

THE ROLE OF TECHNOLOGY IN BRIDGING THE GAP CREATED BY COVID-19 PANDEMIC ON EDUCATION: THE NATIONAL TEACHERS' INSTITUTE EXPERIENCE

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ABSTRACT

Technology is the sum of any techniques, skills, methods, and processes used in the production of goods or services or in the accomplishment of objectives. It supports learning, builds 21st century skills, increases student engagement and motivation, and accelerates learning. This process enhances integrating technology in education with the objective of diversifying the learning environment for students. The main purpose of this paper is to show the impact of technology in bridging the learning gap created by closure of schools all over the globe, and Nigeria to be specific as a result of covid-19 pandemic. According to a report by UNICEF (April, 2020), over 10.5 million children in Nigeria are out-of-school as at 2019, banditry, kidnappings, poverty etc. constitute more. The National Teachers' Institute (NTI) being major teacher supplier and trainer in Nigeria, in collaboration with various stakeholders, came up with various programmes to assist learners in public schools to bridge the gap created by covid-19, and also train teachers with the technical skills to enable them reach out to their students anywhere, anytime, and any place. Some of the programmes includes online and offline, but the teachers lack technical skills, motivation and lack of awareness from the parents to encourage their wards to key in and be part of the technological advancement. A qualitative survey design was adopted for the study, the instruments used are document review, semi-structured and structured interview questions, three research questions were used with a total of 90 participants. Findings from the study indicates that over 80% of learning was lost by students between March and September 2019/2020. The paper recommends National Teachers' Institute (NTI) being the prime driver of teacher professional development in Nigeria, should be given the opportunity for continuous development of teachers on issues boarding new waves in teaching and learning.

KEY WORDS: Technology, Bridging Gap, Covid-19 Pandemic, Education, Experience

INTRODUCTION

The Covid-19 pandemic has created the largest disruptions of school system in human history according to UNICEF (2020). It affected nearly 1.6 billion learners in more than 190 countries in the world which led to closures of schools and other learning spaces. The closure of the schools due to the Covid-19 pandemic, has negatively affected student's learning outcome, the general school system and the parents.

This had a devastating effect on Nigeria's educational system especially on learners from poor families that attended public schools. The National Teachers' Institute (NTI) being a major teacher supplier and trainer in Nigeria, in collaboration with Federal Government of Nigeria (FGN), development partners like the Commonwealth of Learning (COL), United Nation Child Education Fund (UNICEF) and other stakeholders came up with various programmes of integrating technology to help bridge the gap created by Covid-19 pandemic. The programmes were aimed at empowering teachers with new technological skills to enable them reach out to learners anywhere, anytime and anywhere.

Technology has become the main focus that has taken a Centre stage affecting our culture and society which had to be adjusted to meet the challenges of the digital age. The lockdown due to the covid-19 pandemic has facilitate schools and universities to begin experimentation of online programmes and schooling system. Technology and education are interconnected and has impacted on the quality and quantity of teaching, and accelerated the distance-learning programmes of the National Teachers' Institute (NTI).

The National Teachers' Institute (NTI), embarked on developing self-study materials using technology in collaboration with Federal Government of Nigeria (FGN) and other various stakeholders like COL, UNICEF through developing videos on Family Health, Podcast on Learning Recovery Programme (LRP) which was piloted in Sokoto and Kebbi states of Nigeria.

The use of technology enhances the students learning process or an alternative to face-face learning outcome, application of technology creates a pathway for differentiated instruction to meet the unique needs of students (Gulati 2008). Technology is capable of bridging the gap occasioned by the covid-19 pandemic and beyond (Kunle & Nwamaka, 2020). Therefore, integrating technology into the education system could be harnessed to deliver teaching and learning even if the teachers or learners might not be physically present in the class.

