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### **African Universities in Post-COVID 19: Assessing the Opportunities and Challenges of Online Learning**

The closure/lockdown of all education institutions across World due to the COVID-19 pandemic put the student population and their parents at stake with arguable responses to handling the teaching of these students when at home. Many of the institutions were not prepared to continue with the education beyond their physical boundaries.

Substantial gaps have been identified within the educational sector because majority of the teachers in there have been ill prepared to effectively handle students' teaching and learning amidst uncertain times such as those brought in by the COVID-19 pandemic. Even

today, majority of the teachers undergoing training continue to be trained in a conventional manner that enables them to only handle students as and when there is face-to-face interaction.

This unpreparedness to continue teaching beyond the institutional premises has caused state of hopelessness and anxiety within the students, parents and government on how to handle teaching amidst this turmoil. Everyone is rushing to e-learning without first understanding what it entails and landscape under which it can operate. However, some question to ponder with; Do we have regional, national and institutional policies to support the adoption of e-learning? Do we understand and interpret it in the same way? Do we have the appropriate Quality Assurance mechanisms to monitor and track its adoption?

#### **Opportunities for Online Learning:**

- Online learning provides the ability for students and teachers to participate in educational activities ubiquitously. They can remain wherever they are and continue with the learning
- Online learning creates a level playing field in relation to learning. Students from different age brackets, physical appearance, disabilities, race, and gender can easily come together to focus on learning

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## RUFORUM THOUGHT PIECE ON COVID-19

- Partnerships among institutions in terms of research and training have increased due to online learning. We are seeing institutions today delivering collaborative degree programmes
- Online learning allows educational institutions to enrich the learning process with multiple media materials
- Through online learning there is real-time and easy share of digital resources despite geographical barriers,
- Through online learning students have the ability to reach out to more training opportunities and resources cheaply or for free. These include resources in MOOCs, Open Resources like from Coursera among others.
- Institutions have attained intercontinental educational markets for institutional courses due to the fact that they can ably and easily deliver the courses at a distance.

By majority of students going online and staying home, educational institutions have contributed a lot in slowing the spread of the COVID 19 virus.

### Challenges for Online Learning:

- There is still a lot of ICT illiteracy amongst the educational stakeholders across Africa to benefit from online learning.
- The attitude and cultural change within the population in many of the African countries is a barrier to adoption of ICT in education
- By taking on online learning as the new normal there is a probability of increasing the learning gap for low income students' households most especially from poorer countries.
- Teaching online still faces a lot of unprofessional teaching etiquettes due to the unpreparedness of the teachers to effectively teach online. There are related issues of The dress code, background sound, etc
- Students' engagement is undermined in many of the online classes and this is majorly based on how the course was designed. Make sure you have enough problem-solving activities to make sure each student is involved and engaged.
- Feedback to students is very irregular or not there at all and this is a barrier to their learning since they have no information to support them to improve
- Volume of work for the teacher who may not be prepared to tackle all of it from all the very digital and active students. Sometimes the work can be overwhelming and leads to breakdown on the side of the committed online instructor.
- There is uncertainty over accreditation of programmes undertaken online by many people and organisations out there. This is largely due to the quality control issues around the programmes that remain unresolved.
- Unethical tendencies from both students and staff online is one of the biggest challenges being faced. Students sometimes plagiarize all what they can find online and some staff take

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a lot of digital content as their own without recognizing the authors

- Accessibility by students and staff to ICTs to use for online learning including internet connection and hardware are still a challenge to many students across Africa.
- Africa is still faced with the lack of localized digital materials that can be used by students to learn and so depend a lot on foreign digital materials. There is less localized digital content from Africa as compared to the rest of the world.
- Uncoordinated ICT in Education integration projects funded by different bodies with own interests and agendas. There are no consolidated efforts from funders to support effective integration across African countries.
- The student to teacher ratio is sometimes very high and hence quality aspects in activities such as assessment, discussion can be over looked hence leading to poor quality learning.
- Curriculum development to suit the e-learning teaching and learning model (focus being done on technology rather than pedagogy). The lack of appropriate ICT skills by the education stakeholders, the limited or no access to power in some areas, the internet access is still costly and has fueled plagiarism within Higher Education Institutions, preparation, planning and maintaining of quality is always an issue if not well monitored, and standardizing locally developed content.

