responses to school-related violence and discrimination based on disability, gender, race, origin, religion, ethnicity or any other factor;
- Provision of more resilient, flexible, and responsive educational systems to include internally displaced people, and refugees and increasing investment for Education in Crises and Emergencies;
- Making sure that adequate teachers are recruited and deployed, motivated and provided professional support, and to encourage the teacher professional development programmes and training at various educational levels such as early childhood education, non-formal education; recognizing teachers as qualified professionals and agree on a unique qualification system; and strengthening dialogue and partnership with teacher organizations;
- Promoting the use of mother tongue in teaching and learning, especially during the early years of a learner; and make policies to secure and increase the value, esteem and status of traditional African languages.
- Ensure that issues of all forms of exclusion, out-of-school children including adults who never enrolled into formal education, albinism, disabled among others are effectively addressed by the education sector planning and that there should be proper disintegration of data to be owned at local, national, regional and continental levels.
- Implementation and effective providing a diversified and appropriate learning policies and programmes, promoting multilingual education, inclusive and gender-responsive curriculum, promoting the use of sign languages and Braille, to reach the unreached (UNESCO, 2018).

ICT in education makes it easy for students to enroll into educational programmes from any location mostly with the use of web connections and the internet. It also creates an opportunity for teachers to enroll in training programmes in their various fields. However, even though the use and application of ICT in education in sub-Saharan Africa has not been properly harnessed in recent years there has been enormous growth in its utilization (Olatunji&Adebisi, 2021).

Furthermore, outside the utilization of ICT in bridging the gap towards teacher education and increasing access to educational opportunities, one of the vital aspects of this study is the role of social-cultural approaches in education and the impact of culture, interaction, as well as collaboration on improved teaching and learning process. Modern social

learning approaches emerged between 1924 and 1934 from the work of Russian psychologist Vygotsky, in the form of response to conflicting theories in the field of psychology (Kozulin, 1990; in Polly, Allman, Casto, Norwood, 2017).

The work of Vygotsky (1978, 1981) has been recognized due to its role in identifying the impact of cultural play as well as social interactions in the development of higher order thinking skills, and mostly important based on the intuition it offers about the active interdependence between social processes and individual in the formation of knowledge (John-Steiner &Mahn, 1996, p. 192; in Polly et al., 2017). The views of Vygotsky are considered as developmental theories, which deals on qualitative changes in a person's behaviour over a given period as it tries to describe hidden processes of development of language, thoughts, as well as other higher-order thinking (HOT) skills. Notwithstanding that the initial intent of Vygotsky's was to understand children's higher psychological processes. However, there are several practical applications that can be deduced from his ideas for various groups of learners (Polly et al., 2017). A proper understanding of the work of other sociocultural scholars' and the ideas of Vygotsky has resulted to various perspectives and the emergence of new methods to education. Presently, sociocultural approaches and theories are been generally acknowledged due to their role in education.

