

Transforming 21st Century Education: Holistic Strategies for Teacher Preparation and Professional Development in Nigeria

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Abstract

Education is the foundation of any country; and the quality of the educational system reflects the level of growth and development of a country. The 21st century has been defined by globalization, brought about by technology which has changed the political, social, economic and communication environments. The education system of Nigeria is under great pressure, with issues such as low funding, unqualified educators, and others, which do not help to equip learners for the globalized and digitalized world. The COVID-19 pandemic also highlighted the fact that the system was not ready to support learning in crisis situation. This article therefore, explains why there is an urgent need to train teachers and develop them in a holistic manner so as to transform education in the 21st century in Nigeria. Such training should deal with curriculum design and teacher training, new instructional practices such as project-based learning, collaborative learning, blended and flipped classroom designs, research, assessment, and evaluation in teacher education, among others. The paper concludes that the modern and future educators should be equipped in the current pedagogical skills and digital literacy in the 21st century to enhance the training of learners in 21st century skills.

Keywords: teacher preparation, holistic strategies, professional development, 21st century education, professional development.

Introduction

Education is the foundation of any nation; it is the basis for building structures that will enrich, enhance, and advance development. It is the process of cultural transmission, socialization and skill acquisition that will facilitate an individual's integration and participation in the building of society. Education empowers, and knowledge acquired through it, restructures the cognitive perceptions of individuals, and helps create vast opportunities for them to function, and the capacity to handle challenges in the society. Education drives social cohesion and economic growth in the society. The extent of any societal growth and development is often a reflection of the strength of its educational system.

The 21st century global societies are rapidly undergoing geometric transformation, with new demands, expectations, and challenges, especially as technology has revolutionized the world, metamorphosing it into a global village. Technology has taken over the political, social, economic and communication aspects of life. Information technology explosion is driving this new wave of transformation, making it accessible to everyone. To still be the medium of transmitting cultural technology, education being the focal point, therefore needs to be re-engineered to catch up with the wave of transformation, in equipping individuals with the necessary 21st century knowledge and skills required to function and tackle challenges in the global world.

A turning point was reached in 2020, during the COVID-19 pandemic that shutdown institutions globally. The impact was severe in most African countries, and Nigeria in particular experienced total shut down of schooling and learning. This brought to limelight the unpreparedness of Nigeria's educational system to keep afloat in the event of crisis and turbulence which is becoming characteristic of the post COVID-19 world. It also implies that the way education is practiced in Nigeria presently cannot produce individuals who can fit into the 21st century, where education transcends being knowledge based to service based. What really counts are the life skills individuals have acquired such as critical thinking, creative ideas, innovations, synergizing and decision-making skills among many others, to enable them to navigate and survive in a highly complex and competitive Gen Z new world.

Teachers are the bedrock of any educational system. The quality of teachers in a given country is influenced by the character of its education. Therefore, the importance of teacher preparation in the 21st century, in shaping learners in Nigeria, and making them career ready with functional skills and appropriate behaviours cannot be undermined. In order to facilitate learners' integration into the society at large, teachers must possess the necessary pedagogical skills, technology, and knowledge. Building on this foundation, this paper focuses on the:

1. Current educational challenges and the need for holistic strategies in teacher preparation
2. Curriculum development and teacher preparation
3. Innovative teaching methods
4. Research, assessment, and evaluation
5. Psychological issues in teacher training
6. Professional ethics and teacher preparation
7. Vocational and lifelong learning and professional development.

Current educational challenges and the need for holistic strategies in teacher preparation

To appreciate the need for holistic strategies in teacher preparation, there is need to articulate current challenges the Nigerian educational system must address, otherwise meeting up with the demands of the 21st century will be a far cry. Any nation aspiring towards development and technological advancement, must prioritize education. Education in Nigeria has always been politicized, going by the budgetary allocation to education from 2013 till present. Nigeria has always fallen below the recommended fifteen percent by UNESCO, despite the increments by the government each year (Suleiman, 2023). This has affected funding of institutions of learning. Bisong and Oden (2013) in a study on the social climate of learning in Cross River state, discovered that most secondary schools, especially those in the rural areas, lacked basic facilities for learning, such as chalk board, good playground, chairs and desks, libraries, laboratories, light, running water and conveniences, among myriads of other basic facilities that were completely lacking. They concluded that all government schools visited were grossly under-equipped. Another remarkable challenge is the lack of qualified teachers, in the primary and secondary schools especially, many of whom do not possess the rudiments of pedagogical skills to communicate knowledge.

