

Exploring the challenges and opportunities in adoption of eLearning during COVID-19 pandemic in Kenya

Dismas Kitaria*, Anthony Irungu Njina**, David Kibaara***, Stephen Mageto****, Patrick Njuguna*****

* *Department of Computer Science, Meru University of Science and Technology*
Email: teddismas@gmail.com

** *Department of Computer Science, Meru University of Science and Technology*
Email: freenjina@gmail.com

*** *Department of Information Technology, Meru University of Science and Technology*
Email: kibaaragichuiri@gmail.com

**** *Department of Computer Science, Meru University of Science and Technology*
Email: smageto@gmail.com

***** *Department of Information Technology, Meru University of Science and Technology*
Email: pnjuguna@must.ac.ke

Abstract:

As the COVID-19 cases continued to escalate, the Ministry of Education declared that the school calendar for the year 2020 to having been lost due to stringent COVID-19 restrictions, which prevented normal learning activities. E-learning presented a critical opportunity during the pandemic in assisting teachers to deliver their lessons and to track the learning and teaching processes. eLearning platforms are supported by different technologies and require both electricity, data connectivity, as well as devices, which creates technical challenges for their implementation. The willingness and acceptance of learners to utilize the e-learning platforms is a major contributing factor to the success of the system. Learners, teachers, and parents have been noted to have been ill-prepared for eLearning. In absence of operational policies on e-learning, the education sector was caught unawares and was ill-equipped to adapt to any form of standardized learning. The lack of a standardized approach to the e-Learning systems poses a challenge to their implementation. Despite the challenge, eLearning systems provide a significant opportunity for carrying out education reforms to ensure that learning can continue even when the traditional schools are closed.

Keywords — eLearning, COVID-19, Closure of Schools

I. INTRODUCTION

On March 15, 2020, the Kenyan government issued a directive requiring the closure of all schools, colleges, and universities across the country as part of the response to COVID-19. This directive led to disruption of learning affecting approximately 17 million learners all over the country [1]. As the COVID-19 cases continued to escalate, the Ministry of Education declared that the school calendar year would be considered as lost due to stringent COVID-19 restrictions, which prevented the resumption of normal learning activities [2]. The situation compelled the government to adopt a remote and digital learning mode of learning. Online e-learning is described as “learning experiences using various electronic devices (e.g., computers, laptops, smartphones, etc.) with internet availability in synchronous or asynchronous environmental conditions” [3]. Schools adopted different software and apps to carry out the e-learning, including Google Meet, Zoom, and Microsoft team.

While online learning is not new to learners, especially in universities, COVID-19 presented a need to explore online learning at a greater scale. UNESCO noted that the closure of schools was likely to have adverse effects on learners, including interruption of learning, thereby leading to students being deprived of opportunities for growth and development [4]. E-learning presented a critical opportunity during the pandemic to assist teachers in delivering their lessons and track the learning and teaching process.

II. CHALLENGES OF ELEARNING DURING COVID-19 PANDEMIC IN KENYA

A. Technology-related Challenges

eLearning platforms are supported by different technologies and require both electricity and data connectivity as well as devices that can allow the eLearning materials to be accessed. The eLearning systems that were being launched experienced

several hurdles such as accessibility, availability, usability, and the quality of the websites used [4]. Challenges related to poor internet access and lack of reliable electricity implied that eLearning caused inequalities in learning, with most learners being excluded from learning. Estimates by the World Bank indicate that an estimated 69.7% of the population in Kenya has access to electricity [5]. A report by the Communications Commission of Kenya (CCK) and the Kenya National Bureau of Statistics (KNBS) [6], pointed out that there are notable inequalities to accessing ICT facilities between the rural and urban population, where 21.1% of the urban population reported access to computers relative to 4.3% of the urban population. A study by [7] on the implementation of e-learning in Kenyan Public Universities had shown that approximately 92% of the participants pointed out inadequate ICT and e-learning infrastructure as being among the main challenges hindering the widespread implementation of e-learning in Kenyan public universities. In their study, [8] identified that technological factors make up the main criteria for the success of e-learning systems, with 45% of e-learning projects in developing nations end up as total failures, 40% ending up in partial failures, with only 15% emerging as successful.

