Essay

COVID-19 and Prospect of Online Learning in Higher Education in Africa

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ABSTRACT

Although its impacts on higher education functions are yet to be studied across regional, national, and institutional contexts, it is generally observed that COVID-19 disrupts teaching and learning, research and travels, and university community service worldwide. To improve our understanding of the strategies higher education institutions (HEI) can use for staying relevant and competitive in times of crisis and beyond, this essay reflects on current developments in HEI in Africa as linked to COVID-19. It subsequently highlights how African HEI respond to the pandemic, the prospect of online instruction, and the conditions that support the successful integration of technologies in teaching and learning. There is ample evidence that supports that African universities are more likely to significantly embrace digital technologies in the future than ever before. To inform successful technology integration, a generic conceptual model that explains success indicators and success factors in technology-supported learning environments in higher education is presented.

Keywords: COVID-19, higher education, online instruction, success factors, success measures

INTRODUCTION

This essay reflects on current developments in higher education institutions (HEI) in Africa as linked to COVID-19. It subsequently highlights how African HEI respond to the pandemic, the prospect of online instruction, and the conditions and factors that support the successful integration of technologies in teaching and learning. The goal is to understand the strategies HEIs can use for staying relevant and competitive in times of crisis and beyond. The generic conceptual model presented in this essay can better inform instructional designers, faculty, students, and leaders and administrators as to how to optimally integrate digital technologies to teaching and learning during the pandemic and beyond.

The essay first presents an overview of how HEI respond to the pandemic and then discusses relevant strategies to integrate technologies to teaching and learning. In so doing, the essay focuses only on those issues that transcend institutional and national contexts. The focus is on the pattern and trend across the issues and on core theoretical and methodological reconceptualizations needed for optimal integration

of digital technologies in higher education. Where appropriate, case examples from specific universities are highlighted only to exemplify some of the issues discussed concerning HEI response to the pandemic. The experiences of such universities are not thus claimed to be generalizable to other universities.

As research (knowledge production generally) is also disrupted by it, our understanding of how and to what extent the pandemic affects African HEI is unknown, let alone being complete. Studies that delve deeper into the issues and that match and reflect the size and diversity of the African higher education systems are yet to gain momentum. As described below, this piece draws on available recent international studies on observed impacts of the pandemic, and completed and active research projects on integrating digital technologies in higher education in Africa.

HIGHER EDUCATION RESPONSE TO THE PANDEMIC

Although its precise effects or impacts on higher education functions are yet to be studied across regional, national, and institutional contexts, it is generally observed that COVID-19 disrupts teaching and learning, research and travels, and university community service worldwide. The International Association of Universities (IAU) survey of 424 HEI in 109 countries indicated that the percentage of pandemic-triggered campus closures in Africa, Asia and the Pacific and Europe, and the Americas was respectively 77, 55, and 54 (Marinoni, Land, & Jensen, 2020). According to the authors, the highest percentage of closures in Africa might indicate the preventive measures taken, as the region had the lowest reported cases at the time of the study, March and April 2020. The participants of the same study indicated that teaching and learning were not affected by the pandemic (3%), classroom teaching was replaced by distance teaching and learning (29%), teaching was suspended while the institutions were developing alternative solutions (43%), and teaching was cancelled with no viable alternatives (24%). Similarly, a study by the Organization for Economic Cooperation and Development (OECD) indicated that 88% of the 165 students sampled from 21 African countries said that their institutions had discontinued in-person classes because of COVID-19 (Koninckx, Fatondji, & Burgos, 2021).

Overall, campus closures were found to be 'knee-jerk' reactions made by HEI following the onset of the pandemic. Although the IAU and OECD surveys may not give a 'complete picture' about the phenomenon, as they relied on data collected from limited sample sizes and time span while the pandemic is still raging, they can still point to the pattern and trend across the region. Following campus closures, HEI employed varied strategies to ensure their survival and to demonstrate their relevance to society.

