

Chapter 3

Education Reengineering and Future Proofing in a New Normal World

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Introduction

This paper reflects on a new normal post COVID-19 world and re-imagines how university education can be reengineered to future proof invaluable and immeasurable education foundations laid by eminent scholars and astute promoters of education, including Prof. Rashid Adewumi Aderinoye. The paper argues for swift action, by Universities, to take stock of where they are now in the COVID-19 season, what they have done well and what they could do differently in future should such crisis befall the education system as it most likely will. The paper intentionally raises more questions than it does provide answers in a strategic way to stimulate further discussions on the multi- faceted nature of the new normal world we are headed towards.

Where COVID-19 Found Us

Since its emergence in late 2019, the coronavirus disease (shortened as COVID-19) crisis has evolved into a pandemic, heavily affecting the education quality¹ due to disruptions to learning and reduced length of the school year in many countries. In February/March 2020, education institutions in 188 countries closed their gates to prevent the spread of COVID-19. This closure was abrupt; catching many of these institutions off guard.

Momentarily, it seemed education did not matter anymore. In any case, was not life more important than books and academic certificates? Needless to add many educators, particularly those in private schools and institutions of higher learning or those employed on contractual basis, lost their jobs and means of livelihood.

Fear gripped many people's hearts, mostly as a result of rumours and misinformation about COVID-19. Many more went into panic mode, stocked up food supplies and locked themselves up fearing for the worst. For the first few weeks, the media was awash with horror stories of the ravages of COVID-19 in Europe and North America.

People died in their hundreds per day. Then statistics about cases in Africa began trickling in. Reaching the continent through travellers returning from hotspots in Asia, Europe and the United States, Africa's first COVID-19 case was recorded in Egypt on 14th February, 2020.

¹ Quality of Education in which inputs are transformed into outcomes.

The second case was reported on 25th in Algeria. By 28th February, the first case was reported in Nigeria. In no time, many other countries in Africa were affected. More fear gripped citizenry of different African Nations. COVID-19 was closing in. The window of opportunity the continent had to prepare for coronavirus disease was closing.

COVID-19 not only caused thousands of deaths, but it also unleashed economic and social devastation. As of 20th September 2020, the confirmed coronavirus death toll on the continent stood at 33,818.²

There are 1,399,186 confirmed infections and 1,148,578 recoveries, according to the Africa Centre for Disease Control and Prevention. Governments across Africa ramped up their preparedness activities and scaled up their capacities in critical response areas such as coordination, surveillance, testing, isolation, case management, contact tracing, infection prevention and control, risk communication and community engagement, and laboratory capacity.³

Nigeria, Kenya, Ghana, Ethiopia, Egypt, Morocco and Tunisia expanded national testing to multiple labs, allowing for decentralised testing. Education took a back seat. As a matter of fact education institutions were turned into isolation centres just in case hospitals became overwhelmed in handling the anticipated rise in numbers; further dimming the hope of schools resuming sooner rather than later.

How Universities in Africa Responded to COVID-19

COVID-19 was a major inconvenience for many. However, it also created a surge in demand for online learning and open and distant learning; a subject close to the heart of Prof. Aderinoye. Education ministries put in place national strategies and modalities for remote education.⁴ These included audio programmes aired through the radio and audio-visual programmes transmitted through television (analogue and digital). Mobile gadgets were harnessed for voice, text and web-based learning.

Online teaching and learning (cloud-based or internet-dependent) was availed through various Learning Management Systems (LMS), including Google Classroom, Canvas and Moodle. University administration, management, communication and course facilitation were enabled through conferencing tools such as Zoom, Google Meet, Skype and Microsoft Teams.

Many universities in Africa (as elsewhere in the world) swung into action speedily after recovering from the initial shock of COVID-19. Simultaneous activities were undertaken to upskill lecturers' capacity to offer courses online. Specifics of capacity-building programmes may have varied from one university to another. However, they included the fastest and most straight forward way to have lecturers transfer face-to-face content and offer it online.

Lecturers were taught on online instruction and assessment. In this regard, the pandemic resulted in an unprecedented reengineering of university education systems. COVID-19 became the tipping point⁵ that *almost forcefully* compelled lecturers (many

² <https://www.aljazeera.com/news/2020/9/20/tracking-africas-coronavirus-cases>

³ <https://www.afro.who.int/news/covid-19-cases-top-10-000-africa>

⁴ Where education does not necessarily imply a physical presence of the actors simultaneously in the same space.

