



ABSTRACT

Education has increasingly becomes important to the success of individuals, societies and Nations. Evidence abound that, among all educational resources, teachers' professionalism is specially a critical contributor to students' learning and successful development of a nation economically,

DELIVERING QUALITY EDUCATION IN TEACHER EDUCATION PROGRAMME BEYOND COVID-19 ERA: THE POWER OF DIGITAL TECHNOLOGY

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INTRODUCTION

Information and technology is popularly used in field of education for making teaching learning process successful and interesting for students and teachers. Students and teachers must have sufficient access to improve digital technology and the internet in their classroom, schools, and teacher educational institutions. Teachers must have the knowledge and skills to use new digital tools to help all students achieve high academic standard. The quality of professional development of teacher education depends on the extent of ICT integration in teacher education programme. Teachers are at the core of any living society.

Technologies play important role in training programme of teachers. Students' accesses knowledge and information through TV, digital media, cable network, internet and social media i. e. Facebook, Twitter, Whatsapp, Linkedinn, Igo, Line,



socially, politically and technologically. The need for functional teacher education for quality education delivery becomes inevitable. The need becomes urgent due to the impact of covid-19 that has altered not only the curriculum content, school calendar but methodology of teaching and means of instructional delivery. The paper therefore attempts to look at delivering quality education in teacher education programme beyond covid-19: The power of digital technology. The paper is structured into four parts namely, introduction, conceptual framework, where concepts of quality education, teacher education, digital technology, Covid-19 pandemic. Addition, the objectives of teacher education and the role of digital technology in teacher education were also discussed. The paper further discussed Delivering Quality Teacher Pre-service training Beyond Covid-19 through Digital technology and Delivering Quality Teacher In-service Training Beyond Covid-19 through digital technology. The paper considered digital technology as a powerful tool that can be use to transform and revitalize the existing teacher education programme in Nigeria. The societies' needs is changing on daily bases, the global community is moving on the fast lane, the leadership of teacher education programme is further challenged by global pandemic of Covid-19; our teacher education programmes therefore need to be redesigned to meet up the challenges of the 21st and that of post covid-19 pandemic, hence the need for quality education in teacher education programme through digital technology. The paper concluded that teacher education programme in Nigeria is to take cognizance of changing pattern of the societal need and the present global reality in order to respond appropriately through digital technology. The content of the teacher education curricula should take account of needs of the 21st century classroom teachers and impact of Covid-19. Teachers should be trained on the state-of-the-art hard and soft ware that is relevant to the 21st century classroom and to respond appropriately to the aftermath of Covid-19. Much needed to be done to change the narrative on the state of quality education in teacher education programmes in Nigeria.

Keywords: Quality Education, Teacher Education Programme, Beyond Covid-19 Era, Digital Technology, Teacher Pre-service training and Teacher in-service training



Wechat etc. ICT is very important for Pre-service teacher education programme in the 21st Century. Without proper knowledge of ICT teacher cannot perform in his/her class room and it could not be said to be a complete one Baishakhi and Kamal (2016). The classroom teaching scenario has changed and is still changing. There is a technological gap between the progress of the society and instructional activities of the teacher in the classroom. A critical look at our societies reveals how technology has revolutionized our society but the teaching- learning activities at school levels have remained so far away from technology.

Teaching occupies a honorable position in the society. ICT helps the teacher to update the new knowledge, skills to use the new digital tools and resources. By using and acquiring the knowledge of ICT, students / teachers will become effective. ICT is one of the major factors for producing the rapid changes in our society. It can change the nature of education and roles of students and teacher in teaching learning process.

Quality Education

The value of education in bringing about character and attitudinal change rank as important as its ability to change and reshape human potentials for desired development Usman and Abuh (2019). The present 21st Century's education is student centric education. Students learn from multi sources and for this reason use of ICT & Multimedia, it is very much essential in educational field and simultaneously, teacher's knowledge of ICT and Multimedia is also required.

Teaching and learning in the classroom is no longer the old traditional one way communication but two way communication where teachers as well as students participate in classroom discussion. So the teacher should prepare to cope up with different technology for use in the classroom to making teaching learning interested. For effective implementation of certain student-centric methodologies such as project-based learning which puts the students in the role of active researchers, technology becomes the appropriate tool. Technology has enabled better and swifter communication; presentation of ideas more effective and in relevant ways.



So for this reason technology is very much necessary for Teacher Education. Even though it was observed that a lot of teacher are reluctant in the use of technology in the process of teaching and learning in the classroom, the advent of Covid-19 has forced teachers, students and education institutions to quickly adjust their learning methodology curriculum content and teaching methods/ learning facilities.