Based on the aforementioned surveys and additional literature mentioned below, HEI in Africa could generally be loosely categorized into three depending on how and to what extent they integrate technologies to sustain teaching and learning during the pandemic. Considering the nature of their decisions and practices linked to emergency online instruction, three groups of universities could be formed. The criteria used for such classification include the use of learning management systems, use of interactive or active pedagogies, student and faculty access to computers or laptops, dependable access to Internet connection, and supporting infrastructure. This typology is meant only to facilitate our understanding of the varied ways universities used to respond to the pandemic following campus closures.

The Transformationalists

This category of HEI seems to demonstrate institutional readiness, experience, capacity, and resilience to launch and sustain some form of online instruction. They seem to have quickly developed their learning management systems and usually have dedicated teaching and learning centers or pedagogical centers to spearhead the initiatives. Faculty, students, and staff go through mandatory trainings and are

generally skilled at exploiting available technologic tools. Faculty quickly adjust course activities and deliverables to better suit online settings, and administrators show flexibility in meeting deadlines.

Despite some challenges linked to unstable Internet connections and power outages, this category of universities generally secures a shared basis of understanding that going and staying online is both pedagogically and economically defensible. Their shift to online instructions is quick and transformational and generally satisfying for faculty and students. However, that 29% of African HEI were able to quickly migrate to online teaching and learning (Koninckx, Fatondji, & Burgos, 2021) does not necessarily mean that they have transformational online experiences. Flagship universities, international branch campuses, universities having partnerships with international institutions, and well-resourced universities could belong to this category.

Although they cannot represent the experiences of other universities, the experiences of some universities regarding emergency online instruction are worth highlighting. This can exemplify how a transformational strategy to respond to the pandemic looks like in reality. In Ghana, most private and public universities resorted to emergency remote education. The University of Ghana had a learning management system called SAKAI and practiced blended learning before the pandemic. Students "have been able to enrol to the LMS (learning management systems), which gives them access to free rich online learning materials, video tutorials from lecturers, discussion forums to interact with peers, chat rooms to connect with lecturers, and online quizzes and tests, and move all assignments and peer reviews online. Lecturers are now using the live chat option to interact with students" (Bozkurt et al., 2020, p.39).

An independent, public, not-for-profit university in Morocco, the Al Akhawayn University in Ifrane, had pioneered a distance learning program in March 2020. A university-wide survey indicated, "student satisfaction rates with learning efficacy and online teaching remain very high, comparable to pre-pandemic figures" (Morocco World News, 2021, n.p.). The New England Commission of Higher Education, a regional accreditation association that evaluates HEI in the Northeastern United States and worldwide, accredited Al Akhawayn University as the first in Africa in online instruction.

In Egypt, private and international universities seem to lead emergency online instruction following campus closures. Private universities use such learning management systems as Moodle or Blackboard; faculty upload their lectures to the platforms and some also use Zoom live sessions to meet their students (Bozkurt et al., 2020). The American University in Cairo (AUC) case is briefly highlighted to shed some more light on how online instruction is planned and implemented.

Founded in 1919, the AUC is the only non-profit, private university in Egypt. The AUC has been consistently rated among the top performing universities in Africa and the Middle East. The Center for Learning and Teaching (CLT) at the AUC coordinates the implementation of innovative pedagogies, including the integration of digital technologies in teaching and learning. Faculty and students have been using the learning management system, the Blackboard, for years. The AUC announced campus closure days before the Egyptian government announced, on 14 March 2020, the national closure of schools and universities. Faculty training for "contingency had started before this announcement and continued for one more week" (Bozkurt et al., 2020, p. 33). The following excerpt explains the process that led to the sudden migration to fully online instruction and the support systems put in place.

> Following guidance from the Provost in late February, CLT implemented an initial contingency plan to train faculty members on Blackboard and Panopto lecture capture platforms in addition to preparing a comprehensive online resource within days of the decision to plan for the online

transition. CLT conducted training in collaboration with members of the Technology Solutions team from March 5th - March 12th for over 540 faculty members. By the time AUC announced it would move fully online on March 15th, the CLT team had worked hard to prepare resources on its website produced specifically to guide faculty for emergency remote teaching on conducting lectures, interactive classes, and alternative assessments online…. CLT offered 28 webinars (attended by over 390 faculty members), responding to faculty needs, and initiated a system for faculty to request online consultations (over 400 consultations were handled (CLT, 2020, p. 2).