⁵ This is a critical point in a situation, process, or system beyond which a significant, and often unstoppable, effect or change takes place.

of who may have initially resisted or were reluctant to integrate technology into teaching and learning) to latch onto it. It seemed as though nature had conspired with technology in a stealthy revolution to get lecturers to shape up (i.e. embrace technology for online instruction) or shape out (be left behind).

Hadn't Prof. Aderinoye, in his many publications, urged colleagues to put ICTs at the centre of teaching and learning owing to its many benefits? Did they really need a pandemic like COVID-19 to make knee-jerk reactions?⁶ Look who is smiling now even he joins the rank of *Professor Emeritus*. Sir, your work has just begun. Retirement is not an option yet.

Many universities in Africa invested also in building the capacity of students to learn online. Some Universities even subsidised bandwidth costs for both Lecturers and bonafide students to access online teaching and learning.

As we end this section, did all universities in Africa embrace online teaching and run with it? Far from it! Concerns, many of them genuine, were raised by both lecturers and students in different universities across Africa about viability of online teaching and learning. Students' concerns seemed rather straight-forward in regards to bandwidth and ICT hardware for access and learning online. Lecturers offering courses in disciplines (such as medicine, engineering and architecture), which require practical work seemed most reluctant to embrace online teaching and assessment; and rightly so. Criticisms were levied on the security of online assessments and whether existing LMS were not susceptible to cyber-crimes, including hacking, that were likely to compromise the integrity of University examinations and dilute the quality of degrees earned online. Some lecturers argued, and again rightly so, that online teaching would widen the gap among students with high-tech, low-tech and no-tech, and further increase inequities in provision of and access to quality university education to needy students. There were many more issues raised. The bottom line from these positive criticisms was really to ensure universities and lecturers should appreciate that online teaching and learning has its own merits, but cannot recreate all the aspects of face-to-face interaction that tap into, and nurture, higher order thinking skills including: critical thinking, problem solving, imagination and creativity. Prof. Aderinoye, has this paper left anything out on how universities responded? The paper invites you and the reader to further intellectual interchange on the same.

Way Forward: What Ministries of Education and Universities Can Do to Future Proof Education

In September 2020, many countries contemplated reopening learning institutions while also grappling with the seemingly insurmountable task of minimising the risk of infection, amidst meagre resources, to fully meet the stringent measures and protocols set by Ministries of Health. Some of the countries which partially reopened their institutions in early September had to quickly close them due to a spike in COVID-19 infections. Other institutions postponed their earlier scheduled reopening to a later date. Many more are considering re-opening progressively, beginning with examination classes and tertiary institutions.

⁶ a quick reaction that does not allow you time to consider something carefully.

Ministries of Education and universities are walking a tight rope in a delicate balance between guaranteeing quality education, whilst also taking into account the best scientific understanding of how COVID-19 is spreading and can be controlled.

An eclectic mix of re-opening options is being shared on different media platforms. For instance, using double-shift systems in which existing lecture halls are split into two or making extra desks and lecture rooms or using tents, temporary structures and/or other existing areas such as dining halls and laboratories; all with the aim of meeting the social distancing requirements of limiting the class size to between 25 and 30. Education institutions are also concerned about provision of masks to administrative staff, lecturers (and learners) and sensitisation of communities neighbouring universities.

Even as they grapple with these approach-approach issues, Ministries of Education and universities must realise also that it is not an option to keep education institutions closed until a totally secure environment has been created. This state of abeyance is uncalled for as the current situation could last as long as it takes to find a vaccine against COVID-19.

Worldwide, 75 million children already affected by crises face the negative impact of the COVID-19 while 91 percent of the world's student population is affected in academic continuity and quality. Prof. Aderinoye has worked among marginalised and vulnerable populations in Nigeria and would affirm that the biggest losers from an absence of schooling are children from the most deprived and disadvantaged communities. University students are not immune to this loss.

No school denotes that all children lose the learning opportunities that they need and want, together with the social engagement which is critical for their growth and development. University students are no exception. How much longer can they stay at home before they regress in knowledge and skills they acquired pre-COVID-19?

Ministries of Education and universities must bear in mind that the crisis occasioned by COVID-19 will evolve. They must, therefore, plan ahead in the short-, medium- and longer-term. They must decide how best to balance the complex risks associated with the pandemic and the re-opening of education institutions expeditiously. This can only be achieved through outstanding levels of leadership within Ministries of Education and in universities. Lecturers like Professor Aderinoye must be incorporated in critical decision-making and called upon regularly to offer technical support on such weighty matters on reopening of education institutions.

