

Acceptance of E-learning as a Mode of Study among University of Nairobi Students Amidst COVID -19 Pandemic

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ABSTRACT

The COVID-19 pandemic in 2020 has aroused interest in the education sector to explore—full potential of online learning mode of study. This has been catapulted by the unabated spread of the Corona Virus in the year 2020. With more restrictions in terms of social distancing as preventive measure, e-learning mode of study remains the most viable option for the education sector. In line with this, the University of Nairobi has encouraged all colleges to adopt the online mode of study. This study, therefore aimed at seeking students' views on—perceptions on utilization of online learning as a mode of study. This study adopted cross-sectional survey research design and used questionnaires in the Google Forms format to reach out to students in the ODeL (Open Distance and Electronic Learning.) campus of the University of Nairobi. Cross-sectional survey research design was instrumental in this study to collect data from students at different levels of learning. The design employed use of questionnaires in data collection which was converted to Google Forms and sent to students through emails and WhatsApp groups. This instrument was modified from a previous tool developed and used by Poon, Low and Yong (2004). The total number of students who responded to this study were 244 drawn from all four-level of study at the University of Nairobi, ODeL campus.

Results from this study showed that the online learners in ODeL had a moderate acceptance level of the online learning and that learners are yet to fully own and accept e-learning mode of study. All efforts should be explored to make this mode more acceptable through more direct communication with learners.

Key words: Acceptance, e-learning, students, University of Nairobi.

1. INTRODUCTION

Covid-19 has affected lives of all people worldwide. Due to this pandemic, Africa is facing its first real economic depression in the last 25 years. This has led to a contraction in trade and demand, value chain disruption, reduced domestic production as well as reduced foreign financing flows from remittances, tourism, foreign aid, foreign direct investment and more importantly the education sector. Long-term effects of this pandemic are projected to be felt as long as two years after its end (Zhang, Liu, Han, Kou, 2020; Torales, O'Higgins, Castaldelli-Maia, Ventriglio, 2020; Karthikeyan, & Vaishya, 2020; Heneka, Golenbock, Latz, Morgan, Brown, 2020).

The disease is highly infectious and countries across the globe affected by the virus have come up with various mechanisms to contain the spread. These measures include lock down, people staying home except for work or others working from home saves for those working in essential services. Equally affected are the schools, colleges and universities. As a result, the effects have been both positive whereby people get more time to spend with families as well as devastating like the case of health workers away from families, broken relationships, family traumas, gender-based violence, depressions amongst others which have become the norm of daily life, resulting in ill health (Leigh-Hunt et. al., 2017).

While the working class has still managed to work through virtual methods (Saxena, 2011), school-going learners in many parts of the world have been disadvantaged. Education has been the main casualty of the COVID-19 pandemic. Over one and a half million children are out of school, representing close to 90 percent of learners worldwide (UNESCO, 2020). This has been one of the greatest disruptions to learning in the recent history. There are also fears over the post COVID-19 interruptions particularly to the vulnerable groups in developing countries. For example, in many parts of Asia and Africa, children do not have access to laptop, smart phones or data to carry on with online lessons.

The worst group of children is those in the poorest countries, in poorest neighborhoods and those who are already in disadvantaged and vulnerable situations as they are affected by the schools' lockdown situation (UN, 2020). These include children from informal urban settlements and those from pockets of poverty. Teenage girls are particularly vulnerable while outside school environment. Other vulnerable groups include children living with disabilities and those from minority groups. The situation is no different for college going students. They are locked at home too. Some have limited resources to access online classes offered by respective colleges.

This pandemic has somehow given educators globally, an opportunity to rethink their view and impact of online studies. Kenya hasn't been left behind; many institutions are grappling with the idea amidst claims of equity issues in its roll out. At the university if Nairobi, the ODeL campus had to realign itself quickly through trainings and information sharing to serve the entire university in this mode of learning.

Poon, Low and Yong (2004), Folorunso, Ogunseye, and Sharma (2006), Selim (2005) and Volery and Lord (2000) reported that students' characteristics were key in influencing students' acceptance level of the online learning. They went further to provide key aspects of student characteristics in this regard.

This study goes beyond student characteristics to look at the students' behaviors and attitudes, Interactive applications and Technology and system as they impact on students' acceptance of the online learning.