LITERATURE REVIEW

Despite the institutional closures, learning has continued to thrive uninterrupted in the more developed countries, with the help of technology, except in few areas that lack internet connectivity or access to a web-enabled device, which in the United Kingdom constitute 10% of the entire households (New York Times, March 17, 2020). In the less developed countries, however, the massive scale of institutional closures has laid bare the uneven distribution of technology and the sheer lack of institutional preparedness to support teachers in the successful and safe use of technology for online learning resulting in huge loss of learning. Bolaji, (2021) argued that, the COVID-19 pandemic has affected every activity of the world with educational institutions not exempted.

The lockdown has halted instructional activities in the four walls of classroom in Nigeria. Hence, many educational institutions have resulted to embracing Technology-Enhanced Learning (TEL) platforms to sustain academic session and continue to engage in teaching-learning activities through WhatsApp, Google Classroom, Schoology and Zoom Video Conferencing. According to OECD report (2020), the school closures related to the current Covid-19 pandemic illustrate that students from diverse backgrounds who are more at risk of increased vulnerability are less likely to receive the support and extra services they need, and the gap between students that experience additional barriers and those that do not has further widen. Sessay (2021) in a Learning Recovery Plan (LRP) for Kebbi and Sokoto States stated a snapshot of educational challenges and opportunities for recovery in Africa and Nigeria to be specific which includes electricity and network data are unavailability , the United Nations Educational, Scientific and Cultural Organization (UNESCO) identified impacts of COVID-19 on African Education Systems. These included among others increased dropout rates, transition to distance learning and the digital divide, distance platforms used in Africa, teachers' readiness, and status.

The covid-19 pandemic has significantly troubled the lives of children from marginalized and vulnerable backgrounds, especially children with special needs and low-income families. The lockdown has deprived these children of physical learning opportunities and social and emotional support available at school (Bonal & Gonzalez, 2020). The current COVID situation has revealed many underlying vulnerabilities and inequalities in the education system. Though Nigerian teachers are used to the chalk-and-talk method, an online setup has compelled them to discover innovative strategies to maintain an inclusive classroom. In another related development, Talib & Mutayyib (2021), reported that the lockdown has wreaked havoc on many aspects of daily life, but education has been particularly hard hit by this unprecedented situation. The

closure of educational institutions brought along many changes, including the transition to more technology-based education.

Many educational institutions have been compelled to make an immediate transition to remote methods of learning that rely heavily on technology. The immediate transition to online learning has not made it possible for many to be adequately prepared for the challenges ahead. This migration to remote learning had to be implemented as quickly as possible, and for many learning institutions, it happened several months into the academic year, leaving both staff and students with little time to plan, adjust and adapt. According to Obiakor and Adeniran (2021), before the Coronavirus (Covid19) pandemic stalled learning in Nigeria, the educational system was for long grappling with formidable challenges. that was further confounded with the outbreak of the pandemic. These challenges include, poor funding, unequipped laboratories, unqualified teachers, lack of functioning libraries, and poor learning environment, coupled with inequitable access to educational opportunities among urban and rural dwellers.

STATEMENT OF RESEARCH PROBLEM

The outbreak of Covid-19 has crippled learning in many countries including Nigeria, which is partly affected by ravaging insecurity. While the Global Campaign for Education (GCE) acknowledges the public health decision to close schools, the Federal, States Governments and other agencies spent a lot of resources in providing financial assistance, packages and emergency palliatives while completely ignoring the educational sector with little or no clear line to cross. The Covid-19 pandemic has stalled teaching and learning for more than five months in all schools in Nigeria (public schools to be specific). This created huge gap in learning that is yet to be bridged.

At the same time, each day millions of children were prevented from going to school due to emergencies and humanitarian crises. In this regard, the National Teachers' Institute (NTI) assumed that contingency plans should be put in place to ensure educational delivery even in times of crisis. The major challenge is regaining what has been lost. In this context, can technology be used to bridge the gaps created in the pandemic period, can technology be used to mitigate learning gap created by closure of schools and serves as an alternative platform for teaching and learning in schools? This paper therefore, seeks to explore the possibility of deploying technology in education delivery especially within the context of teaching and learning anywhere, anytime and anyplace, and the role technology can play to deliver knowledge to large number of students at the same time.