Teacher Education Programmes

In Nigeria, reasonable preparations have been made to improve teachers' professional development through the establishment of colleges of education, both at the federal and state levels. Institutes of education and faculties of education in various universities have also been established to provide effective and professional teacher education programs. In such institutions, students receive training that will help them become teachers capable of shouldering responsibilities, showing initiative and being good models for their future pupils Ololube in (Baishakhi & Kamal, 2016).

The objectives of Nigerian teacher education as contained in the NPE (Federal Republic of Nigeria, 2013) are as follow:

1. To produce highly motivated, conscientious and efficient classroom teachers for all levels of our educational system;
2. To further encourage the spirit of inquiry and creativity in teachers;
3. To help teachers to fit into the social life of the community and society at large and enhance their commitment to the national goals;
4. To provide teachers with adequate intellectual and professional background adequate for their assignments and to make adaptable to changing situations, and;
5. To enhance teachers' commitment to the teaching profession

The teacher is one of the most important inputs in the education system. He shapes the direction and influences to a great extent other educational inputs to achieve the stated goals of the education industry. A teacher is therefore viewed as a trained individual who uses his knowledge, skills and expertise to erupt behavioural change in the learners. He uses his



knowledge of child psychology to redirect the perception, competence, knowledge, and skills of the learners to a positive learning behaviour that is desirable and accepted in the society Usman, (2020).

Teacher education is the process which nurtures prospective teachers and update qualified teacher's knowledge and skills in form of continuous professional development. Teacher education revolves around the policies and procedures designed to equip prospective teachers with the knowledge, attitude, behaviour and skills required in them to perform effectively in the classrooms and in other social gatherings including religious activities Usman and Abuh (2019).

Teachers should also know the right attitudes and values, besides being proficient in skills related to teaching. As we know the minimum requirement of any training programme is that it should help the trainee to acquire the basic skills and competencies of a good teacher. The new trends in teacher education are Inter-disciplinary Approach, Correspondence courses, orientation courses etc. Simulated Teaching, Micro Teaching, Programmed Instruction, Team Teaching are also used in teacher education. Digital technology acts as the gateway to the world of information and helps teachers and potential teachers to be updated. It creates awareness of innovative trends in instructional methodologies, evaluation mechanism among others (Baishakhi & Kamal, 2016).

In-service training is a planned process whereby the effectiveness of teachers collectively or individually is enhanced in response to new knowledge, new ideas and changing circumstances in order to improve, directly or indirectly the quality of pupils education. In-service training is a fundamental aspect for the enhancement of teachers professionalism related to the teachers vision to improve the quality of their work. Through in-service training, teachers can identify and evaluate critically the culture of the school which can bring changes to the working culture. Studies by Ekpoh, Oswald & Victoria (2013) shows that, teachers who attend in-service training perform effectively in their work concerning knowledge of the subject, classroom management, teaching method and evaluation of students



Covid-19 pandemic

The eruption of the COVID-19 pandemic has affected every sphere of life and may forever change how we have always lived and conducted our businesses, and no one can resist the wind of change that is blowing. Of all the sectors of governance, the educational sector, appears to have been most greatly affected and therefore requires a more pragmatic approach to resolution. As the COVID-19 Pandemic ravages the world, it is essential to attend to the educational needs of children and youth during and after the crisis (Usman & Lawal, 2020).

Coronavirus Disease (Covid-19) deadly disease has resulted to total shutting of schools in about 215 countries all over the world with 91.4% of the total number of enrolled learners in these countries momentarily mandatory out of school UNESCO (2020). This development has negatively impacted on the rights of learners, and poses a very big challenge to the realization of Sustainable Development Goal 4 on inclusive and quality education. In a short time, COVID-19 disrupted the landscape of learning in Nigeria by limiting how students access learning across the country. The closure of schools and learning facilities during the pandemic has resulted to further deterioration in facilities and capacities for the delivery of quality education Olaitan, Abdullahi, Tolorunju, Akinjo and Ogunjemilua (2020). The atmosphere in the schools is no longer the same, the teachers and the learners must device new ways of coping with the challenge posed by Covid-19. The need therefore for digital technology in teacher education programme becomes inevitable.

The index case of COVID-19 was confirmed in February, 2020. Subsequent development led to indefinite closure of all schools and learning facilities in Nigeria in March 2020. It will be recalled that at the outbreak of the COVID-19 pandemic in Nigeria, schools and all learning facilities were closed in order to safeguard the health and general wellbeing of our children, youths, teachers, and educational personnel (Federal Ministry of Education, 2020). The need to support education leaders at various levels of educational governance, in public and private educational organizations, in formulating adaptive, coherent, effective and equitable education responses to a crisis



that has significantly disrupted educational opportunities globally becomes imperative, Fernando and Andreas (2020)

Digital technology

Digital technologies are electronic tools, systems, devices and resources that generate, store or process data. Well known examples include social media, online games, multimedia and mobile phones. Digital learning is any type of learning that uses technology. It can happen across all curriculum learning areas.