Relevant technological support to the online learning mode of study is very critical for its support (Folorunso et al., 2006; Selim, 2005). Other than the online platform system being versatile to learners, it must be up to date. Issues of internet connectivity speeds must be solved at the earliest convenience so as to make the information flow faster and reliable (Selim, 2005). Technical hitches to the system must be identified in good time and sorted out appropriately. Rafaeli and Sudweeks (1997) observe that smooth operating system is desirable to learners, it makes learners appreciate the system and therefore boost their acceptance level of the system (Cleaver, 2014; Misevicien, Ambrazien, Tuminauskas & Pažereckas, 2012; Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012).

Best practice in lesson delivery must be adopted in online tasks, key among this is the appreciation for a two-way communication between the learner and the instructor (Duta, Panisoara & Panisoara, 2015) and more interactions with the learners to increase their cognitive abilities and engagement (Silong & Ibrahim, 2002).

Tasks given online help learners to tackle more challenging assignments during examinations. On the other hand, discussion sessions with the learners helps them to develop critical thinking and helps to retain more content than students who were not exposed to group discussions. (Bryce, 2014; Lander, 2015; Jacobi, 2018)

This study adopted cross-sectional survey research design and used questionnaires in the Google Forms format to reach out to students in the ODeL (Open Distance and Electronic Learning) campus of the University of Nairobi. Cross-sectional survey research design was instrumental in this study to collect data from students at different levels of learning. The design employed use of questionnaires in data collection which were converted to Google Forms and sent to students through emails and WhatsApp groups. This instrument was modified from a previous tool developed and used by Poon, Low and Yong (2004). The total number of students who responded to this study were 244 drawn from all four levels of study at the University of Nairobi, ODeL campus. The survey was undertaken between September 3rd and October 5th, 2020.

Data from the learners was collected through an online questionnaire. Before adoption for use, the questionnaire was piloted and yielded a Cronbach Alpha coefficient of 0.7 which was considered appropriate for this exercise. Section one of the questionnaire gave information about student demographic characteristics. Section two was concerned with the learners' acceptance level under three sub themes as identified by Poon et al. (2004). The sub themes used in this section were: students' behaviors and attitudes, technology and system, and interactive applications." (Poon et al., 2004). This instrument presented useful information that was analyzed by way of descriptive statistics.

3. RESULTS

The analysis of available data from respondents was analyzed using SPSS (Statistical Package for Social Sciences) version 15. Table 1 Indicates that the online students had a moderate acceptance of the online mode of study at the University of Nairobi. The learners had a higher acceptance level for "institutional factors," followed by "students' behaviors and attitudes, "The level of technology used in the institution and the instructor characteristics had means of 3.39 and 3.62 respectively. The subsequent section discusses each of these findings in detail.

Table 1: Means and standard deviations for factors influencing acceptance of e-learning

Acceptance of e-learning factors	N	
	Mean	Standard Deviation
Students' behaviours and attitudes	3.60	0.75
Interactive applications	3.63	0.74
Technology and system	3.39	0.76
Mean	3.54	0.75

1) The items had responses in the Likert format with 5 = Strongly Agree (SA), 4 = Agree (A), 3 = Neutral (N), 2 = Disagree (D) and 1 = Strongly Disagree (SD).

2) For the overall mean scores, scores of 1.0 - 2.9 = low level, 3.0 - 3.9 = moderate level and 4.0 - 5.0 = high level.

Students' behaviours and attitudes was the first factor to be considered in this study as shown in Table 2. Results indicate a moderate level of acceptance to online learning with a mean score of 3.50. Overall, the University of Nairobi students were anxious to complete studies/degree program on time. The UoN system for online learning is motivational to learners using it. The students were in a good position to interact with the Moodle learning system used at the University of Nairobi together with the Google Classroom used in the teaching of the online programs. Students also responded that they had the cognitive power to use the available technologies. Finally, students observed that they were satisfied with the online learning system in place.

Table 2: Students' behaviours and attitudes

	N	Mean	Std deviation
1. I am anxious in completing my degree	244	3.67	0.87
2. I belief in my capability to interact with technology	244	3.58	0.69
3. I am cognitively engaged in doing the e-learning activities	244	3.57	0.80
4. I am willing to participate in e-learning activities	244	3.53	0.64
5. I have the motivation to learn and use the system	244	3.46	0.70
6. I have high level of self-confidence in using the system	244	3.37	0.77
7. I am flexible with use of the system	244	3.35	0.73
Mean		3.50	0.75

Table 3 indicates that the learners had a moderate level of acceptance of factor two on Technology and system use at the University of Nairobi. Final tabulation of the means under this factor ranged between 3.16 and 3.68. The students noted that the system made it easy and possible to navigate through the online system, the online colours and presentation of content were well done, the information in the system was credible enough. The learners, however, were not comfortable with the browsing speeds in the system and also the navigation through the system.