B. Individual Challenges

One of the major factors that affect the success of an e-learning system is individual-related factors. Learner's willingness and acceptance of utilizing the e-learning platforms is a major contributing factor to the success of the system [4] Another individual factor that poses a significant challenge to the implementation of the eLearning system in Kenya is the financial factor. A study by [7], had 87% of the respondents identify those financial constraints are a major constraint hindering the implementation of e-learning in Kenyan public universities. A key individual factor that posed major challenges to the implementation of e-learning systems in Kenya is the lack of preparation by the individuals, including teachers, students, and parents. According to [9], 59% of primary school teachers, 84% of public secondary school teachers, and 63% of international school teachers revealed that they were unprepared to administer virtual learning. One main element of the new eLearning system that was adopted after the closure of schools due to the COVID-19 pandemic was that it led to a shift in the supervision roles from teachers in a school set-up and assigned more responsibilities to parents. The parent's lack of preparedness to take an active role in the adopted e-learning system. This challenge is evident with 73% of primary school teachers, 85% of secondary school teachers, and 69% of teachers from international schools holding the perception that parents were unprepared to support their children's virtual learning requirements.

C. Lack of Operational e-Learning Policies

The e-learning model of learning was adopted in widescale as a response to the closure of schools in the country following the COVID-19 pandemic. When the system was launched and implemented, it faced a key challenge of a lack of operational

e-learning policies. Policy frameworks play a major role in offering guidance to the implementation and provision of e-learning. While several education reports and commissions highlighted the possibility of using e-Learning as a substitute approach to delivering education, no guidelines were implemented at a national level. The National ICT Policy of 2016 seemed to address the lack of strategy of e-Learning in the National ICT Policy of 2006 by providing some details of e-Learning policy strategy [10]. Even with the e-Learning strategies, there is no clearly defined national e-Learning policy framework to guide the practice [10]. While the Ministry of Education developed the Kenya Education Sector Support Program (KESSP) in 2005, which made it a priority to mainstream ICT into the teaching and learning process, no national e-learning education policy had been developed to guide its implementation [11]. The Kenyan public universities have been noted to attempt to implement e-learning models with no formal policies, and the lack of operational e-learning policies is a major hindrance to the success of the e-learning systems in schools. The lack of operation policies on e-learning meant that the education sector was caught unaware and thereby had limited ability to adapt and respond with appropriate e-learning systems.

D. Quality Issues

Quality is considered as a measure of the degree of excellence. In e-Learning, context quality is considered an outstanding, excellent, and positively impact service offered to learn. The quality of the e-Learning has been questioned, with various stakeholders being doubtful on the excellence level under e-Learning programs while compared to the traditional learning systems [12]. A study by [13] indicates that the quality of e-Learning in institutions of higher education in Kenya is inhibited due to conflicting interests by the various stakeholders in the education sector. In response to the closure of schools after the COVID-19 pandemic break-out, schools were left to implement e-learning systems on their own without proper guidance or benchmarking. [10] noted that e-Learning benchmarking is a major challenge in the Kenyan system, which leaves the respective institutions solely in charge of their standards. The lack of a standardized approach to the e-Learning systems poses a challenge to ensuring the quality of the system in delivering education to learners.

III. THE OPPORTUNITY OF E-LEARNING IN KENYA

The implementation of e-learning in schools in Kenya provided an opportunity for education reform. The objective of the online learning system adopted was focused on providing opportunities for learners to continue with their learning even when schools had been closed due to the COVID-19 pandemic. For the e-Learning system to be successful, there is a need to focus on its implementation. According to [7], for the successful adoption of e-learning, educational institutions, teachers, and school heads need to be engaged in decision-making processes. The COVID-19 pandemic provided an

opportunity for the Ministry of education to introduce necessary reforms through policies and procedures to facilitate effective implementation of the e-Learning system. A key part of the reform process is to ensure e-learning implementation readiness, which entails mental and physical preparedness for some intended action. To facilitate the implementation of the system, there should be an assessment of e-learning preparedness to assist educational institutions in developing appropriate comprehensive strategies that are ideal for ensuring effective e-learning systems [14]. The reforms to implement a successful e-Learning system needs to be personalized to address the needs of various learning groups.