2. Overview of Teacher Education in Nigeria and Africa

Historically, institutions of teacher education in Nigeria began springing up due to the arrival of Christian Church Missionaries. The arrival of the Western missionaries into Nigeria during the 1840s became the beginning of the development of present day western education (Fafunwa, 1974). Some of the church missionaries like the Roman Catholic church, the Church Missionary Society (CMS), the Wesleyan Methodist, the Baptist, and the Church of Scotland also known as the Presbyterian church were not only pioneers of Western education, but very active in Nigeria between 1842 and 1860 (Ogunyinka, Okeke, &Adedoyin, 2015). As the missionaries recorded a high level of growth in their ministry, there became a need for teachers as the number of pastors trained by the missionaries were not enough to meet their desired goal. This gave rise to the need to establish teacher training institutes. According to Oladumijoye (2013) in Okpea&Onjewu (2016), in 1896, St. Andrews College, Oyo which was the first teachers training college in Nigeria was established, subsequently, other teacher training colleges were established in 1897, 1904, 1905, 1928 and so on, in different parts of the country. According to Taiwo, (1980) and Osokoya (2010) the teacher training Institute which was first established in Nigeria 'The training Institution' was by the Church Missionary Society (CMS) in Abeokuta, western Nigeria, in 1859. The institute according to Fafunwa (1991) was subsequently in 1867 relocated to Lagos as a result of the Missionaries being rejected by natives/authorities whom in the views of Ogunyinka et al., (2015) had some disagreements with the missionaries most of whom did not accept the NjeruChristian faith and their type of education. In 1896, the school was moved from Lagos to Oyo and the name changed to St. Andrews College, Oyo. In 1897, the Baptist Training College Ogbomoso was established by the Baptist Mission while in 1918, the Wesley College was established in Ibadan by the Wesleyan Mission. Furthermore, in 1892, the Hope Waddell Institute was established in the Eastern Nigeria, precisely in Calabar (Taiwo, 1980). Subsequently, in 1909, the Northern part of Nigeria had the first teacher training college established by the then Colonial Government in Nassarawa.

The major focus of the teacher training institution by the missionaries was to train schoolmasters who would graduate to become catechists, classroom teachers, priests and deacons (Osoba&Fajana, 1980). Thus, some subjects such as Christian faith, New Testament criticism, preaching and theology, school method and management, hygiene, English history, geography, among others were offered in the teacher training institutes at the period (Fafunwa, 1991; Osokoya, 2010). However, the Phelps Stokes Commission Report of 1922 was severely criticized because of teacher education scheme in the period due to the high rate of teacher-pupil ratio, the curriculum was mainly beneficial to the Christian Missionaries as well as insufficient supervisory system. Fafunwa, (1974) in Ogunyinka et.al (2015) argued that it appeared that the missionaries did not prepare adequately for the task of training teachers in Africa hence, the supervisory system was poor.

In a bid to realign and transform the teacher education system as well as proffer lasting solutions to the problems of teacher education in the colony, the Phelps Stokes Report recommended two (2) forms of teacher-training institutions namely;

- The Elementary Training College (ETC), which was designed for lower primary school teachers, and
- The Higher Elementary Training College (HETC), designed for higher primary school teachers (Ogunyinka et al., 2017)

The first director of education, Mr E.R.J. Hussey, in 1929, based on the recommendations of the Phelps Stokes Report re-organized the teacher training system in Nigeria. However, for the two types of teacher-training institutions - the Elementary Training College (ETC), for lower primary school teachers, and the Higher Elementary Training College (HETC), for higher primary school teachers to be operated, the power of overseeing educational activities in Nigeria was centralized by combining the departments existing in the Southern and Northern region. The Elementary Training College is a 2-year course where teachers on successful completion are awarded the Teachers Grade III certificate while the HETC is also a 2-year course leading to the Teachers Grade II Certificate (Osokoya, 2010). Ogunyinka et al. (2015) further noted that individuals must have served for a period of 2years as pupil-teacher before desiring to be enrolled into the Elementary Training College (ETC) course and having completed qualifying courses leading to the Grade III certificate will at least teach again for two (2) years before enrolling into Higher Elementary Training College (HETC), for the two-year Grade II program. This marked the beginning of a unified and recognized method for training and development in teacher education and an end to the system operated by the Christian missionaries.

The establishment of Yaba Higher College by the British Colonial Administration in 1932 was another historic milestone in the advancement of teacher education in Nigeria as it ran a 3-year teacher education programme from its beginning (Omolewa, 1980). Sadly, the Yaba Higher College suffered tremendously during the Second World War as it was used by the military for war. In 1947, the University College Ibadan absorbed the college although there was a stop in the diploma courses by 1950. There was further improvement in teacher education due to the establishment of the University College Ibadan in 1948 which introduced a 1-year diploma course in education.