OBJECTIVES

The objectives of the study are:

1. To find out the effects of Covid-19 on education in Nigeria.
2. To explore the role technology can play in bridging the gap created by school closure as a result of Covid-19 pandemic.
3. Suggests recommendations on the use of technology to mitigated teaching and learning in crisis situation.

RESEARCH QUESTIONS

1. What are the effects of Covid-19 on education system in Nigeria?
2. What role can technology play in bridging the educational gap created by COVID 19 pandemic?
3. What are the recommendations for the use of technology in teaching and learning in crisis situation?

RESEARCH METHODOLOGY

The research used qualitative survey design. Participants were drawn from primary and junior secondary schools in Chikun Local Government Area of Kaduna State, they included five (5) Head Teachers from 5 primary schools and two (2) principals from 5 Junior Secondary Schools. Thirty school administrators and teachers from the State Basic Education Boards (SUBEBs) of Sokoto and Kebbi States who participated in the Learning Recovery Programme (LRP), (still on-going) NTI-COL collaboration project also participated in the study making a total of 90 participants. The instruments used to gather data were document review, semi-structured and structured interview questions. The procedure used for data collection were one-on-one interview (in-depth interview) and group interview Focus Group Discussion (FGD). Some of the responses were received through SMSs, WhatsApp messages, and emails. Document review of syllabus and record of work was carried out to find out the coverage of the syllabus during the school closure. Record of work of the teachers for two terms which forms more than 70% of the session's curricula activities were reviewed. The data gathered were transcribed, analyzed and summarized.

RESULTS

The research examined two terms record of work of the teachers, which forms more than 70% of the session's curricula activities, especially for examination, transition and promotion classes for primary 4 – primary 6 upper basic, and Junior Secondary School (JSS) 3 and Senior Secondary School (SS3). The result showed that over 80% of learning was missed by students due to the lockdown specifically between March and September 2019/2020 academic session.

The study discovered out that the ministry of education in Kaduna State organized television and radio programmes which were aired on State TV stations, and FM radios, but the participation was low, because, many students and their parents do not have access to television or radio. The study also found out that in Sokoto and Kebbi States, administrators and teachers who participated in the LRP were able to reach out to their remote learners using podcasts with their smartphones and other electronic gadgets, but the participation was still low due lack of awareness, poverty and above all attitude.

DISCUSSION OF FINDINGS

The finding showed that over 80% of learning was lost by students between March and September 2019/2020 academic session. This finding corroborated that of Bolaji, (2021) who reported that, the COVID-19 pandemic has affected every activity of the world with educational institutions not exempted. Similarly, Bonal and Gonzalez, (2020) found that the lockdown has halted instructional activities in the four walls of classroom in Nigeria. The lockdown has deprived these children of physical learning opportunities and social and emotional support available at school. The current COVID-19 situation has revealed many underlying vulnerabilities and inequalities in the education system. Related to this finding is the result from Talib & Mutayyib (2021), who reported that the lockdown has wreaked havoc on many aspects of daily life, but education has been particularly hard hit by this unprecedented situation.

The study discovered that the Ministry of Education in Kaduna State organized television and radio programmes which were aired on State TV stations, and FM radios, but the participation was low, because, many students and their parents do not have access to television or radio. Most of the students that benefitted from the use of technology in learning are those from the Urban and Semi-Urban areas who have access to Television, computers, smartphones etc. and had steady electricity supply. While, those living in the remote areas did not have electricity nor computers as such could not benefit from the TV programmes but could have access to radio which belong to their parents.