Table 3: Technology and System

	N	Mean	Std Deviation
1. The system allows easy access to information	244	3.68	0.77
2. The configuration colours and background are clear	244	3.67	0.65
3. System information is credible	244	3.62	0.70
4. The guidance screen is clear and easy to use	244	3.60	0.66
5. IT infrastructure is guaranteed	244	3.54	0.77
6. Investment in infrastructure is adequate	244	3.54	0.76
7. Screen layout and design are appropriate	244	3.45	0.75
8. There's rare disconnection during lesson	244	3.23	0.87
9. Browsing speeds are okay	N	3.27	0.77
10. Navigating the system has no issues	244	3.16	0.91
Mean	244	3.48	0.76

Table 4 indicates that the learners had a moderate acceptance of interactive application.

This was evidenced through a mean of 3.63 and a standard deviation of 0.73.

They agreed that online discussions were a good idea because they were able to be engaged. They held the view that online engagement and sharing could improve their level of knowledge sharing, exchange of views and ideas. They believed that this online engagement could increase quality of education on offer at the University of Nairobi. Generally, they believed that by browsing through colleagues works could improve their own work.

However, some students were not comfortable in receiving colleagues/classmates' feedback.

Table 4: Interactive Applications

	N	Mean	Std Deviation
1. Knowledge sharing through online discussions is great	244	3.99	0.70
2. Online discussion enriches students exchange of ideas	244	3.83	0.83
3. Interactive applications are beneficial to me	244	3.72	0.72
4. I fully participate in the Q&A sessions	244	3.63	0.67
5. Browsing classmates' works acts as check and balance for me	244	3.63	0.69
6. Online discussions wastes time	244	3.61	0.84
7. I am able to concentrate on the quality of learning	244	3.59	0.67
8. I manage discussions with comrades through e-learning system	244	3.58	0.83
9. Course work uploads isn't difficult	244	3.56	0.71
10. Browsing classmates' works improves quality of my work	244	3.55	0.65
11. Uploading coursework is ideal	244	3.53	0.73
12. I browse peers' feedbacks of my colleagues	244	3.36	0.75
Mean	244	3.63	0.73

4. DISCUSSION

4.1 Students' Acceptance of E-learning

Overall, the students' scores from the study showed moderate level of e-learning acceptance. This was the same result that, Poon et al. (2004) established among college students in Malaysia. This study indicates that interactive applications scored the highest mean at 3.63."

This is in disagreement with Poon et al. (2004) study which found that students' behaviours and attitudes was ranked highest, followed by technology and systems.

4.2 Students' Behaviours and Attitudes

On "students' behaviours and attitudes," the scores showed moderate level of e-learning acceptance. The study shows the students were self-motivated and determined to interact with the system and hence complete their studies on time. Learners were confident enough in engaging the online system which they viewed as very important in their studies. This was consistent with studies by Landrum, 2020; Lundqvist, 2015; Alqurashi, 2019). In particular, the study by Landrum (2020) observed that student inner motivation and determination was critical in their level of online interactions and learning process at large. Students' confidence to learn online was the strongest positive predictor of satisfaction and usefulness of online classes.

Poon et al. (2004) affirmed that students' participations enhance their learning desire. In addition, Horspool, & Lange, (2012) found that students' perception to e-learning is critical in online learning experience. This is in line with the findings of the study where "students' behaviours and attitudes" was the second highest mean scores among the factors influencing the acceptance of e-learning.

Rada, (2011) observed that users' self-efficacy could influence the use of technology not only with learners, but also with the instructors/teachers. Therefore self-drive or self-confidence is a critical aspect of a learner to engage any new system in the learning process (Zimmerman, Bandura, Martinez-Pons, 1992; Morgan (Ed.). Newbury Park: Sage. Zimmerman, 2000, Kaleci & Akleman, 2019; Zhu, 2019). Therefore, it is critical to understand the student self-efficacy and needs before engaging them with new methods of teaching especially in regard to technology (Woodrow, 1991; Vakoufari, Angelaki, Mavroidis, 2014). This is an important factor to consider in terms of e learning readiness for learners.