### **Value for money: Should universities charge same amount of fees for online courses? The issue of missing services to students**

Adoption of online education does not necessarily mean that fees should be waived since students are not accessing the University premises. It is true there are several services that were being paid for by students to access while physically on University campus and these are no more. Going online by any institution initially leads to very high costs of investment due to the numerous infrastructure acquired, trainings offered and content developed. But the initial investment happens at the early stages of adoption and usually a one-off investment. However, this investment is used for some time during the online adoption hence reducing costs in the long run within the institution. Therefore, the costs of going online will be high but gradually go down as adoption is rooted within the University. It would therefore be expected that University fees shall have to reduce as compared to what they used to be in the future but not necessarily at the beginning of online education. For example, acquiring physical resources for the library will go down and replaced by e-resources which can be used by all the students at the same time.

There are numerous services which will be missed and not paid for by students at all because they are not accessed any more. Services like Sports, Sanitation, Security (goes very low), among others and these will bring the fees costs low. The services that will need to be paid for are registration, teaching, supervision, internet access, e-resources, among others.

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However, one strategy to have the fees go low at the beginning is for institutions to be subsidized by either government, funders and through collaboration in order to access certain services cheaply. African institutions need to rethink their adoption of online education and focus on doing it collaboratively so that there are reduced and sharable costs. Investing in resources as a single institution is more costly than undertaking it in a collaborative form. For example, establishment of an African E-Library with e-books for students to access across the continent will allow use of a single book by millions of students in the subscribed institutions. This means that instead of 100 institutions acquiring the e-book singly within their libraries will not happen but access the same book via the African E-Library.

### Choosing the platform for implementing on-line learning: technical consideration

Choosing the technology to support you in adopting online learning requires several things which may include the following;

- Institutional Policy and funding
  - Does the policy allow open source or proprietary software and technologies?
  - The costs involved in acquiring the platform
- Features and services
  - Provide the reliability/stability, flexibility, scalability, and security the institution needs?
- Interoperability
  - Easily integrate with other existing systems (both software and hardware)?
- Technology environment
  - The appropriateness of the technology environment to support the platform. Is the environment for open source system or not?
- Human Capacity
  - Require IT staff to receive additional training? If training is required, can it be provided online and how much will it cost?
  - Necessitate the hiring of additional staff with skill sets that differ from those possessed by existing staff? How many staff will be needed to support the Learning Management System solution?
- Support
  - Require extensive maintenance and support over time? Do vendors offer tiered support plans that can be covered by existing budgets?
- Sustainability
  - Does it update regularly and does it follow the trends?
  - In what time intervals are new hardware and web technologies included in platform?
  - How long does it take to eliminate any found and informed security vulnerability?

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### Quality of online courses and other factors for integrating online learning

- Foundation for quality of online starts with the incorporation of learning outcomes within the content of the course units under study since it addresses the interests and needs of learners. These learning outcomes are part of the curriculum under use and hence quality is rooted right in there. This means that all learning activities prepared will be largely related to the learning outcomes.
- Universities should have a clear quality assurance policy that is in harmony with other policies such as academic policy, e-learning policy, etc. The policy should present specific criteria and process by which any curriculum is designed and reviewed.
- The Academic units where the curriculum was accredited have the mandated to make sure that the curriculum meets quality standards in terms of content and learning outcomes.
- There should be clear instructional design placed within the developed content for the curriculum and its activities by the instructional designer in line with the set learning outcomes.
- The instructionally designed content should be based on known and international standards such as SCORM, among others
- The quality issues in teaching and facilitation of any course will determine how teaching and learning will happen. Have the appropriate professional etiquettes while teaching and avoid anything that will make you unprofessional is very important for online learning.
- As a teacher, you need to understand your learners in order to provide effective facilitation that will lead to a great learning experience. Therefore, understanding learner pre-requisite knowledge, learning styles and preferences is very critical for quality delivery.
- Before any delivery online, there is need for quality check on the content resources that are supposed to be delivered to the students in order to avoid brand damage or teaching the wrong things.
- The regular feedback from the teacher to effectively support continuous learning of students is very important for achieving quality education. Teachers should be able to avail feedback on time and where it is needed and this will create confidence in students that they have support available online/virtually.

