

EDUCATING THE EDUCATOR: UPGRADING TEACHERS' SKILLS FOR DIGITAL EDUCATION IN NIGERIA

INTRODUCTION

This is the twenty-first century and everything is going digital. Health, finance, trading, agriculture, communication, gaming, entertainment, and every other field of human endeavour has been enhanced or is being enhanced by the very many possibilities that digital technology provides. Education, the vital core of human development, is not left out of the action.

From audio and video lessons to assistive technology like JAWS (for persons with Disability), eBooks, audiobooks, and a vast array of products and services, it has become infinitely easier to learn now than it was just a few decades back. The emergence of social media platforms like YouTube, with billions of hours of content for every subject under the earth, has put education and information at the fingertips of anybody who can afford a smartphone and internet connection. For this reason, the meaning of illiteracy is beginning to change. In the next two decades, perhaps, illiteracy would no longer mean the inability to read and write but a lack of digital skills and internet-savvy.

Individuals who cannot send emails, do not have twitter handles, cannot upload videos on YouTube or Twitch and cannot collaborate (use Google docs or set up meetings via Skype or Zoom) would be considered unskilled and find it awkward, or completely impossible, to function in the workplace. These skills are now being taught or acquired even before a child takes her first steps.

Digital devices like tablets, smartphones, smartwatches, flash drives, scanners, and wifi routers, are now an almost indispensable part of life and it is no longer a symbol of status to possess some or all of them.

Thankfully, Nigeria is quite abreast of the trend: the country has one of the most sophisticated fintech environments in Africa, an internet-compliant banking system, and a robust social media space that is in tandem with our huge population. Internet service in Nigeria is also one of the fastest and cheapest on the continent ^[1] and it is relatively easy to acquire laptops, smartphones, and other devices needed to go digital.

Nigeria's education sector however needs some serious catching up. For digital education, it is better to catch them young. Five- and six-year-olds in Europe, Asia, and America are already able to code and do other cool stuff with the guidance of their instructors. This is also the case for Nigerian kids in expensive schools. They are gaining skills and leaving their peers behind – a reality that could create a technology caste system in the future.



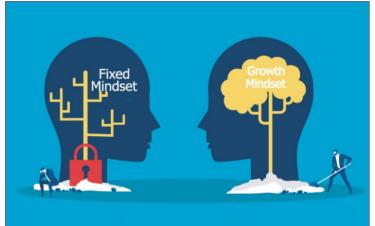
(Photo Credit: www.open.edu)

An early introduction of children to digital education can only be successful if primary and secondary school teachers are equipped with the very same skills they are expected to inculcate in students. This is where it becomes inevitable to upgrade the skills of all teachers for digital education and prepare the ground to ensure that new trainees also become digital-compliant. The task will require strategic planning and diligent execution by the government.

A Shift In Perspective

There is no debating the fact that a nation cannot grow beyond the quality of teachers it has at her disposal. The peculiarity of education in the fourth industrial age does not only apply to reinventing and retooling the classroom and student experience, but also a proper and constant eclectic capacity building for teachers.

Teachers are critical and central to the complete reinvention of our pedagogical process, and they are pivotal to the nation's quest to retool and upgrade her human capital. Globalization and technological advancement has also led to a shift in the reality of the education system from a traditional teachercentred pedagogy to a learner centred system. A phenomenon that justifies our thesis on the need to upskill teachers in all ramifications, the basic argument of the current pedagogical process is that educators need to become learners and to constantly upskill themselves if they don't want to lose their relevance in a new educational system that is witnessing a reversal of roles.



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Modern pedagogical structure has moved past the teacher or one individual being the sole repository of knowledge, data or information to a system with independent, decentralized and extremely accessible and impersonal virtual knowledge systems. This system sometimes produces learners that are smarter than their teachers. The foundation of this modern pedagogical system is digital technology. With this new age, being adept at digital tools would be critical to accessing information, as well as distilling this information to students who also have equal access to the same repository of knowledge with the teacher.

A RAND Corporation research on digital learning ^[2] estimated that technology skills have to be updated every three years in order to have continued relevance. Much more fundamental is the role-reversal pointed out in the study: educators' role is now to guide the learner to access and evaluate information, rather than to be the sole source of information. They

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emphasize the analogy of educators as coaches as opposed to classical teaching, thus educators need to be familiar and comfortable with using new learning tools and technologies in their teaching.

In the industrial north, the challenge is bridging the gap between a digitally skilled learner especially those that are considered as 'digital natives' by virtue of their being born within the fourth industrial age, and a teacher who is still grappling with the how to adapt his skill set to the learning of digital technology.