The teachers themselves were also getting exasperated with poor remuneration and welfare package, burden of overcrowded classrooms and lack of teaching aids and education apps to work with. Their classrooms are very traditional and teacher-centred, instead of student-centred. The curriculum is almost outdated, as it still retains a significant proportion of what was designed by the colonial masters, and that cannot prepare students to face the challenges of the modern world. Society is dynamic and it appears to be moving faster than education (Friday, 2023). For education to keep abreast with the evolving society, there is need to restructure learning and learning process, to be flexible and embrace skills and current knowledge to enhance modern living. Teaching is of paramount importance in preparing students to thrive in the rapidly evolving globalized and digital economy. Unfortunately, there are many teachers who do not understand the needs of the children they are teaching, neither can they identify their aspirations in life and guide them through it. (St. Andrew's International School, 2023). In addition to that, there is currently no government initiative dedicated to consistent training and re-training of teachers to meet these demands (Abarna, 2023).

These are the reasons for highlighting an urgent need for holistic strategy in teacher preparation. Holistic strategies for teacher preparation focus on all-round development of teachers that enables them to have an integrated catholic world view. They expose the

teachers to the physical, mental, social, and spiritual dimensions of human development. They make them understand that the curriculum goes beyond the acquisition of academic core subjects, to other learning experiences that will equip the teachers with soft skills like critical thinking, innovative and creative skills, problem solving and decision-making skills. These will assist them in inculcating the same skills to students to boost their capacity to tackle challenges in a globalized and digitalized world.

The holistic strategy for teachers will also enable them to make the classroom come alive to the students by assisting them in self-discovery, awareness of their needs, potentials and goals. It will also make them appreciate the fact that the classroom is a melting pot for students from diverse cultures, with diverse needs and interest. Therefore, they need a strategy to meet the individual needs of the children, within the context of their diversity. The holistic preparation of the teachers will help them synergize between the classroom and real life. This will help them to prepare the students for career life and gradually begin the journey of smooth transition to the world of work. The teachers will also be able to use technology in the classroom to enable students get exposed to a wide array of resources, that will make them able to learn at their own pace and connect with other learners (Abarna, 2023; St. Andrew's International School, 2023).

Curriculum development and teacher preparation

Curriculum development and teacher preparation play a significant role in the educational process. They are essential elements in crafting a high-quality education system, that will equip learners with skills necessary to thrive in a rapidly evolving world that is increasingly embracing technology. The two are inseparable and needs to be given adequate attention by stakeholders if the Nigerian educational system is to be transformed in the 21st century. Rawat (2023) defines curriculum development as the process of designing a course and content of learning experiences that learners will be exposed to within an educational programme. It also involves revising or updating the contents, methods, and techniques of an existing programme of study. This programme of study is systematically planned to address the objectives, rationale, methods, and techniques of inculcating the learning experiences to meet the learners' need, goals, and aspirations.

Nathani (2022) emphasized that curriculum development should be learner-centred, subject-centred and problem centred. Modern curriculum development process integrates these three key aspects, highlighting the importance of the 21st century skills. It is learner-centred because it provides learners with ample opportunities to take the lead by participating fully

in the classroom through task performance that has relevance with the real world. The learners are also made to be involved in teamwork that enhances their collaboration in shared tasks, which allows them to express their opinion, make suggestions and asks questions. Their communication and vocabulary are also enhanced through their participation in conversations.

The subject centred design focuses on the specific subject content, how these are communicated to the learners, and how the learners construct knowledge through exposure to various subjects and other interrelated subjects through an inclusive approach. While the problem centred design focuses on assisting learners acquire soft skills, like communication skills, decision-making skills, analytical skills, creativity skills, that will enable them to tackle the challenges they encounter in their daily interactions. In essence, curriculum should be developed and periodically updated to meet the changing demands of the 21st century.