To support effective online teaching and learning, additional initiatives were undertaken. New guidelines and policies were developed to ensure harmony and ethical delivery of online instruction. To better inform reiterative course design and instruction, frequent faculty and student satisfaction surveys were conducted, and results were shared with them timely. Overall, adequate (technological, material, financial, and human) resources and agile leadership seemed to contribute to effectively sustaining online instruction for almost two and a half consecutive semesters. Although its generalizability to poorly funded public universities might be questionable, the AUC experience could inspire other universities to embark on designing and delivering online instruction during the pandemic and beyond.

The Late Experimenters

Many African HEI were not ready for online instruction but most of them have started developing some kind of digital or self-study solutions (Koninckx, Fatondji, & Burgos, 2021). These universities do not seem to have sufficient institutional readiness, experience, and or capacity for quickly establishing online learning environments or optimally using available learning platforms. Following campus closures, they tended to develop a general understanding that technology integration could help them to 'keep going' until normalcy is restored. However, the 'digital divide' between students from low and high socio-economic backgrounds regarding access to technology and connectivity challenged their ambitions. Overall, although this category of universities has resorted to online instruction following campus closures, success seems compromised by limited access to dependable facilities and equipment, unreliable Internet connections, faculty and student limited technology skills, and or pedagogies not relevant to online learning environments.

Case stories from some universities are highlighted here to exemplify this category. Egypt lately (after mid-April 2020) announced national guidance on how to move forward for both public and private universities. Guidance was provided for "alternative assessments, and pass/fail grades for the second term which was taught online", and "failed projects would be given a second chance to improve" (Bozkurt et al., 2020, p. 33). Faculty in public universities produced video or audio lectures and shared them with their students via university webpages or YouTube (Bozkurt et al., 2020).

In Kenya, most universities use such learning management systems as Moodle or Google Classroom. However, online instruction, "left out thousands of learners, especially those from disadvantaged communities, where power shortages, poor connectivity, and lack of digital devices are prevalent. Educators face a number of challenges regarding their digital proficiency and internet accessibility (Bozkurt et al., 2020, p. 37). Similarly, Namibian universities having their campuses in the capital Windhoek could access Internet connections, unlike those located in rural areas, where Internet connection is limited and unreliable. Although universities provide USB devices for students to access the Internet, many students do not have laptops or computers. As a result, "while universities indicated that

they would go online, in practice, there was a real challenge to get students and teachers connected" (Bozkurt et al., 2020, p. 40).

A typical challenge in South Africa concerns appropriate online pedagogies. All HEI are mandated to shift to online instruction quickly, but 14 of the 26 public universities "battle to cope with online learning" (Bozkurt et al., 2020, p. 46). Pedagogies that could result in satisfying online experiences were not considered. For instance, a "lecturer at the University of Pretoria was told that she needs to simply prepare all her lessons as usual and then present them in front of a camera that will record the sessions and stream them to the students. This seems to be the modus operandi of many of the universities" (Bozkurt et al., 2020, p. 46). Moreover, it was found that most students used learning management systems only for administrative purposes and not for actual learning as such.

In Uganda, as part of emergency online instruction, universities like Uganda Christian University, the largest private university "had gone as far as preparing take-home examinations…Petitions by some students against the take-home examinations resulted in the Ministry of Education and Science producing a stay of issuance of any manner of examination whatsoever" (Bozkurt et al., 2020, p. 49). Other initiatives include the partnership created between Makerere University (the largest public university) and MTN Uganda (the largest Telecommunications Network), which enabled students and lecturers to access learning platforms free of charge (Bozkurt et al., 2020).

The Laggards

Of the HEI that closed campuses, 22% of students indicated the absence of online or remote learning solutions at all (Koninckx, Fatondji, & Burgos, 2021). Universities of this type seemed overwhelmed by the pandemic, and they did not seem to have the economic and technical affordances to embrace technologies. They did not demonstrate institutional readiness and capacity to launch online learning anytime soon either. These universities seemed to acknowledge the bitter reality that their competitiveness and resilience as institutions were publicly tested and were left behind. However, this unforgettable lesson might trigger these universities to aggressively embark on future technology integration.