This outcome corresponds to the findings of UNESCO (2021) which reported that teaching and learning cannot be conducted, due to nationwide lockdown in Nigerian schools, particularly in rural areas, where electricity and network data are unavailable. With already high unemployment rate and insecurity, closure of schools for a longer period have further heighten the problems in Nigerian educational system. Obiakor and Adeniran (2021) pointed out that the educational system in Nigeria was for long been grappling with formidable challenges. that was further confounded with the outbreak of the pandemic. These challenges include, poor funding, unequipped laboratories, unqualified teachers, lack of functioning libraries, and poor

learning environment, coupled with inequitable access to educational opportunities among urban and rural dwellers. Similarly, Talib & Mutayyib (2021), added that the closure of educational institutions brought along many changes, including the transition to more technology-based education. Many educational institutions have been compelled to make an immediate transition to remote methods of learning that rely heavily on technology. The immediate transition to online learning has not made it possible for many to be adequately prepared for the challenges ahead. This migration to remote learning had to be implemented as quickly as possible, and for many learning institutions, it happened several months into the academic year, leaving both staff and students with little time to plan, adjust and adapt.

The study also found out that in Sokoto and Kebbi States, administrators and teachers who participated in the LRP were able to reach out to their remote learners using podcasts with their smartphones and other electronic gadgets. This agreed with the argument of Bolaji, (2021) who said that many educational institutions have resulted to embracing Technology-Enhanced Learning (TEL) platforms to sustain academic session and continue to engage in teaching-learning activities through social media platforms like; WhatsApp, Google Classroom, Schoology, Zoom Video Conferencing etc. In the same vein, Goodyear and Retalis, (2010) justified the use technology to deliver instructional content in turbulent times, like the Covid-19 pandemic success, and sometimes survival, depend upon the ability to distinguish between what is changing and what is staying the same.

CONCLUSION

The future of the Nigeria's educational system is in the hands of every one of us and we cannot afford to allow it to be soiled with the interference of the coronavirus. The Government, Private sectors, concerned individuals and Organizations both within and outside the country should as well come in to rescue it from the impending doom which may spring up after the lockdown caused by covid-19 pandemic if Education for All (EFA) is to be realized by 2030. Report from e-Learning Africa (2020) stated that movement to online learning will primarily benefit already privileged urban communities that have access to infrastructure especially power supply while, marginalizing the underserved rural communities widening digital and education gap.

This means that there are thousands of students who cannot partake in online teaching because they live in rural areas where they do not have means of power supply, it is therefore pertinent that other remote learning devices should be explored to suit specific peculiarities of learning abilities of all students. To keep up with the rapidly changing times, educators need to not simply 'adjust' to the new normal, but feel as comfortable and confident in this technological world as their digital-native students. Students may feel at home in this brave new world, but they still need teachers to help guide/facilitate them through it. This is why NTI swing into action to explore more alternatives to face-to-face teaching and design more programmes and instructions to move with 21st century teaching and learning activities within and outside the classroom.

RECOMMENDATIONS

The National Teachers' Institute (NTI) has observed that there were no proper plans in place to curb and manage the influence of coronavirus on the educational system, it is highly recommended for the government, educational enthusiastic, concerned educational stakeholders to ensure there are futuristic plans in case of another similar experience. After covid-19, nobody knows what other occurrences will happen in future that will lead to interruption of the activities of the educational system in Nigeria, therefore holistic plans are to be made in ensuring the future of the education system is secured in case of any emerging unexpected crisis. Other recommendations include among others: -

1. Devices for digital education should be provided by sponsors of education, Federal, State, Local Government Authorities, and State universal Basic Education boards (SUBEBs);
2. Training and re-training of teachers should be an on-going, exploring different aspect of remote learning peculiar to the areas the teachers and the students came from;

3. The government and indeed schools should collaborate with development partners to achieve the vision of digitalizing education, as an alternative;
4. The government and educational institutions should envision occurrence of pandemics (such as banditry, insurgency, flooding, storm, insecurity etc), and make adequate preparations of an all-inclusive alternative to teaching and learning in the classroom;
5. The National Teachers' Institute (NTI) being the prime driver of teacher education in Nigeria, should be given the opportunity to continuing teacher professional development on issues bordering new waves in teaching and learning for the benefit of all citizens.

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