Although the Richards constitution of 1946 introduced regionalism in Nigeria which divided the country into three regions, namely – Western, Eastern and Northern region, it was strengthened by the Macpherson constitution of 1951 which also empowered regions to make educational laws. In 1955, the Free Universal Primary Education was commenced in the Western region, their Eastern counterpart embarked on the free education programme in 1957 while the Northern region did not until 1976 when it was launched nationwide. Teacher training programmes were crashed to meet the educational needs especially in the Western region (Osokoya, 2010; Ogunyinka, 2015).

Universal Primary Education brought about uncommon growth in the primary, secondary and tertiary levels of education as there was a huge demand for teacher education. According to Osokoya, (2010) funding for all Grade II teachers' colleges was overseen by the federal government under the Universal Primary Education scheme. Also, pre-service teachers in the Universities and Colleges of Education were awarded bursaries by the federal government who also expanded the Universities and established more teacher training institutions. However, there has been improvement in teacher education in Nigeria over the years.

According to the National Policy on Education document which was first published in 1977 and later revised in 1981, 1998, 2004, and 2013 in knowing the relevance of education posit that

'no education system can rise above the quality of its teachers'.

According to section 93 of the NPE (2013), the goals of teacher education in Nigeria include:

- Provision of the professional and intellectual background for teachers that is sufficient for their responsibility and to make them adaptable to changing environment;
- Producing highly conscientious, motivated, and efficient classroom teachers for all levels of the education system;
- Stimulating the desire for enquiry and creativity in teachers;
- Enhancing teachers commitment to the teaching profession; and
- Helping teachers to effectively fit into the social life of the community and the society at large and to enhance their commitment to national goals and development.

Every teacher is mandated by the National Policy on Education to be trained. It further outlined the minimum entry qualification required in the teaching profession to be the Nigeria Certificate of Education (NCE), see section 92(b). Additionally, section (96) of the NPE provides that

'teacher education shall continue to take cognizance of the changes in methodology and in the curriculum.

Teachers shall be regularly exposed to innovations in the profession'. While section 101(f) of the NPE (2013) in highlighting the need for ensuring at all levels, quality education, emphasized the need to 'revamp teacher education curricula and training'.

The legal responsibility regarding teacher education in Nigeria today is vested in National Teachers Institute (by distance), Institutes of Education, College of Education, Polytechnics, and University Faculties of Education (Osokoya, 2010). He further stated that the Nigeria Certificate in Education (NCE) is awarded by the Polytechnics and Colleges of Education as a sub-degree (diploma) after three years of study. The Senior Secondary Certificate (SSCE) or its equivalent with passes in five subjects including the English language is a major criterion for admission. To ensure that competent professionals are produced in the NCE programme, courses such as General English, mathematics and computer education are made compulsory. Other courses in the NCE curriculum are environment/ conservation education, Nigerian constitution, HIV/AIDS education, population and family life education, women's education, and drug abuse (UNESCO, 2006; Ayodeji, Lawal, Isaac, 2017).

The desire by the Nigerian government towards improving teacher education led to the establishment of the National Teacher's Institute (NTI) in 1976 under Decree No. 7 of 1976 to provide upgrading programmes through distance learning for teachers. Through in-service training, NTI has over the years offered teachers the opportunity to upgrade their qualifications during weekends or school holidays for the award of either NCE, B.Ed. or Post Graduate Diploma in Education (PGDE) certificates. According to Osokoya, (2010), various Institutes of Education in Nigerian Universities colleges have additionally been included through part-time courses and distance learning in the training of teachers for NCE, B.Ed. or Post Graduate Diploma in Education (PGDE) certificates. Pre-service teachers on the other hand are prepared by Faculties of Education for Bachelors of Education (B.Ed.), Bachelors of Art (B.A), Ed. and Masters in Education (M.Ed.) degree certificates (Osokoya, 2010). He further stated that the four basic requirements by the Nigerian universities for the degree programme are; Educational studies, General studies, Teaching practice, and Studies related to the student's intended field of teaching.