The challenges with schools generally in Nigeria, especially teacher training colleges is that they are founded on an archaic understanding of digital education. In some colleges of education in Nigeria, intending teachers in training still submit hardcopy, paper assignments and digital education is not yet a criteria when it comes to teaching requirements. This is perhaps why it is difficult to create a culture of pedagogy that is founded on digital learning. Some schools do actually have ICT centres, even colleges of education in Nigeria, most have computer based courses that prospective teachers need to complete or pass before they can be awarded the basic certification in education. Unfortunately, digital education in the fourth industrial revolution has moved beyond this, it has moved beyond been able to use the hardware of the 20th century to being able to understand software, tools and packages to help the individual access the global repository of information through the internet and being able to use the various application available to distil this information beyond the extant face to face learning.



(Photo Credit: www.blog.ttnf.ng)

The teaching service currently in Nigeria considers being digitally savvy to mean being able to operate a computer which is ascertained through a three-month course. It does not consider it a systematic and continuous process that is dependent on a string of backward and forward support systems that sees education as a learning experience other than the teacher knows it all classical structure.

It is important to state that the education atmosphere will need a systematic rejig so as to complement digital upskilling of teachers especially in public schools at all levels, it is not impossible, and education policies that speak to this are on the ground. This would also require a tectonic change from the traditional 'being able to use a computer system' that has been taken to be ICT education in Nigeria to evolve our pedagogical system.

Gaps in Existing Government Policy



(Photo Credit: www.td.org)

The National Policy on ICT in Education was approved by the federal government in April 2010 for implementation across the federation. The document was subsequently reviewed and signed in 2019. The policy aimed at empowering: Teachers and trainers to use technology to support all learning across the curriculum, functioning as coaches, mentors, advocates and managers of information, also included in the document is: Teachers and trainers are transformed through technology, from authority-experts to facilitators guiding the students/learners to use technology to find answers.

Two issues that are germane to the digital upskilling of teachers are top in the policy thrust of this document, which states that government:

(i) Build and encourage the development, utilization and sustenance of the ICT manpower required to achieve an ICT-enhanced Education;

(ii) Establish and sustain a common ICT infrastructure platform for education at all levels;

The focus area of this policy is human development, which also emphasizes the need for upskilling of teachers to realize the ICT objective of this policy.

The government also came up with a national implementation guideline on how to achieve this policy with a proper work plan that include timelines of how to achieve an ICT enhanced education including the empowerment of teachers to facilitate education through the use of digital technologies. While laudable, the implementation of the policy has been fraught with challenges making results of ICT in the educational sector still below global standards.

Another policy gap that needs attention is in the Teachers Registration Council of Nigeria Act. The council is vested with wide powers in determining who can train teachers, who can be called a teacher and what teachers should learn while being trained. Unfortunately, a number of the provisions of the Act are not in tandem with modern realities. For instance, the penalty for unregistered teachers practicing and schools employing such is far from being a deterrent for compliance.



To make Nigeria's education system fit for the digital economy, the guardians of the portal – the teachers – must be armed to the teeth. While excellent infrastructure including internet connectivity, and an up-to-date curriculum are inevitable, a digital-savvy teacher corps is the icing on the cake for the youngsters who will uphold Nigeria's economy from now onto the next century. The children deserve the best.

RECOMMENDATIONS

It is clear and agreed by stakeholders that digital learning which essentially means bringing tech innovation into education, is important for national development. It is also clear that educators themselves need to be upskilled to understand technology and use it to deliver learning. What perhaps is not often apparent or talked about is that in contexts like Nigeria, the entire value chain of education needs upskilling so that the appropriate policies, which are the important under guards of long lasting change, are made with effective measures for implementation, monitoring and evaluation. The following recommendations will address the value chain of education in Nigeria to achieve the goal of properly integrated digital learning for teachers and pupils too. While there might be preponderant focus on Basic Education, these recommendations apply to all levels of education.

1. Increased and Consistent Investment in Education

Pushing for increased funding of education appears to be stating the obvious but requires re-iteration. The priorities of every government is reflected in the area to which the bulk of their funds go. For Nigeria, the handwriting is clear on the wall and the results, open for all to see. The UNESCO benchmark for budgetary allocation to education is between 15% and 20%^[3] and Nigeria has never come close to these figures. The 2020 budget allocates less than 7% to education^[4] but ironically, over 70% goes to recurrent expenditure. This begs the question of how Nigeria intends to position itself for the achievement of SDG 4 and galvanize innovation-led national development. Increased funding should be targeted at remuneration, infrastructure and training.



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When the budgetary allocation is put in context of Nigeria's burden of out-of-school children and statistics such as 37.6 pupils to a teacher as at 2010^[5] which is likely to have increased since then considering the increase in geographical mobility of labour as a result of poverty, unemployment, underemployment, insecurity etc, it becomes clear that both the executive and legislature have to do better.