### Needed Policy support framework for widening use of ICTs to support delivery of services and address education divide

It is important for any adoption of online learning to follow acceptable standards. These are usually within the national and institutional policies. There are several frameworks that have been developed to support the adoption of ICT within the education sector. Amongst these is the African Digital Agriculture Programme (AfriDAP).

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The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), a network of 129 universities in 38 African countries, developed the African Digital Agriculture Programme (AfriDAP) programme as an approach to harness the pivotal role of digital technologies in the agri-food system value chains.

This programme focuses on the use of ICT in transforming Africa by eradicating poverty, steering prosperity, innovating and providing entrepreneurship. Through this programme, RUFORUM intends to harness ICT by creating digital platforms and solutions for research, teaching and learning as well as community engagement. By doing so, the programme will produce skilled human capital, science, technology and innovation needed to transform Agricultural sector on the Continent. The programme has three main pillars inclined to ICT that support the realization of the programme objectives:

- The first one being digital learning and sharing technologies to support effective teaching and learning experience ubiquitously within agriculture and broad food systems.
- The second is data science development which comprises of data science research, big data management for agriculture and capacity building in data science.
- The third is incubation and innovations for digital agriculture in order to produce sustainable entrepreneurship and startups to support both the first and second pillars of the AfriDAP in a low-cost manner

In my view AfriDAP provides a continental rallying point for harnessing digital technologies for not only enhancing access to education but the needed mechanism for intra-African teaching and knowledge sharing, creating relevant digital resources for Africa, linking to global knowledge centres, providing timely data for decision making and empowering African people to be part of the global community. It will support skills and innovations for advancing African food systems, promoting entrepreneurship and youth innovations and employability. This is something that our universities and governments and indeed our partners need to embrace and fund.

*This is our twenty fifth issue in a series of articles we are releasing as part of our RUFORUM Thought Pieces on the Corona Pandemic. This Thought piece is a summary of the discussion points that emerged from the 11<sup>th</sup> RUFORUM Webinar which focused on “[African Universities in Post COVID-19: Assessing the Opportunities and Challenges of Online Learning](#)” You can get more information about RUFORUM at [www.ruforum.org](http://www.ruforum.org). You may also share your thought piece about the Pandemic with us by writing to [e.adipala@ruforum.org](mailto:e.adipala@ruforum.org) and copying [m.agen@ruforum.org](mailto:m.agen@ruforum.org)*

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### About the Author

Prof. Lubega is the Deputy Vice Chancellor of Nkumba University, Uganda. Previously he served in Makerere University as the Deputy Dean and the Head of the Information Technology Department in the College of Computing and Information Sciences. He also served as the Deputy Vice Chancellor of Uganda Technology and Management University.

Jude Lubega is a Professor of Information Technology who has vast experience in ICT4D. He has been the Chief Executive Officer for 8Tech Consults one of the leading ICT consulting companies in Uganda. He was listed among the 100 Movers and Shakers in Corporate Online Learning for 2018 in Africa. He is an experienced ICT4D consultant and has undertaken numerous researches and projects both nationally and internationally. He is a member of several boards and has won several research funding to undertake ICT4D projects. He is formerly a researcher and Lecturer in the School of Systems Engineering at the University of Reading, UK. He has been involved in developing several information systems including election monitoring using mobile devices.

He has a wealth of experience and competencies in Tracking and Assessment in e-learning, Content Authoring, Multimedia, Multi-Agent Systems, Data Warehousing, Knowledge Representation, ICT for Development (E-Governance, E-Health, E-Agriculture), Mobile Computing, ICT Strategic Planning and Management, Web-based Systems and Mobile Learning. He has published widely in journal, books and conference proceedings.

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