Digital technologies create an impact upon what, why, where and how the individuals learn and who they learn from. The widespread use of digital technologies is in the form of computers, laptops, tablets, smart phones, mobile phones and so forth. The main purpose of digital technologies is to form a connection between the individuals rapidly, effortlessly and cost-effectively. The individuals get connected to each other with a huge range of digital services and resources.

Digital technology can be competent and valuable with the main purpose of making improvements within the learning areas (Higgins, Xiao, & Katsipataki, 2012). For instance, teachers make use of blackboards and write on them with chalks to provide training and instruction to the students. The students, who sit at the back of the classroom face problems in observing and understanding the concepts. In the present existence, there are usage of projectors and computers in classrooms, so that students are able to observe and understand the content in an effectual way. The usage of technology within classrooms has led to an increase in the enrolment of students. They have begun to take pleasure in learning and there has also been a decline in the rate of absenteeism. The individuals, who have special needs, for who are experiencing visual or hearing impairments, or those who belong to deprived, marginalized and socio-economically backward sections of the society, for them, technology has contributed to a major extent in the enhancement of learning

The COVID-19 pandemic has resulted in educational institutions across the world being compelled to suddenly harness and utilize the suite of available



technological tools to create content for remote learning for students in all sectors. Educators across the world are experiencing new possibilities to do things differently and with greater flexibility resulting in potential benefits in accessibility to education for students across the world. Nigeria cannot afford to look indifferent. These are new modes of instruction that have previously been largely untapped particularly in the primary and secondary arena. Below are some of the platforms for e-learning.

Role of Digital Technology (ICT) in Teacher Education:-

1. ICT helps teachers in both pre-service and in-service teachers training.
2. ICT helps teachers to interact with students.
3. It helps them in preparation for teaching, provides feedback.
4. ICT also helps teachers to have access to institutions and Universities, NCERT, NAAC NCTE and UGC etc.
5. It also helps in effective use of ICT software and hardware for teaching –learning process.
6. It helps in improving teaching skill, helps in innovative Teaching.
7. It helps in effectiveness of classroom.
8. It also helps in improving professional Development and Educational management as well as enhances Active Learning of teacher Trainees.
9. ICT helps teachers in preparation for teaching. In order to introduce ICT in pre-service teacher education different methods and strategies are applied. Different tools are used such as word processing, Database, Spreadsheet etc. Various technology based plans are used to help the teachers for their practice teaching.
10. ICT prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.

Statement of the problem

In performing their teaching activities and meeting these new demands teachers often find themselves with inadequate training and resources to address the challenges of adapting teaching content and formats to



students in disadvantaged situations. Even before the pandemic, teachers in the region had few opportunities for training on inclusion (UNESCO, 2018) or for working with pupils in less favoured and more diverse contexts (UNESCO, 2013).

In addition, the new circumstances have meant teachers have to use virtual platforms and methodologies with which they may not be familiar. If a teacher's school does not possess adequate computers and fast internet connection, the implementation of educational technology is not feasible. If teachers are not provided effective professional development on new technologies, they will not be capable of using it to its full potential. Certainly, the most basic step toward effective technology integration is widespread access to equipment necessary to run educational computer programs

Delivering Quality Teacher Pre-service training Beyond Covid-19 Trough Digital Technology

Technology is perhaps the strongest factor shaping the educational landscape today. Many school districts are showing support for increased levels of technology in the classroom by providing hardware such as tablets and computers, enhancing internet connectivity, and implementing programs designed to improve computer literacy for both teachers and students. Although teachers generally appreciate the benefits of educational technologies, they often find smooth and effective integration of new educational technologies challenging. From acquisition of new technology equipment to adaptation of curricula and teaching techniques to incorporate new educational tools, technology integration presents significant challenges to educators at each level of school systems.

Teachers today report increasing confidence using classroom technology, operating software, and searching the internet, but given that technology is constantly changing, it is more important than ever that teachers stay up-to-date with their technological expertise Ertmer (2012). Even if a school or government were to hire only teachers who were literate in current classroom technology, countless new technologies will be developed



during their teaching careers, and they will need to undergo additional training to keep their skills current. Without the necessary resources to provide continuous technological training, schools and teachers will continue to cite inadequate professional development as a major barrier to technology implementation.