No doubt education is considered to be a major drive force for any society including Africa. In July 2000, one of the major issues for discussion in the 45th World Assembly of the International Council on Education for Teaching (ICET) in Windhoek, Namibia is the lessons to be learnt from the increased global trends amid global realities and issues and their implication on teacher education in Africa in the 21st century (Bitzer, 2002). He further stated that more than 80 delegates from African countries were present in the African Education Forum to express the need for collaborative efforts towards teacher education in Africa. However, some of the issues presented which were agreed by the forum to be looked into towards ensuring an improved action and functional education include:

- The Forum should engage more in the implementation of functional educational strategies, policies and plan towards improving the position of teacher education in Africa and cease from becoming another 'talk shop' especially in Africa
- At the national level, educational scholars and stakeholders should get actively involved in making educational policies.
- Education policy documents mostly stay policy documents, this is because of a lack of desire and funds for its execution.
- The implementation of successful education in Africa is hindered by quasi-western influences, traditional tribal thinking, and naive conventions.
- As a result of the poor standard of Information and Communication Technology (ICT), there is a limitation in the development of communication networks on education in Africa
- An over-idealistic perspective on what can be achieved through education in Africa exists. Sometimes the perspective that education is a subsystem of complex socio-economic systems is lost thereby creating ridiculous assumptions; and
- Encourage knowledge sharing towards harnessing untapped knowledge in Africa through unfolding the rich sources of knowledge and experience regarding teaching and learning on the African continent (Bitzer, 2002).

African leaders are still confident that one of the major tools for building and developing Africa in line with the global agenda is education. Given the hard realities of developing countries, some of these views may seem to be over-optimistic (Bitzer, 2002) although there is no consensus by scholars worldwide on the teacher education model. However, teacher education model must fit the problems and issues of the locality, region, or country where they are designed to be applied without failing to focus on global realities and issues.

3. Impact of Social-Cultural Approaches of Learning to Teacher education

Some scholars have opined that man's motivation and cognition begins based on his milieu and situations which interacts with the external environment (Phan, Maebuta, &Dorovolomo, 2010; Walker, et al., 2004; in Phan (2012). This theoretical assumption is based on the existing belief by some notable scholars such as Vygotsky's (1978, 1981) sociocultural theory of development, Bronfenbrenner's (1979, 1989) ecological systems theory, and Bandura's (1986, 1997) social cognitive theory. In spite of their peculiar attributes, the mentioned approaches agree on some shared attributes which proposes that the development of man is not an isolated entity but instead restricted to a broad sociocultural system. As opined by Vygotsky's (1978, 1981) sociocultural theory of development, Bronfenbrenner's (1979, 1989) ecological systems theory, and Bandura's (1986, 1997) social cognitive theory, cultural values as well as other extraneous social factors combine with internal motivational and cognitive approaches to account and explain man's achievement and learning outcome in both educational and non-educational environment.

This study focused more on the social-cultural approaches to learning as opined by Lev Semonovich Vygotsky's (1978, 1981) sociocultural theory of development and its implication on revamping teacher education towards meeting their professional responsibilities as well as the needs of their environment. A proper understanding of this approach will help guide educators in meeting the goals and objectives of education in their locality.

Three basic themes are usually linked to Vygotsky's theories of sociocultural learning. They are;

- Human learning and development built based on instruction in learning; cultural, historical, and social interactions;
- Utilization of language and other psychological tools, moderate the development of higher mental functions, and
- Learning takes place within the zone of proximal development (polly et al., 2017).

Vygotsky argued that there are social origins to every thinking pattern, social interactions assume a basic role particularly towards the development of higher-order thinking abilities, and psychological development can't be completely appreciated without a proper understanding of historical and social constructs on which they were developed. Socially associated effects and shared experiences as well as the acquisition of necessary knowledge and strategies are adopted by learners through working with others on various assignments (Scott &Palincsar, 2013; Polly et al., 2017). In the view of Rogoff (1990) in Polly et al. (2017), this process is considered as guided participation because learners are assisted by experienced individuals in getting new capabilities and cultural values through a collaborative and meaningful activity. It is basic to note that these cultural mediated abilities are seen as being implanted in social-cultural activities as opposed to being independent (Polly et al., 2017). An application of the views of Vygotsky implies that a developed Africa can emerge through education. This development can be gained by revamping teacher education and ensuring a structured instructional activity that promotes the learning and development of every learner based on current realities to equip every individual teacher in meeting stipulated educational goals and objectives of the nation, as well as gaining proficiency and how they can be applied to new situations.