PROSPECTS OF ONLINE INSTRUCTION IN AFRICA

African HEI generally seem to get a valuable and unforgettable lesson from the pandemic, albeit the hard way. That methodically embracing technology in teaching and learning is an essential strategy not just for boosting national and international competitiveness but for mere institutional survival or existence, at least in times of crisis. The transformational universities outlined above may clearly understand that they survive 'forced' migration to online instruction without prior planning. This can leave the impression that future strategic instructional planning for online instruction can accrue even more substantial results. These universities may thus decide to scale up further and or sustain their online offerings. The late experimenters may engage in debates and discussions to convince protesting faculty and students to embrace technology further. They may invest more on technology acquisition and development and may systematize training and professional development opportunities for faculty. They may start working on narrowing down the digital divide and the technical and logistical challenges they face. On the other hand, the laggards may start, from scratch, discussing the roles technologies could play in teaching and learning. Their pedagogical or teaching and learning centers may revamp their philosophies and activities and try to catch up with the rest of the world in the future.

Generally, COVID-19 seems to teach universities worldwide that using technologies to support purely online learning and/or blended learning is not an option; it is a survival strategy at least in times of crisis. The flexibility and affordances technologies could bring to the content, method, time, and place of learning and teaching would be more clearly understood in the future.

Emerging developments at the institutional, national, and continental levels are also strong indications of a more intensified integration of technologies to catalyze higher education functions in the years to come. A study of 30 African HEI (Bekele & Ofoyuru, 2021) indicated that technology integration in teaching and learning, research, and administration is considered one of the *strategic pillars* to improve education quality and competitiveness. Moreover, a study of African university-society partnerships (Bekele et al., In press) indicated the understanding, among partners, that the further development of technology infrastructure, Internet connectivity, online engagement and presence directly affect the quality or successfulness of partnerships. Moreover, the African Union and national governments also consider technology integration as one of the strategic pillars for meeting the 2030 Sustainable Development Goals and the African Union 2063 vision.

Overall, the COVID-19 lesson plus the inclusion of technology in continental, national and university strategic plans could be considered as powerful indications that African universities are more likely to significantly embrace technologies in the future than ever before. Blended or purely online learning environments are more likely to become normalized strategies. Damtew Teferra, professor of higher education and leader of the Higher Education Cluster at the African Union, also claims that online delivery in Africa "may become a more regular and more recognized practice in the post-COVID-19 era" (Teferra, 2021, n.p.). A more significant question to ask would then be linked to the optimal or effective integration of technologies to teaching and learning.

Of those universities that did employ remote learning solutions during the pandemic, the percentage of students who rated their learning experiences as not at all effective, minimally effective, and highly effective were respectively 13, 21, and 8 and hence, "40% of students perceive that they have learned less than half of their original academic curriculum; and only 10% reported to have learned about the same" (Koninckx, Fatondji, & Burgos, 2021, n.p.). This compromise of the already poor-quality higher education in Africa is alarming for all stakeholders. Consequently, understanding the conditions under which technologies optimally impact learning and teaching is as crucial as timely.

PROBLEMATIZING SUCCESS IN ONLINE INSTRUCTION

A programmatic research project (Bekele, 2009a &b, 2010; Bekele & Menchaca, 2008) was conducted to problematize successful technology integration in higher education worldwide. The project included systematic reviews of international literature on educational technology and empirical data collected from Africa. The ambition was to identify conditions and factors that affect the optimal integration of technologies in higher education. As an outcome of the research project, a generic conceptual model that explains both success indicators and success factors in technology-supported learning environments in higher education was developed.

The model was used to conceptually scaffold an empirical study conducted in the California State University (CSU) system (Menchaca & Bekele, 2008). This research analyzed the experiences of learners and faculty in an online, distance education environment by using a participatory action research methodology. Generally, results indicated that the success factors found in the CSU online program

corresponded to the factors stipulated in the conceptual model. The model has since then been widely used to support research and instructional practice internationally.

Although the model was developed more than a decade ago, its salience and fecundity to African contexts seems to become more vivid now than ever. As explained below, the model is holistic in its inclusion of the many core categories of success factors and conditions and is generic in its selection of the most significant considerations that transcend institutional and national realities. It can better inform faculty, instructional designers, technology developers, students, and university leadership and administration as to how to successfully integrate technologies in teaching and learning.