IV. CONCLUSION

Following the break-out of COVID-19 in Kenya, the Ministry of Education reported the closure of all schools, colleges, and universities, thereby disrupting the learning process for more than 17 million learners. In a bid to continue the learning process, even as the learners remained at home, the Ministry of Education advocates for the use of eLearning. Schools adopted different software and apps to carry out the e-learning, including Google Meet, Zoom, and Microsoft team. However, the eLearning system in Kenya faced several challenges that inhibited its effectiveness. Among the challenges facing the eLearning system in Kenya include; technology-related factors which hinder the ability of learners, teachers, and parents to utilize the eLearning system. Individual factors have been noted to be a major challenge for the success of the eLearning system since it impacts the willingness and acceptance of users to utilize it. Lack of operational e-Learning policies hindered the quality of the learning process under the eLearning system due to institutions being left to determine their standards. The lack of a standardized approach to the e-Learning systems poses a challenge to ensuring the quality of the system in delivering education to learners. Despite the challenge, eLearning systems provide a significant opportunity for carrying out education reforms to accommodate the eLearning process as part of accepted and recommended learning processes.

REFERENCES

- [1] C. Jelimo. Impact of COVID-19 on the Right to Education in Kenya. *Right to Education*. <https://www.right-to-education.org/blog/impact-covid-19-right-education-kenya>. September, 2020
- [2] Kathula, D. N. (2020). Effect of Covid-19 Pandemic on the Education System in Kenya. *Journal of Education*, 3(6), 31-52.
- [3] Zalat, M. M., Hamed, M. S., & Bolbol, S. A. (2021). The experiences, challenges, and acceptance of e-learning as a tool for teaching during the COVID-19 pandemic among university medical staff. *PLoS one*, 16(3), e0248758.
- [4] Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during the COVID-19 pandemic. *Education and Information Technologies*, 25, 5261-5280.
- [5] The World Bank (2019). <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=KE>
- [6] CCK and KNBS. (2018). National ICT Survey Report. <https://ca.go.ke/wp-content/uploads/2018/02/National-ICT-Survey.pdf>
- [7] Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *International review of research in open and distributed learning*, 16(1), 120-141.
- [8] Al-araibi, A. A. M., Naz'ri bin Mahrin, M., & Yusoff, R. C. M. (2019). Technological aspect factors of E-learning readiness in higher education institutions: Delphi technique. *Education and Information Technologies*, 24(1), 567-590.
- [9] Ireri, M. (2021). Teachers' and Parents' Preparedness to Support Virtual Learning during the Covid-19 Pandemic in Kenya. *African Journal of Empirical Research*, 2(1), 95-101.
- [10] Kibuku, R. N., Ochieng, D. O., & Wausi, A. N. (2020). e-Learning Challenges Faced by Universities in Kenya: A Literature Review. *Electronic Journal of e-Learning*, 18(2), pp150-161.
- [11] Makokha, G. L., & Mutisya, D. N. (2016). Status of e-learning in public universities in Kenya. *International review of research in open and distributed learning*, 17(3), 341-359.
- [12] Gaskell, A. and Mills, R. (2014) The Quality and Reputation of Open, Distance, and e-Learning: What are the Challenges? *The Journal of Open, Distance, and E-Learning*, [e-journal]29(3), pp 190-205. doi.org/10.1080/02680513.2014.993603
- [13] Njoroge, R. W., and Kibaru, F. (2012) Implementing Quality e-Learning: Which Way for Higher Education Institutions in Kenya? In: EdMedia 2012, World Conference on Educational Multimedia, Hypermedia and Telecommunications 2012. Denver, Colorado, 26-29 June 2012, AACE: USA, [online]
- [14] Odoyo, C. O., & Olala, S. O. (2020). Covid-19 Pandemic as a Catalyst to E-Learning Acceptance in 2020. *International Journal for e-Learning Security (IJELS)*. 9(1)