The use of psychological tools, especially language, also helps in mediating the development of mental functions is another significant part of Vygotsky's view that can be utilized in teacher education. Vygotsky contemplated that social structure affects individual decisions and also influences their interaction with others and determines their working condition (Polly et al., 2017) thus, shapes their beliefs, cognition, attitudes and views of the real world and that individual and social work is medicated through semiotics like traditional signs, language, method of counting, and work of art; psychological tools; and signs.

Also, quoting Norris, (2009), one of the basic importance of the utilization of indigenous languages is the idea that they reflect a variety of cultures, identities, and histories that forms fundamental conceptualization of the society. Also, the identity includes the conventional knowledge of the community. According to UNESCO (2012) languages form the standard of cultural recognition, and variety in languages is an essential aspect of the diversity in culture. Thus, language plays an essential role in the development of the society as well as in the Notably, language plays an important part in the progress of the nation including the fight against hunger, poverty, and disease and thus needs to be part of the national planning process (Olagbaju, 2014; UNESCO, 2012; Ofulue, 2011).

Vygotsky, therefore, recommended that the utilization of semiotics, psychological tools, mediates both individual and social working and facilitates co-construction of knowledge. Through appropriation (a process whereby socially psychological tools are adopted by a person adopts to help independent problem solving in the future) semiotic methods assume a significant role in development and learning (John-Steiner and Mahn, 1996; Polly et al., 2017). This implies that learners existing tools don't have to be reinvented in a bid to effectively utilize them. However, learners need to be acquainted with how a particular tool is utilized, then, at that point, they can utilize it in solving new problems across various situations (Scott and Palincsar, 2013).

Learning takes place within the zone of proximal development. Presumably, in the design of learning experiences the sociocultural concept that is in most cases generally applied is the concept of the Zone of Proximal Development (ZPD) (Polly et al., 2017). According to Vygotsky (1978), Zone of Proximal Development is defined as the difference between the real level of development as set by independent problem solving and the potential development level set through problem-solving in collaboration with more capable peers or under the guidance of adult(s) (p. 86).

For him, learning ought to be coordinated based on a person's developmental level thus, it is crucial to determine the real and potential degree of development for a better understanding of the link between learning and development. Unlike the products of learning and development, much attention should be given to the processes (Polly et al., 2017). For Vygotsky (1978), the Zone of Proximal Development (ZPD) is a more dynamic and better indicator of a person's cognitive development since it does not only measure what the learner can achieve independently, showing what has been previously learnt but also showing what the learner is currently learning.

4. Some Examples of Learning Environment That Can Be Adopted in Teacher Education towards Meeting the Goals of Education Based on Social-Cultural Perspective

Some of the learning environments include an online collaborative space collaborative environment, flipped learning environment, and project-based learning. However, one of the focal components of the social learning approach is a collaborative learning environment which emphasizes the need for learners to think critically and apply acquired knowledge and skills. Social-cultural perspectives of learning are promoted through anchored instruction and real activities by supporting the development of cultural skills, the contextualization of learning in the simulation of workable issues through the utilization of language to both internalize learning and communicate learning as well as coordinated participation in collaborative groups. These must be understood by educators in their endeavour to develop a guided and cooperative learning experiences for learners.