The model, see Figure 1 below, maintains that a host of factors at human, technologic, course, pedagogic, and leadership levels jointly impact success measures such as student and faculty motivation and satisfaction, higher learning, faculty professional development, and sustainability and scalability of online instruction (Bekele 2009b, p. 81-84). These success measures or indicators and success factors are briefly explained below.

Success Measures

These are processes or outcomes that designate benefits or gains universities, faculty and students can accrue from getting involved in online instruction or learning. The model considers faculty motivation and satisfaction, professional development, and sustainability and scalability of online instruction as *secondary success measures*. Student motivation and satisfaction, and higher learning such as critical thinking, problem solving, creativity, and metacognition are considered *primary success measures,* as learning is the primary concern of (higher) education. Although the model views learning as an *active social process*, success is finally measured in terms of student acquisition of higher-order thinking skills which are increasingly required in the labor market. The primary and secondary success measures are presumably impacted by a host of factors at several levels.

Success Factors

Human, technologic, course, and pedagogic factors impact success *directly* (hence, they are considered as *essential success factors)*, as indicated by the single-headed arrows that point toward the success measures in Figure 1 whereas leadership factors affect success only *indirectly* yet substantially through affecting the other four factors (they are thus considered *desirable success factors)*. Each major success factor is briefly described next.

Human Factors

These refer to student and faculty characteristics such as their understandings, viewpoints, perceptions of and their competencies in technology use. Higher levels of technology skill, positive attitude toward technologies, and experience in online learning would facilitate meeting learning outcomes and faculty satisfaction and motivation. Student and faculty views about technology role in learning as well as their views of knowledge and learning would also impact success substantially. For instance, if participants (faculty and students) view knowledge as something to be acquired and defended versus generated, acquired and modified, it is more likely that they would stay *passive* in the learning process. If they view learning as a process of knowledge acquisition per se, that would not bring success either as online environments are generally pertinent to bring active, productive learning. Finally, if participants assume that technologies are mere vehicles for storing information versus technologies as cognitive and communicative tools, active and meaningful learning would not happen.

Thus, to achieve success, students and faculty should hold favorable and appropriate assumptions, views, and attitudes toward and about online instruction in addition to the acquisition of technical competencies, knowledge, and skills. It is argued that faculty characteristics and professional development are some of the most significant factors that affect successful online learning (Karkouti & Bekele, 2019).