Teacher preparation functions as the conduit for transmission of curriculum content to students. It ensures that the training of teachers, align with an in-depth knowledge of the curriculum requirements. Teachers should be exposed to the understanding of the content knowledge, the teaching techniques and methodology. They should be equipped with pedagogical skills that will assist them design lesson plans that meet the learners' needs and create classroom environment that is so real that learners can relate situations in the classroom with home experience. Teachers should master how to make connections between theory and practice (Will, 2024). They should be flexible in the use of tech resources to zoom the world into the classroom for the learners. Teachers should be able to give feedbacks to curriculum planners as they interact daily with the learners on their challenges, observations and experiences with respect to the strategies and methodology, and the use of educational apps in classroom instruction. The feedbacks help the planners to revisit and update the curriculum, if it becomes necessary, to keep abreast with global reality.

Innovative teaching methods

Transforming 21st century education in Nigeria, will involve empowering teachers with innovative teaching methods. Traditional teacher-centred methods, which involve the instructor controlling the entire learning process while the learners remain passive, must be replaced with more dynamic and active student-centred participation. To enhance active learning, teachers should be able to utilize techniques, such as project-based learning. This method affords the learners to take the lead in their own learning process, as they collaborate

to seek solution to a challenging task under the teachers' guidance. Their mastery of the subject matter is deepened; experience and skills the learners acquire in this task performance, such as cooperation and problem-solving skills, will enhance their adjustment in the global world and skill development (Leming, 2024).

Another effective learning technique teachers need to be acquainted with is collaborative and peer-based learning, where learners can go beyond the classroom to collaborate with their peers, to carry out joint tasks and brainstorm under the teachers' guide. This technique helps learners develop soft skills like creative thinking, writing skills, and cooperation among others while also expanding their worldview. Part of teachers' preparation should incorporate utilizing digital tools and resources in classroom teaching, this is a way to interact and keep learners engaged in a digital world. It affords the teachers the opportunity to utilize multiple teaching methods to communicate knowledge to the learners. The proficiency of teachers in the use of digital tools will greatly facilitate them in monitoring of learners' progress, providing individual or personalized learning to track learners at their pace and foster collaboration with learners and also receive feedbacks from their parents. Technology integration empowers the teachers to create classroom models that will give learners ample opportunity for participation and hands-on activities.

Popular classroom models that current and prospective teachers should be familiar with are the blended and flipped classrooms. The flipped learning approach prepares the learners to gain insight into the material content before the actual classroom time. This approach helps the learners to participate actively in problem-solving and collaboration as they work in groups, the teachers monitor the group process and identify struggling individual learners for assistance (Lesly University, 2024). While in the blended learning, the teacher creates for the learners a flexible learning environment to deepen and master the subject content; the learners go beyond the structured learning in the classroom to interface with other forms of learning apps like zoom, WhatsApp, YouTube with their peers, while the teachers act as facilitators to guide them to the expected goals (McCarthy, 2016). These modern pedagogical approaches are learner centred; they deepen the knowledge base of the subject content and help the learners to build higher order cognitive levels which are needed in the 21st century.

Research, assessment, and evaluation

Research, assessment and evaluation are instrumental in teacher preparation programmes. The global world is technology-driven, and technology thrives on data. Research in teacher

education is a systematic investigation by teachers into the challenges of teaching and learning, utilizing the scientific method of inquiry to find solution to the issues encountered by teachers in how children learn and the approaches to use in teaching. The results provide evidence-based strategies and approaches to learning. It helps teachers and prospective teachers keep abreast with best practices in the classroom and update them with the current technologies that they can use in the classroom, that are best suited to the needs of their learners.

Research results facilitate the teachers' understanding of the relationship between theory and practice. They also provide lifelong learning and growth for the teachers as they continue to explore how best to engage their learners for effective learning outcome (Henderson et al., 2012; Counsell et al., 2010). Assessment is another component that teachers need to be familiar with in measuring learners' outcome. They employ various methods of assessment tools to do this, such as standardized tests, where learners are given the same questions, under the same conditions to write. Other times, continuous assessment tests are given by teachers intermittently or periodically as determined, to measure trends of learners' comprehension in the learning process. Assessment can also measure whether prospective teachers have acquired the necessary skills in measuring tools in a learning process.