4.3 Interactive Applications

The present generations of students are generally affable with technology. They love to engage their peers, colleagues, tutors, parents, friends through online platforms. This is common in the so-called chats. This gives them an upper hand in the use of interactive applications.

This level of interaction has been accelerated by the level of internet penetration across the globe, availability of communication gadgets, fiber internet connectivity and generally low cost of internet services in most countries including Kenya. All these are a motivation to learners to take the option of online interactive classes.

Scholars from diverse backgrounds have established that online discussions play a critical role in knowledge sharing and that online student interactions is an integral part in exchange of knowledge among distance learners (Pendry & Salvatore, 2015; Onyema, Deborah, Naveed, Sanober, & Alsayed, 2019). Students in this study have affirmed this to be the top most important consideration in e e-learning acceptance at the University of Nairobi. Students in the current study were excited in engaging each other in online discussions in the course of learning. The students had a feeling that online knowledge sharing should be encouraged among the learners. All these results affirm Poon et al (2004) thoughts and believe that knowledge sharing is critical aspect of online learning. However, students expressed their reservations on browsing their peers' feedbacks of most of their classmates. This is consistent with previous studies (Poh & Abu Samah, 2006). This supports the traditional views on learning that placed much more emphasis on the role of the teacher in the teaching learning experience.

4.4 Technology and System

Nowadays the progress in information technologies is opening new possibilities for people in all areas of life.

Since education is a fundamental right to humanity, Technology must be packaged in a manner that it can be attractive, presentable and enjoyable to all learners interested in learning (Tselios, Avouris, Dimitracopoulou & Daskalaki, 2011). Technology is dynamic and must therefore be packaged in a matter that it serves the learners interests well (Alelaiwi, & Hossain, 2015). The technology use in education must be simple, reliable and user friendly (Andreicheva & Latypov, 2015).

Previous studies have underlined the critical role of course web page interface with the e-learning system (Tiako, Kouede, & Tiako, 2016; Poon, et al., 2004; Abduljalil, & Kang, 2011). For instance, it is important to have appropriate colour configurations of the content on the webpage (Tiako, Kouede, & Tiako, 2016). This reduces monotony and allows both the tutor and learner to appreciate the system and thus learning takes place. This helps since online classes are different from face to face classes where learners and tutors can take a break to stretch. Home pages without proper background colours are unattractive making learners to spend little time on the platform (Abduljalil, & Kang, 2011).

For example, women will be happier, to have more vivid colors (pink, green fluorine), and attractive images on their interfaces, to get their attention than men who just want an interface with less bright colors (blue, gray)

(Tiako, Kouede, & Tiako, 2016). Those aspects are sometimes overlooked, but women are galvanized when the work environment is pleasant (Tiako, Kouede, & Tiako, 2016).

There are practical issues that must be taken into consideration when designing such online interfaces. Other than gender, the interface should pay attention to the characteristics of the learners in terms of impairment, age, level of student, and even state of the learner (Tiako, Kouede, & Tiako, 2016). Therefore, usability and the art of instructional design are crucial for the designing and development of successful e-learning tools (Squires, 2009). They create interest in learners to study. This study indicates that the webpage interface is critical in helping learners to have an enjoyable experience as learners. This notwithstanding, the students felt that internet disruptions together with electricity blackouts had a toll on their studies. Previous studies have shown that these technical problems could affect learners' willingness or acceptability of the online mode of study (Mussa. 2018; Bashir, Mahmood, & Shafique, 2016; Pelgrum, 2001, Sarvestani, Mohammadi, Afshin, Raeisy, 2019 & Swan, 2017).

It is therefore of essence that institutions of learning must continue to review their online learning systems so as to remain relevant and attractive to students for maximum output.

This is informed by the fact that technology in itself is a dynamic area and must therefore be treated as such (Trentin, 2003; Bush, 2002; Qureshi, Qureshi, Ahmed, 2020; Yolande, Chan, 2019).

5. CONCLUSION

Results from this study indicate that learners are yet to fully own and accept e-learning mode of study. All efforts must be put in place to make this mode more acceptable to the learners through more direct communication with the learners and also ensure that all bottlenecks are addressed as soon as possible by the University. The University can take an initiative to have more trainings or user guides availed to students. Without this, the acceptance level of the online learning mode will take a long period of time to be realized.

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