Figure 1

Model Of Success In Online Learning
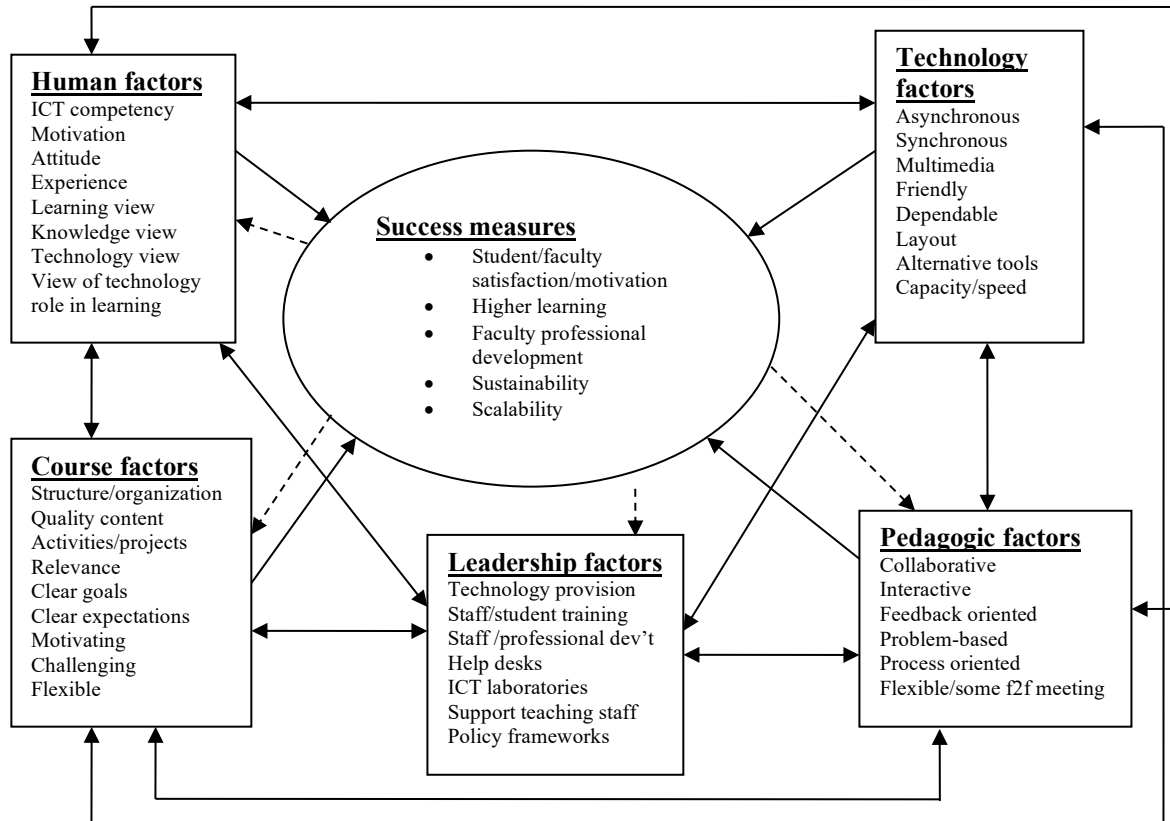
Source: Bekele (2009b, p. 83)

Technologic Factors

These factors seem to reflect the public view of educational technology and refer to the capabilities or attributes of technologies and unlimited access to them. If students and faculty have dependable access to an ample variety of technologies and Internet connections, then that should have a favorable impact in the how, when, where, and even what of learning. Moreover, online collaborations at various levels are possible only when one has multiple tools at hand. Both synchronous and asynchronous tools that support digital multimedia are required to execute course-related tasks effectively and efficiently.

However, the technological platform should be as user-friendly and appealing as possible. According to the International Telecommunication Union (ITU), only 28% of the African population has access to the Internet, which is much lower compared to Internet users in the developing countries (47%) and worldwide (54%) (ITU, 2019). Substantial development of Internet infrastructure and connectivity can play a decisive role in improving and sustaining online instruction in African HEI. That the African Union,

its member countries and universities consider technologies as one of the strategic pillars for catalyzing significant institutional and societal transformations seem promising.

Pedagogic Factors

These primarily refer to the how of learning and instruction. Success would come if learning is truly student-focused, collaborative, problem-based, feedback intensive, and generally process-oriented. Students should have ample opportunities to regulate their progress, and projects and exams should support critical ability over sheer memorization of course contents. Flexibility in achieving milestones and timelines is crucial.

Course Factors

These refer to the critical elements needed in course development. Students should not be considered as virtual nomads; they should get some form of content that is organized, relevant, clear in its goals and expectations, flexible, and appropriate in scope. The model proposes that course factors are among the *core* factors that directly impact success measures and leadership factors.

Leadership Factors

These factors denote the role university administration and teaching and learning centers play in technology leadership. Support may be provided in the form of acquiring new and powerful technologies, arranging student and faculty regular trainings, creating new opportunities for faculty professional development, establishing permanent IT help desks, establishing IT laboratories for experimentation, hiring teaching support staff, and providing all other logistics required in the successful execution of online courses. Presumably, these factors substantially impact all the essential success factors directly and success measures only indirectly.

Relationships among Success Factors

There also exists a complex relationship among the success factors themselves, as indicated by the double-headed arrows in Figure 1 above. Presumably, each success factor affects and is affected by the other. Student and faculty attitude, understanding, and motivation, for instance, may directly impact the optimal use of technologies, the adoption of certain learning methods, and the nature and quality of courses. If there is no adequate technology leadership, it may be difficult to acquire powerful technologies, adopt collaborative and process-oriented learning, develop quality courses, and get motivated in and develop appropriate views and assumptions about online learning.