Performance tests should be given by teachers to assess learners' overall performance at the end of a term or semester. Assessment is also used to measure the effectiveness of teachers' strategies, methods and technologies used in a learning process. It also measures teachers' effectiveness in a learning process. Evaluation focuses on measuring the learning outcome of learners, at the end of a learning programme, to ascertain whether the objectives have been attained, and required skills demonstrated. Evaluation also measures the teachers' preparation programmes to be sure that they are producing teachers who are equipped to meet the diverse needs of the learners in the 21st century (DeLuca & Volante, 2016).

Continuous research is important in teacher preparation programmes, because data-driven decisions will be needed in giving teachers and prospective teachers feedback on improving their instructional strategies in teaching practices, making their classroom learning active, and to align with current trends in the changing world. Continuous research feedback will also be of help in improving and updating the curriculum to meet the needs and demands of learners in a dynamic society. Furthermore, it will ensure the preparation for effective teachers who will influence their learners positively. To ensure that the standards of teacher

education is maintained, quality assurance mechanisms have to be put in place. Quality assurance in teacher preparation involves a systematic process of monitoring teacher preparation programme and making sure that standards and benchmark set for teacher quality is maintained in terms of deep knowledge content, competence, commitment, confidence, teaching process and service delivery (Singh & Kaur, 2013).

In Nigeria, there are three primary regulatory bodies that oversee the educational system and preparation of student teachers. Their role is to ensure that academic standards are effectively implemented and maintained across all institutions of higher learning. These bodies are the National Universities Commission (NUC), the National Commission for Colleges of Education (NCCE), and Teachers Registration Council of Nigeria (TRCN). The NUC is responsible for maintaining academic standards in all the universities; it monitors, supervises and accredit all academic activities in the universities to make sure they meet the established benchmark for all universities and ensure quality product output. Periodically, the NUC embarks on accreditation exercise through visitation panels to universities, to evaluate their programmes. They also reserve the right to update or revise the curricula as was recently done, which led to the introduction of the core curriculum and minimum academic standards (CCMAS) for all Nigerian universities, aimed at aligning them with global best practices; that revision, however, has its inherent challenges.

The NCCE is another body that ensures that high academic standards and quality are maintained in all institutions running teacher training programmes across the nation. It also regulates, accredits and evaluates teachers' programmes across the colleges of education. TRCN, on its part, is a body that ensures professionalization of teachers in all universities and colleges of education in the nation. It organizes qualifying professional examinations in which graduates of education in all the universities and colleges of education are meant to take. This ensures that teachers in Nigeria meet with the required standards to enhance quality education (Ikelegbe, 2020). It also helps in continuous improvement processes.

Psychological issues in teacher training

Well-being and resilience are two psychological constructs that are very fundamental in teacher training and will enhance professionalism and excellence in educational outcome. Wellbeing of teachers in training needs to be addressed; there are lots of factors in the environment that can impinge on the mental health of teachers, and that will impact negatively on the teachers' interactions with students. Such factors include poor remuneration, overcrowded classrooms, lack of school facilities, insecurity, high cost of

living, low motivation and lack of support from community. These stressors affect the teachers' productivity and hinder their ability to give their best in shaping the lives of their students. Prospective teachers not only need to be aware of these psychological issues, but also need to develop capacity and strategies in stress management, build resilience and stay mentally healthy. This is crucial as it enables them provide support to learners with diverse needs, by assisting them identify stress triggers and management tips. It also allows them create a supportive and conducive classroom environment that is threat-free (Ngina, 2024).