In project-based learning, students are engaged in collaborative events where real-world challenges or intricate issues are to be resolved. It is a complex process of knowledge and new skills acquisition to effectively proffer possible remedies to a challenge. All through the process which is usually multi-layered, learners are continually acquiring new knowledge from various sources towards getting a final solution

The flipped classroom is another method widely used in fully engaging learners in social learning using the pedagogical model. Before face-to-face interaction between the teacher and student, the student prepares for class by watching instructional videos. This method tries to eliminate passive involvement in the teaching process thus ensuring active learner participation and social learning activities which is one of the major aspects of Vygotsky's theory.

The interest of educators is united through online collaborative spaces in classroom technology, constructivism, and social learning opportunities in a creative way to deal with basic reasoning and active learning (Brame, 2013; Polly et al., 2017). The online collaborative space which is also referred to as computer-supported collaborative learning (Resta&Laferierre, 2007; Deal, 2009; Polly et al., 2017) allow learners to work as a team in a flexible and interactive online environment. Based on Vygotsky's theory on the significance of language use for learning, communication is promoted across various methods in the online collaborative space through multimedia formats, text, and speech.

Technological innovations can help in the utilization of social learning approaches in education in various ways. Learners have the opportunity to utilize various technological means of online collaborative spaces and active collaborative technology in the learning environment to experience significant collaborative learning in both virtual and physical environment that reflects the fundamentals of sociocultural learning.

By accepting the utilization of technology within collaborative learning can likewise encourage a more equivalent distribution of voices when contrasted with face to face groupings (Andrea, Minou, Manuela, Donata, 2007; Deal, 2009), possibly giving a more prominent opportunity to ensure active participation among all students (Polly et al. 2017). By utilizing technological innovation to help in the execution of social learning approaches, collaboration is experienced by learners while processing 21st-century abilities.

The implication of the foregoing is on the need for teacher education to provide every educator with the basic knowledge needed in meeting educational goals through various flexible methods in the 21st century. Much emphasis should be placed on educational processes and lesser attention is given to educational products.

5. The Need for ICT in Teacher Education

The global community is witnessing an expansion in distance education as a result of the advancement in technological innovation. This according to the UNSECO report on 'Distance Education Models and Best Practices', (n.d) has provided a variety of options that are now open to educators than ever in terms of teaching delivery techniques in distance courses. Also, every aspect of life has been reorganized with no exception to teaching (Nwosu, John, &Akorede, 2018). Therefore, the emergence of a new communication revolution, as well as the COVID-19 pandemic, has led the educational system in seeking alternative methods of providing an open and flexible learning environment for learners. A greater success rate is presently achieved by educational institutions in the execution of distance education as a result of the combination of new information technologies such as computers, telecommunications, fibre optic technologies and satellites (Harasim, 1993; Darkwa, 2000).

According to Oyeleke&Apena, (2018), in Olatunji&Adebisi (2021) the only university in Nigeria dedicated to distance learning is the National Open University of Nigeria (NOUN while one of the institutions that gives education through the conventional distance learning method is ObafemiAwolowo University, Ile-Ife. NOUN was established in 1983 however didn't turn out to be completely functional until 2002 while OAU, Ile-Ife, was established in 1962. OAU as one of the few accredited dual-mode institutions in Nigeria offering higher education through distance learning earned this landmark achievement through its aspiration of been the technological flagship of the West African sub-region in teaching, research, and community service (Agyeman, 2007; Onwe, 2013; Olatunji&Adebisi, 2021).

Furthermore, various scholars such as Fu, (2013); Ezugwua, Ofema, Rathodb, Agushakaa, &Harunaa, (2016); and Adarkwah, (2020) have opined on the need for the education sector to adapt to the realities of the time in which they operate towards the utilization of ICT in education. Through ICT in the 21st century, necessary skills needed by the education sector can be provided for easy adaptability and favourable competition in terms of knowledge acquisition and information society (Haji, Moluayonge, & Park, 2017; Adarkwah, 2020). According to Ghavifekr&Rosdy (2015), the integration of ICT in teaching has become crucial in assisting learners to develop their transversal skills and also improve their collaborative learning skills that stimulate self-reliance, social skills, sense of responsibility, problem-solving and the ability to reflect and initiate a task. For him, these elements are core values needed by learners to succeed in an active teaching and learning environment (Ghavifekr et al., 2014).