Nigeria's defense budget has continued to increase especially because of unrest in at least 4 out of the 6 geopolitical zones and sectors such as education are impacted. For example, the 2020 revised budget reduced allocation to education by 55% with its total share of the budget pegged at 6.4% while allocation to defense makes up 16.8% of the total budget [6]. Considering that education has a direct impact on forces that drive security, the executive and legislature need to reprioritize and begin to focus on driving development through education which will improve the insecurity situation of the country in the long term. Investment in education and digital learning and upskilling of teachers will include providing the necessary infrastructure for the achievement of inclusive and equitable quality education and promotion of lifelong learning opportunities for all. It is increasingly clear that the best way to achieve these goals is through digital learning and that by necessity includes the upskilling of educators.

A major chunk of funding goes to remuneration and it is public knowledge that teaching is one of the low paying professions in Nigeria as of date. This at default is a disincentive to bright minds who though having a passion to teach have the reality of their bills to contend with. Payment of employees and especially teachers' salaries should be given utmost attention. Government should treat payment of their employees' salaries as a first line charge item. This encourages an influx of more young 'digital natives' into the profession and also encourages existing teachers to be willing to take the necessary steps to improve their skills. Incentives increase performance - a substantial salary bump is a good initiative especially for teachers. Furthermore, digital education demands an investment in infrastructure & training both at the teacher training institutions as well as the schools in which they teach. Government should commit to allocating a certain percentage of first, the national or state budget to education and a percentage of the education budget for enhancing infrastructure & training. Such policy commitments should be consistent and incremental.

2. Review Competencies & Upskill Existing Teachers

The first step in improving any system is to conduct a holistic review of the competencies required and currently existent in the teaching force. In more technical terms, a Skill Audit is essential. This critical exercise would expose digital skill gaps and guide the process of up-skilling. It also helps lay the foundation for documenting a revised and a Post-COVID era compliant competency framework that reflects the desired digital skills and proficiency levels required of teachers in this highly digital age. An example is the harmonization of 21 digital competencies for teachers into 8 by the European Commission in 2019^[7]. The successful completion of this would help policy makers develop robust programs targeted at closing the identified competency gaps through training over a period of time.

For instance, Hungary is running a 3 year program between 2017 and 2020 aimed at teaching digital competence to over 40,000 teachers within the period ^[7]. This would not be possible without first ascertaining the existing gaps. Though the Lagos State Government through its Eko Excel Program is currently taking commendable steps in this regard, most states are yet to commence. A policy based exercise such as



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this should not be one-off but cyclical as global realities change. The NPower program of the Federal Government which has a component that trains tech-savvy young Nigerians can be remodeled to meet certain aspects of this need. This approach achieves two things, first is that it delivers much needed upskilling to teachers across the country as well as take advantage of the teeming unemployed population of the country which continues to increase and stands at 27.1% as at the 2nd quarter of 2020^[8].

3. Re-Model Teacher Training Curriculum

The ability to teach in a digital age to a digitally savvy student population requires a whole new skill set. While sometimes reactive & ongoing measures like re-skilling of existing teachers are important, a much more important policy measure would be to re-model the teacher training curriculum to address each of the identified digital competencies required to practice as a teacher. For instance the harmonized curriculum for a Post-Graduate Diploma in Education as published by the TRCN which is commendable, focuses more on computer appreciation basics. It should be remodeled to include all required learnings for understanding and imparting digital education, a curriculum that will be inclusive of best practice for the digital age education. Specifically, it should address topics such as developing digital learning content, digital learning delivery, and managing virtual classes among others. To ensure that students in our teacher training institutions fully grasp its importance, such courses should move from the realm of being a 2 credit course to a 3 credit course load with a 70-30 learning methodology ratio (70% for graded practical labs and 30% for theoretical concept learning). This approach immerses the teacher in training into the world where most of their students already live.

By implication, these institutions must themselves receive digital upgrades that will allow them to deliver learning with digital tools as well as impart skills and knowledge for digital education. Passing such courses therefore becomes part of the minimum standards for entering the profession and staying in the profession. While the volatility of implementing this recommendation for existing teachers is acknowledged as seen in the Kaduna experiment, its criticality cannot be ignored.

4. Incentivizing Digital Education for Teachers:

Improving teacher skill and motivation levels is a critical

precondition for the achievement of better student learning ^[9]. Digital learning is no different, the burden of acquiring digital skills cannot be left solely to the discretion of teachers and it will be just as impractical to design policies for student digital learning without first upskilling the educators. Teachers in Nigeria are poorly paid and often these salaries do not come regularly. A secondary school teacher with about four years of experience earns an average of N437,400/annum, just slightly above the yet to be implemented 30,000 minimum wage. There is legitimately barely any room for teachers to pursue more out-of-pocket education.