What is the best way to get Universities operating physically again in ways which allow students to thrive while giving lecturers security about their own safety and that of their students? Your guess is as good as mine. That said, lecturers from different universities must be willing to adapt to the new normal and evolve with it. They should, inevitably, go beyond their regular call of duty to lecture. They need to know as much as there is to know about emerging natural and man-made calamities and crises. They need to undertake risk assessment and mitigation forecasting and scenario mapping so that all involved can swing into action instantaneously to mitigate disruption occasioned by future crises. Lecturers' reaction time should be spot-on to ensure they not only protect and secure their students but also themselves, should there be a spike or other similar crisis. University lecturers must thus be agile in responding promptly to future education-in-emergencies scenarios. On their part university administration have the additional responsibility of protecting employees, many of whom are in the *most- at-*

risk age range (above 58 years of age).

Prof. Aderinoye spearheaded reforms that ensure citizenry are functionally literate. These efforts will come to bear in the current situation as universities identify the best way in which they can operate in a socially distanced way, in order to minimise the spread of the pandemic within Universities and reduce the risk of transmission. Understandably, this will vary from university to university since physical circumstances differ substantially across universities.

There will be some general requirements and minimum standards to be met, including the availability of protective clothing where necessary and regular hand-washing throughout the day. Issues of meals and travel for students and lecturers to attend lectures will need to be done in ways which minimise contact. University attendance may also be phased, on a rota basis by academic discipline, as the case may be.

In a reengineered new normal world, it is not going to be business as usual for the university lecturer. Capabilities of university lecturers will need to be strengthened to enable them unlearn how they have traditionally conducted their lectures. They will need to re-learn, re-skill or up-skill to remain relevant in their lecture halls. They will need to participate in online certifications and courses on online course design, facilitation and assessment. Investing in human capital capabilities will ensure uniform teaching standards and skills for blended education delivery.

Lecturers will need to innovate and experiment with pedagogy,⁷ andragogy⁸ and heutagogy⁹ to achieve objectives of university education. They will need to be conversant with digital technology infrastructure for distance learning and on how to ensure instruction is learner-centric. Efforts must be put in place now to mainstream blended learning. In the unlikely event that universities need to close abruptly, transition to asynchronous and synchronous pedagogical approaches would happen seamlessly to maintain normalcy.

With uncertainty rife on what the job market will look like post COVID-19 – lecturers need to be wary about their career prospects and doing what they can to remain relevant. Being employed on permanent and pensionable basis may be necessary but certainly not sufficient in the new normal world. It is about time to move to life-long, life-wide and life deep learning for sustainable national and international development. A full suite of online learning platforms and on-going capacity strengthening, mentoring and coaching on online course design, facilitation and assessment would suffice.

A positive side-effect of COVID-19 has been the development and extension of the use of a range of technologies in many universities. These ICTs need to be used in the most effective way. The best ways of doing this for each university needs to be found. In the words of Prof. Aderinoye, there is need to accept the innovative approach of training teachers using the Distance Learning System rather than insisting on the traditional mode which is limited in audience. This line of thought is compelling owing to the cost effective nature of open distance learning.

There is need for universities to ensure education continuity in season and out of

⁷ Children's learning.

⁸ Adults learning.

⁹ Self-directed learning.

season. But how will they ensure this continuity? What ICT and other infrastructural offerings and affordances will ensure continuity is sustained? How will they mediate for practical skills if lecturers have to teach online for prolonged periods of time like over half a year? How will they ensure syllabus coverage and assessment flexibility? What extra curricula social support will universities provide to both students and lecturers? How will universities future proof education for equitable access by all students? What education policies will need to change to pave way for new ways of thinking, knowing and being? How will universities determine teaching standards in the new normal world? We all can work collaboratively to find answers to these questions.

There is need to build resilient university education systems to withstand the new normal world. But how best can universities re-establish out from lockdown resilient and sustainable universities within efficient, successful and supportive education systems? How can universities prepare better for future insulation of education from crises like COVID-19? What are the contingency plans for universities? What would happen to university education systems when we have cyclical shutdowns? What needs to change in academic calendars and other University policies to assure continuity during shutdown? For now, EdTech is a complement to help students keep learning during the lockdown. As Prof. Aderinoye would warn, universities must keep in mind that technology does not just step forward but leap frogs. Are they prepared for this disruption as part of the new normal world?

Do universities understand this new reality? What does it mean for lecturers and students? What lessons have universities learned during this season of COVID-19 to have a better sense of the scale of impact of both the COVID-19 on university education systems? How well did University of Ibadan (UI) do in these circumstances? How did UI mitigate immediate impact of the crisis from a policy, practice and research perspective? What gaps must be filled for universities to reach future target state of the new normal world? Prof. Aderinoye would advocate for a holistic and comprehensive approach to answering these and other emerging questions on the dawn of this new normal world we are getting into.