Effective use of digital technology is driven by learning and teaching goals rather than a specific technology: the technology is not an end in itself. You should be clear about how any new technology will improve teaching and learning interactions. New technology does not automatically lead to increased achievement. How will any new technology support students to work harder, for longer, or more efficiently, to improve their learning. Teachers need support and time to learn to use new technology effectively. This involves more than just learning how to use the hardware or software; training should also support teachers to understand how it can be used for learning

After the covid-19 pandemic, parents, teachers, mass media, the government, and others must have changed their views and perceptions about their role in the education process. For example, parents now have a better understanding of the need to work jointly with the schools to foster the education of their children. Equity gaps have been made more evident, along with the urgent need to narrow them. There is better understanding of the digital divide, the differences in access to hardware, connectivity, and the right software, but also the huge shortfall of teachers with the digital skills, Global Education Practice (2020). It is important that each stakeholder rededicate themselves to their respective new roles occasioned by the pandemic in order to provide the learners with the needed and appropriate learning content and skills beyond COVID-19

Delivering Quality Teacher In-service Training Beyond Covid-19 Trough Digital Technology

The need for in-service training or staff development programme for teachers plays an essential role in successful education reform. It also serves as a bridge between prospective and experienced educators to meet the



new challenges of guiding students towards higher standards of learning and self development. In developing the professionalism status of teachers, the training program such as in-service training should not be run away from the reformation that occurs. In-service training has for many years been the driving force behind much changes that has occurred in the area of teaching and learning. As in any other profession, it is vital that teachers keep up to date on the most current concepts, thinking and research in their field (Che, 2014).

The need for in-service training in schools is getting more attention for teachers to equip with new knowledge and skills for them to face new challenges and reformation in education occasioned by covid-19 pandemic. Digital technology enables teachers to leverage technology to achieve new levels of productivity, implement useful digital tools to expand learning opportunities for students, and increase student support and engagement. It also enables teachers to improve their instruction methods and personalize learning. This can be achieved through teacher in-service training

In-service training can enhance the professionalism of teachers who can contribute to the organisation to achieve it's goals. In-service training is a professional and personal educational activity for teachers to improve their efficiency, ability, knowledge and motivation in their professional work. According to Ong in Che (2014), In-service training is the totality of educational and personal experiences that contribute toward an individual being more competent and satisfied in an assigned professional role. The primary purpose of in-service training is to enable teachers to acquire new understanding and instructional skills. It focuses on creating learning environments which enable teachers to develop their effectiveness in the classroom.

To realize effective technology integration, school administrators should seek assistance to identify and provide ongoing training. Teachers want to improve student performance, and technology can help them accomplish this aim. To mitigate the challenges, administrators should help teachers gain the competencies needed to enhance learning for students through



technology. Additionally, technology in the classroom should make teachers' jobs easier without adding extra time to their day.

The International Society for Technology in Education approves materials aligned to their standards for integration of technology into the classroom including student curricula that integrate technology (addressing student standards), professional development resources (training teacher standards), as well as assessments. Professional development programs approved by the ISTE include face-to-face instruction, online courses, online communities of learning, online learning modules, and in-class mentoring, and target development of different levels of teacher technology skills. Using guidance provided by ISTE, schools can identify professional development programs that best fit their needs (Hu & Garimella, 2014)

Additionally, technology in the classroom should make teachers' jobs easier without adding extra time to their day. The COVID-19 pandemic has demonstrated why online education should be a vital part of teaching and learning. By integrating technology into existing curricula, as opposed to using it solely as a crisis-management tool, teachers can harness online learning as a powerful educational tool. The effective use of digital learning tools in classrooms can increase student engagement, help teachers improve their lesson plans, and facilitate personalized learning. It also helps students build essential 21st-century skills.

Prominently rising from the COVID-19 crisis is the issue of content. Educators need to be able to develop and weigh in on online educational content, especially to encourage students to consider a topic from different perspectives. The urgent actions taken during this crisis did not provide sufficient time for this. Access is an added concern — for example, not every school district has resources to provide students with a laptop, and internet connectivity can be unreliable in homes.

Conclusion

Teacher education programme in Nigeria is to take cognizance of changing pattern of the societal need and the present global reality in order to respond appropriately through digital technology. The content of the



teacher education curricula should take account of needs of the 21st century classroom teachers and impact of Covid-19. Teachers should be trained on the state-of-the-art hard and soft ware that is relevant to the 21st century classroom and to respond appropriately to the aftermath of Covid-19. Much needed to be done to change the narrative on the state of quality education in teacher education programmes in Nigeria.

Recommendation

Teachers should be trained on the state-of-the-art hard and soft ware that is relevant to the 21st century classroom and to respond appropriately to the aftermath of Covid-19 pandemic. Much needed to be done to change the narrative on the state of quality education in teacher education programmes in Nigeria.

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