The federal and state agencies responsible for education should underwrite the cost of this upskilling. In countries like the UK, Finland and Iceland, the government funds Continuing Professional Development (CPD) centers and all the teacher does is take the courses for free. A policy alternative would be to design an incentive program for teachers who attain certain digital competencies beyond operating a computer. A tax based system that refunds certain expenses through tax credits incurred by teachers for digital training can be considered.

5. Re-establish & Enforce Standardization of Teaching Profession:

The strength of any profession is in its ability to set and enforce standards for those who intend to operate within its sphere. Unfortunately, the teaching profession seems to be an all comers affair or wrongly perceived as a profession for the jobless, this should not be the case. Different federal, state and professional agencies such as The Teachers Registration Council (TRCN), National Council on Education, National Union of Teachers are to take the lead in this regard. The Professional Standards for Nigerian Teachers as published by the TRCN though laudable is currently outdated and overdue for a review. The review should incorporate a certain level of digital competence which a teacher across the 4 categorizations must have during certification & recertification.

CATEGORY	QUALIFICATION
Category A (Doctoral Teachers)	Holders of PhD in Education or PhD in other field plus teaching qualification e.g. Post Graduate Diploma in Education (PGDE)Professional Diploma in Education (PDE); Nigeria Certificate in Education (NCE)
Category B (Masters Teachers)	Holders of Masters Degree in Education or Masters Degree in other fields plus a teaching qualification, e.g. PGDE, PDE, NCE
Category C (Graduate Teachers)	Holders of Bachelors Degree in Education or Bachelors Degree in other fields plus a teaching qualification, e.g. PGDE, PDE, NCE.
Category D (NCE Teachers)	Holders of the Nigeria Certificate in Education which is the national minimumteaching qualification.

Table 1: Categorization of Nigerian Teachers Source: Teachers Registration Council of Nigeria (Professional Standards for Nigerian Teachers) An updated professional's standards code for teachers would achieve less without a strict enforcement mechanism. Currently, the TRCN Act makes it clear that it is a criminal offence for anyone to take up a teaching role without being registered by the TRCN^[10], yet most schools especially the privately run ones flout this law with brazenness & impunity. The solution is to adopt an inter-agency approach for enforcement. State and federal government MDA's responsible for accrediting schools should work with the TRCN and NUT in enforcing teacher & teaching standards. A wider implication of these standardization is the possible eradication of nepotism that has often guaranteed that the least qualified get the jobs.

6. Increased Scrutiny of State Budget Planning and Management:

There is usually a lot of noise around federal government budgets with very little attention paid to how state governments plan and manage their budgets. Accountability stakeholders need to do more to focus on states especially because education is a shared responsibility across all levels of government. There is little knowledge of how much states' budget for education and how well they implement these budgets. Local governments are more opaque in their operations and provide little or no information about their budgets. A recent investigation revealed that most states do not access UBEC counterpart funding available from the federal purse because of an inability to meet up to requirements to access the fund ^[11]. States and local governments must do better and accountability stakeholders must demand as much accountability from states and local governments as they demand from the central government.

7. Leverage Public Private Partnerships:

The private sector in Nigeria has been front and centre in driving Nigeria's economy into the technological age, in fact Nigeria's tech industry is recognized as becoming the tech capital of Africa. It implies that the technical know-how and the tools to digitize learning and everything that goes with it is already resident in-country. Private education institutions have shown examples of the possibilities of digital learning albeit the burden of these initiatives are borne by parents in the ever-shrinking middle-class. These privately run educational institutions have invested in digital learning infrastructure and equal parts investments in the training of their teachers. While remuneration of teachers in private teaching employment is just as poor, there is the added motivation of training and skills upgrades which is almost completely absent from public institutions. Combining the models of digital learning that exist, with tech innovations, regional and international frameworks for digital learning as well as the political will of the executive backed by significant investments in the education sector will yield quick long-term positive outcomes for public education in Nigeria.

CONCLUSION

We reckon that the submissions above might seem quixotic, it is however pragmatic and can be done. The world keeps moving forward, pushing the boundaries of technology every day and changing the meaning of impossibility. These generation of Nigerians are to be globally competitive in the scheme of things, it is imperative that we teach kids the way of the future. However, to get the desired result at scale, those who teach these kids must themselves be conversant with the intricacies and subtleties of that future. They have to be able to teach with authority and guide the children for the future that is already established. While it would be easier to simply ensure that incoming teachers are properly skilled, it would leave a lot of existing teachers behind and set off heavy friction. A balancing act is more practical, educate the educator; train new teachers and retrain existing teachers.

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