When they re-open, how will the universities redeem the lost time and get students back on course in their academic progression towards graduation? How will they address learning loss that will, inevitably, have happened for over half a year? How will they ensure that the students' education is not damaged deeply and permanently? Will they provide remedial programmes to students who missed out on online teaching and learning opportunities? Should universities cut back on students' holidays (which sometimes last up to three months) to allow them to catch up on what they lost when education institutions were closed? Will this require fundamental reengineering of the timetable of the university calendar year?

On another trajectory, universities will continue to need a network of experts. Professors who retire like Prof. Aderinoye are invaluable resource. They need to be maintained as Emeritus professors to support distance education in its variant forms. They still can contribute meaningfully to sustainable development of adult education.

What else can universities do? They should continue activating distance learning solutions and supporting infrastructure, for instance, delaying or cancelling examinations; reengineering curricula of different disciplines to suit online teaching and learning and remediate learning losses. This may help deal with continued uncertainty and enable learning recovery.

As universities edge closer to the new normal world, priority must be given to blended learning and deployed tools scaled up in ways that will not exacerbate inequality among students. As mentioned earlier, universities will need to think long and hard on what tools can be used to reach high-tech; low-tech; and no-tech students. Given that many students do not have access to quality Internet services required, robust and sustainable solutions must be provided for the reengineered education to be a reality. It would make sense to keep an inventory of all students to get a better sense of their circumstances and adjust accordingly as need be. And the universities should meet these evolving needs in real time. Universities will have no choice but to adopt the alternative approach of producing in crisis situations. Prof. Aderinoye's research on innovative approaches to adult literacy found out that radio and television is a major vehicle of reaching the unreached as well as the unserved. Universities have not maximised the use of these media to cater for the unreached and underserved.

Prof. Aderinoye's study entitled: *from poverty to power: Reflections on the University Village Association (UNIVA) Functional Literacy Programme*; and whose main aim was to advance and integrate ICT to promote literacy education reinforced the fact that when appropriately applied, ICT can be a major tool of poverty eradication even among the poor. Universities must be innovative in ensuring availability and accessibility of distance learning solutions through Public-Private Partnerships with different entities, including telecommunications service providers.

Equally important is the need to manage students' new psychosocial needs and limiting secondary impacts of COVID-19. In this regard, universities must deliver solutions that meet students' and educators' unique needs.

COVID-19 is expected to have a lasting impact on university education policies and policy frameworks. Universities will need to ensure there is a well-coordinated response and enacting of emergency measures, including mass closures of academic institutions as the case may be. Pursuant to that is the need to amend relevant policies that touch on all aspects of University education to ensure continuity of teaching and learning at a distance.

Universities will need to activate their Corporate Social Responsibility (CSR) arm for community service in such times. What can University students do to make a difference in their communities while still keeping out of harm's way?

Prof. Aderinoye undertook a study on the use of literacy shop as a veritable tool for the effective promotion of mass literacy in Nigeria. What is the potential for application of the literacy shop concept to University education and addressing emerging crises like COVID-19? How can open distance education as a mechanism for sustainable development be used to by academia to transform communities and nations?

Through CSR, Universities can reach out to millions of families who cannot afford a tablet, laptop or Internet connection required to educate their children online. Universities can also provide professional education and upskilling on industry-relevant courses for people who may have lost their jobs and need to new skills to rejoin the labour market. They can form lobby groups to education employers on the quality of online degrees that may characterise the future of learning and work as well as on the need to bring down tuition fee for online lectures. Universities can engage communities on the effect of Artificial Intelligence (AI) and industrial automation on people in the new normal world.

Conclusion

The new normal world is here. Ministries of Education and academia must accept and embrace it. One of the ways of successfully navigating this new normal world is through reengineering university education. It seems rather straight forward that the new normal in education environments will make better use of blended learning approaches. We foresee more capacity strengthening efforts in the face of the ever- changing education technologies powered by Artificial Intelligence capabilities. There is likely to be far higher levels of flexibility in both education and assessment if education systems are to create resilient and sustainable education institutions which will best enable students to get the high-quality education which will be so essential for their, and our, future. Future proofing cannot happen any other way. These problems have solutions given the will and the creativity to do so. And indeed there is no alternative to solving them. Universities will benefit from practical, high-level guidance on how to reopen and carry on in the new normal world. Of course different countries will need different forms of response to ensure that no student is left behind. Unfortunately, it is too early to make clear judgements about the ways in which individual African countries have performed in facing this cataclysm. This paper ends where another starts. To interrogate the many questions intentionally posed in this paper.

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