The 21st century has become a digital world and in turn, making the world a global village where learners now have easy access to technological tools and information. This, therefore, implies that teachers with improved ICT culture are those who can cope in a technologically driven education system.

The development of teachers' ICT skills is the first however not by any means the only step in their professional development. The need for a society driven by ICT has been understood by most educators and its role in meeting global educational goals. Knowing that the integration of ICT in education is indispensable for schools to be considered a 'learning organization', Kurelović (2008), therefore, implies that changes must be made in the culture of teacher education towards meeting the educational needs of the society. It, therefore, falls on the need to gradually change the culture of teachers' behaviour towards the use of ICT in the education system, make needed resources needed for training available and develop the knowledge and skills of teachers in the use of ICT. According to Bates (2004) in Kurelović (2008), a high level of investments in the education system in terms of ICT can only be supported when they produce a result. Teachers need to understand the purpose and benefits of ICT in the education system and its impact on teaching. Sadly, teachers apply ICT in classrooms while their teaching methods, materials and strategies remain unchanged (Tenorio, 2003). The classroom is now changing its look from the traditional setting i.e. from one way to two-way communication. Now teachers, as well as learners, participate in classroom discussion (Bhattacharjee& Deb, 2016) as learning becomes learner-centred. Also, the communicative method that is swifter which has helped in the passage of information, knowledge and skills in a more relevant and effective way is through the use of ICT. However, some of the functions of ICT in Teacher Education in the 21st Century can be summarized as follows;

- Teacher training institutes through the use of ICT can help in fostering various networks for communication. Through the use of networks, teachers learn more from others;
- Curriculum can be developed through the help of ICT;
- The use of ICT is essential in the design of learning environment required for both training of future teachers (in the teacher training institutes), and vocational education;
- It also helps Teachers with their personnel support (knowledge, attitude, skills);
- ICT helps teachers with organizational preconditions (vision, policy and culture);
- Most teachers easily design an educational environment through the use of ICT;
- It fosters proper and timely communication to students thus, bridges the gap between teacher and students.
- Teachers are assisted in both pre-service and in-Service teachers training through the use of ICT.
- Professional Development and Educational management of teachers are improved through the use of ICT as well as enhances Active Learning of teacher Trainees.
- It is a tool for teaching and learning hence, serves as a medium through which teachers can teach and learners can learn. It appears in many different forms, such as drill and practices exercises, simulations and educational networks.
- In lesson preparation, teachers are assisted with the use of ICT. For ICT to be introduced in pre-service teacher education different methods and strategies are applied (Bhattacharjee& Deb, 2016; Capillanes, 2019).

6. The Role of Distance Education in Improving the Qualification of Teachers through Teacher Education, Bridging the Illiteracy Gap and Meeting EFA Goals in Africa

Several challenges according to Darkwa&Mazibuko (2000) are faced by African educational institutions. Some of these challenges bother on lack of qualified teaching professionals how can fuel development towards proffering lasting solutions to the problems faced by the African continent, lack of educational facilities and infrastructure, and the need for a sustainable and flexible educational sector for all learners among others. Also, it appears that public institutions are faced with lack of adequate funds, time and money in providing access to every desiring student in an affordable manner. For instance, according to UNESCO (2016) report on 'School Resources and Learning Environment in Africa' in the Central African Republic, Malawi, and Tanzania, the average class size is more than 70 pupils in each classroom. Also, in Rwanda, the teacher-pupil ratio is 1:58 while in Cuba it is 1:9 (UNESCO, 2019b).