Professional ethics and teacher preparation

Professional ethics in education are moral standards, principles, core values and codes of conduct that teachers should exhibit in the practice of their profession. These expected moral standards, include behaviours and values that enable them uphold integrity and quality in the teaching profession. It regulates how they conduct themselves with their students, their colleagues and their immediate community. Ethics is very important in teachers' preparation because teachers are models and influencers; it is crucial that they display high standards of ethics and discipline that will affect the students and transform the society. A very important aspect of the educational process in Nigeria that has been greatly undermined is character training. The Nigerian educational institutions from primary schools to the university, are facing serious challenges that border on character flaws. They include inter-personal squabbles in the classroom, stubborn behaviours, bullying, cult activities and other numerous forms of unruly behaviours and practices. Incidentally, degrees in higher institutions are awarded in character and learning.

Therefore, institutional codes of conduct should be enforced to help students develop the right kind of attitudes and to build a culture of integrity in the institutions. This is why it is crucial that current and trainee teachers should be exposed to professional ethics, because of the central role they play in inculcating the right ethics best suited for different professions especially in the higher institutions. Some of the ethical professional standards and values trainee teachers should be acquainted with include respect for learners' rights, maintaining confidentiality with the students, shunning sexual harassment, abuse and threat, discouraging tribalism and nepotism, dressing smartly, maintaining dignity and integrity, acting as role model, refusing bribery and any form of corrupt practices, among many others (Teachers Registration Council of Nigeria, n.d). Hypothetical scenarios should be simulated for trainee teachers, to enable them practice the art of making ethical decisions. Ethical values and skills will guide teachers to inculcate social skills in their students and uphold quality Education (Mahona, 2023).

Vocational and lifelong learning and professional development

Vocational and lifelong learning is very critical in teaching profession. It has to do with the continuous training and updating of teachers' skills and knowledge to keep them abreast with global developments. This has become even more evident in Nigeria, since the post COVID-19 pandemic, which has resulted in a lot of global challenges confronting nation states. These include general downturn of world economy, migration issues and unemployment, to say the least. To be able to tackle these challenges, lifelong learning will empower teachers to engage students more effectively using new methodologies and technologies that will enable them to meet the students' needs. It will also enable them to utilize any available opportunity to retrain and upscale so that they can remain relevant in their jobs.

The post COVID-19 is creating demands for critical job opportunities, vocational and lifelong learning. This will enhance teacher training in critical job needs of industries, assist them in preparing students to align with the vocational needs of the industries and this will boost economic growth and personal development of students. Teaching practice and other related students' industrial work experience scheme (SIWES), that are designed to give students a real-life work experience and practice, should have their curriculum reviewed to align with the goals, expectations, work ethics and culture of the industries.

There are inherent challenges that confront teachers' lifelong learning in Nigeria; this includes lack of funds, inability of some teachers to embrace change and re-train or upscale immediately. Others are lack of institutions to provide lifelong training for its teachers, among others. However, efforts need to be intentional in providing continuous lifelong training opportunities for in-service teachers and pre-service teachers through workshops, seminars, webinars, and short online certification programmes. These will enable teachers develop professionally in their career and also transform teacher preparation into a lifelong learning process (UNESCO, 2024).

Conclusion

The 21st century is marked by rapid global transformation in every sector. As society is evolving with new challenges and demands, the effect of globalization marked by technology is reshaping the world and closing gaps between nations, and also altering patterns of economic, political and social transactions. To adapt to this changing pattern, learners should have access to qualified teachers who have the right kind of pedagogical skills, methodologies, knowledge content, and technology to equip learners and make them

career ready. Teacher preparation programme in Nigeria in its present form, cannot offer quality teacher education. It requires current and prospective teachers who are equipped with modern classroom management techniques to promote inclusivity, effectively integrate the use of multimedia in instruction, demonstrate expertise in the subject matter, use innovative teaching strategies, conduct continuous assessment and evaluation, and have capacity to build resilience and maintain good mental health. In addition, it requires teachers that can exhibit integrity and key into any opportunity for professional growth and development. The Federal government has made a lot of efforts towards quality education, but it needs to be a bit more intentional and strategic towards adopting a holistic approach towards re-training of current teachers and training of prospective teachers, to transform education to meet the needs of the Nigerian students and equip them with current relevant job skills in the global world.

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Transforming 21st Century Education: Holistic Strategies for Teacher Preparation and Professional Development in Nigeria

Nonso Bisong (Prof)

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