On the other hand, if several or most or all of the success measures are met, all the essential and desirable success factors may be positively affected, as indicated by the dashed arrows which spread from the center in Figure 1 above. For instance, once success of some sort is brought, students and faculty might improve their understanding of and attitude to online instruction, more or better technological tools might be acquired and used, process-oriented learning approaches might be strengthened, better support systems might be put in place, and quality might be added to online courses. These impacts, however, would come mostly through dealing with the *essential* success factors first. Generally, meeting the *primary* and *secondary* success measures heavily depends on the simultaneous and systematic consideration of the *essential* and *desirable* success factors outlined above.

CONCLUDING REMARKS

Although COVID-19 disrupts higher education functions in Africa and globally, it should be at times considered as an opportunity to experiment with new strategies of institutional survival. Because of the pandemic, many HEI are 'forced' to embrace technologies to accomplish their basic functions. There is

clearly a dearth of research on its effectiveness though. However, a synthesis of research conducted in 31 countries worldwide "suggests that the current practices can be defined as emergency remote education and this practice is different from planned practices such as distance education, online learning or other derivations" (Bozkurt et al., 2020, p. 1). There is an urgent need to evaluate the effectiveness of current emergency remote learning practices and then to deliberate on successful technology integration for teaching and learning in higher education in Africa.

As the conceptual model presented above maintains, the quality and extent of technology integration could be enhanced through a methodical consideration of factors at various levels. Reconceptualization of curricula, teaching philosophies and methods, and student assessment is needed to suit online learning and teaching environments. Faculty and student views about learning and teaching using technologies and their skills are significant determining factors as the availability of technologies and Internet connections. University teaching and learning centers or pedagogical centers can play critical roles in spearheading these initiatives. To support evidence-based decision-making, continued experimentation and research on the conditions and factors that affect quality in technology-supported learning and teaching environments in higher education are warranted.

REFERENCES

Bekele, T. A. (2010). Motivation and satisfaction impact of educational technologies: A review. *Educational Technology and Society*, *13*(2), 116-27.

Bekele, T. A. (2009). Cognitive skills in Internet-supported learning environments in highereducation: Research issues. *Scandinavian Journal of Educational Research*, *3*(4), 397-419.

Bekele, T. A. (2009). *Learning impacts of technologies in higher education: Methodological and theoretical issues in and for research*. Doctoral dissertation, University of Oslo.

Bekele, T. A., Cossa, J., & Barat, S. (In press). Toward building strategic university-society partnerships in Africa. *Modern Africa: Politics, History, and Society.*

Bekele, T. A. & Menchaca, M. P. (2008). Research on Internet-supported learning: A review. *Quarterly Review of Distance Education*, *9*(4), 373-406.

Bekele, T. A. & Ofoyuru, D. T. (2021). Emerging university-society engagements in Africa: An analysis of strategic plans. *Journal of Comparative and International Higher Education*, *13*(1), 151-180.

Menchaca, M. P. & Bekele, T. A. (2008). Learner and instructor identified success factors indistance education. *Distance Education*, *29*(3), 231-252.

Bozkurt, A., et al. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, *15*(1), 1-124.

Center for Learning and Teaching. (2020). *Annual report 2019/20*. The American University in Cairo.

Karkouti, M. I., & Bekele, T. A. (2019, 15 June). Human factor behind integrating technology into learning. *University World News (*Global Edition). https://www.universityworldnews.com/post.php?story=20190611082122482

International Telecommunication Union. (2019). *Measuring digital development: Facts and figures*. ITU.

Koninckx, P., Fatondji, C., & Burgos, J. (2021). *COVID-19 impact on higher education in Africa*. OECD.

Marinoni, G., Land, H., & Jensen, T. (2020). *The impact of Covid-19 on higher education around the world.* IAU Global Survey Report.

Morocco World News. (2021, 25 February). Al Akhawayn 1st University in Africa accredited for online instruction. https://www.moroccoworldnews.com/2021/02/335995/al-akhawayn-1st-university-in-africa-accredited-for-online-instruction

Teferra, D. (2021, 15 June). African higher education after COVID: The bane and the boon. *University World News.* https://www.universityworldnews.com/post.php?story=20210614212209304

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