UNESCO (2019a) in 'New Methodology Shows that 258 Million Children, Adolescents and Youth Are Out of School' report posited that in previous years, for all age groups, the region which has the highest out of school rate is Sub-Saharan Africa. Further analysis of the report document shows that at the primary educational level, there are 59 million out of school children of which 32 million are from sub-Saharan Africa followed by Southern Asia which has the second-highest of about 13 million out-of-school children. Also, Sub-Saharan Africa has the highest rate of exclusion at the primary educational level as 19% of Sub-Saharan African children are denied access to education and seconded by Northern Africa and Western Asia at 9% while Southern Asia is at 7%. Also, according to UNESCO (2019a), there are 62million out of school adolescents where 28 million are from sub-Saharan Africa, Eastern and South-Eastern Asia, 9 million and Southern Asia, 17 million.

Furthermore, the report of UNESCO (2019b) – We Must Support Our Teachers noted that 'quality education begins with qualified teachers who deliver good lessons so that students can learn'. This shows the relevance of Sustainable Development Goal 4 which enjoins governmental and non-governmental actors to partner with the education sector in ensuring a high increase in the supply of qualified teachers by the year 2030.

According to UNESCO (2017) – 'More than half of children and adolescents worldwide' report, minimum proficiency levels (MPLs) skills in reading and calculation are not met by 617 million learners. Unfortunately, there is a steady fall in the percentage of trained and qualified teachers across sub-Saharan Africa (UNESCO, 2019b). For instance, 64% of primary teachers were trained in the year 2017 compared to 85% in 2000 while at the secondary level, 50% were trained for secondary schools in 2017 compared to 79% in 2005 (UNESCO, 2019b). Some countries in the region during this period undertook a massive expansion of their education systems and hired more of both trained and untrained teachers (UNESCO, 2019b).

According to UNESCO (2020) report on 'World Teachers' Day 2020 Fact Sheet', the trained teacher-pupil ratio in Sub Saharan Africa stood at 1:58, in Bangladesh 1:60, in Southern Asia 1:40, in Sao Tome and Principe 1:114, while many had overcrowded classrooms as well as Madagascar with 1:240. Although trained teacher to pupil ratios in secondary education was generally lower in all regions, except in sub-Saharan Africa with (1:43) when compared to Central Asia (1:10) (UNESCO, 2020).

Based on the foregoing, it can be seen that many teachers most especially in countries where inadequate training of qualified teachers already undermines education quality are overburdened by large class sizes. High teacher to pupil ratio due to large class sizes reduces teachers' capacity by diminishing the amount of time spent on teaching and learning activities (OECD, 2019).

For development to be achieved in the education system, there is a need for qualified teachers who have skills in inclusive education, classroom management, instructional leadership, and pedagogy. Sadly, the challenges in access to educational opportunities limit the training of teachers. However, teachers can be trained through distance education to increase the number of qualified teachers irrespective of location. Also, through the use of technological tools and devices, out-of-school children can enroll in school to acquire the necessary skills needed to make them better members of the society. Various social-cultural approaches can be harnessed in meeting various educational objectives and goals.

7. Conclusion and Recommendation

Various countries in the African continent including Nigeria are faced with the challenge of poor funding of the educational system and the rising cost of education. This has limited the growth and performance of the sector in terms of provision of basic facilities, increased access to education as most schools are overpopulated based on the available facilities and infrastructure, and the high rate of out-of-school children. This, therefore, has resulted to a high illiteracy rate. Notwithstanding these challenges, the role of teachers in the development of the society remains crucial hence, the need for revamping teacher education to ensure increased access to education, improvement in the qualification of teachers, and making education available to all irrespective of class, location and age.

Therefore, teacher education should be redesigned towards equipping teachers on the utilization of ICT and social-cultural approaches as well as help teachers towards developing a professional and personal ICT culture besides the development of knowledge and teaching skills. This will help in meeting the various needs of all learners through the effective use of distance education. Also, due to poor facilities in schools and a rise in educational costs, teacher training programmes can be implemented through distance education using various social-cultural approaches as this will help in increasing the qualification of teachers and preparing teachers for the various groups of out-of-school children in the society.

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