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SOCIAL-ECONOMIC FACTORS INFLUENCING BLENDED LEARNING AMONG STUDENTS IN KENYA MEDICAL TRAINING COLLEGE

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Abstract

Purpose: The objective was to determine the social-economic factors influencing blended learning among students in Kenya Medical Training College

Methodology: A cross-sectional descriptive study was done. In the KMTC campuses the average student population is thirty thousand (30,000). The research used simple random sampling in the selected campuses. The sample size was 384. Primary data was collected using questionnaires and Quantitative data was analyzed using descriptive statistics whereas qualitative data was analyzed using content analysis. Qualitative data was transformed into themes and analyzed with the helped of SPSS version 25. Collected data was edited, sorted, cleaned and coded for data analysis.

Findings: The study concluded that Proficiency in the use of a learning device and cost are major challenges that hinder success of blended learning. Most respondents feel that blended learning is expensive. The study also concluded that students have devices that they can use for online learning and that students can access the college e-learning platform on season basis,

Unique contribution to Theory, Practice and Policy: The study recommends that the institutions should Strengthening of campus internet services to support E learning. The study further recommended that the policy on delivery of learning instructions and materials should be reviewed to reflect the changing times. Further, policy makers need to consider the characteristics of the learners and trainers so as to reduce the barriers to successful implementation of blended learning by applying different strategies to each category of adopters.

Keywords: *Social-Economic Factors, Blended Learning, Students, Kenya Medical Training College.*

INTRODUCTION

Blended learning originated from online education. As a subversive innovation to the traditional education model, online education has gained extraordinary influence due to its features of prestigious schools, famous teachers, excellent courses, openness, free of charge and mobility. However, the low completion rate of online education courses has aroused widespread concern. A large number of students cannot complete their studies without supervision or face-to-face instruction. As a result, the value of traditional school education has been re-examined. In recent years, colleges and universities around the world have explored the integration of online education into various face-to-face instructions and researched the effect of blended learning on students' learning performance. Because blended learning combines the advantages of traditional face-to-face learning and online learning, the education community generally regards blended learning as an ideal model for realizing personalized learning, increasing learning opportunities, and reducing school operating costs Although faced with plenty of problems in learning and teaching practice, blended learning has become an important components of the higher education in the world (Bates, 2020).

According to Bates (2020), COVID-19 has demonstrated the current inequalities in the system and the need for universal and low-cost access to the Internet for education. This failure cannot be attributed to e-learning itself, but to the fact that the potential of this teaching method has been underestimated and excluded from the digital education projects of educational organizations. The future of e-learning must be built on principles of openness and equality with an education in digital competence (Vázquez-Cano et al., 2020). From an economic point of view, the industry of e-learning has developed considerably in the last decade. According to Statista (2020), the market of e-learning all over the world will be over 243 billion dollars in 2022.

With the spread of COVID-19, education and training institutions around the world have moved towards online instruction to ensure the continuity of learning. Combining face to face and online learning approaches can produce greater positive impacts than instruction using just one of these delivery modes. Blended learning provides variety of experiences to the students, make them active and focused on the teaching - learning process due to increased involvement. The learners bear the responsibility of their learning thus making them more disciplined (Hondonga, Chinengundu & Maphosa, 2021).

Blended Learning can be defined as the organic integration of thoughtfully selected and complementary face -to-face and online approaches and technologies (Graham, 2006). Blended Learning is provided by the effective combination of different modes of delivery, models of teaching and styles of learning which are exercised in an interactively meaningful learning environment. Blended Learning courses combine online and classroom learning activities and uses resources in an optimal way in order to improve student learning outcomes and to address important institutional issues (Garrison, 2004). Blended Learning can be defined as the organic integration of thoughtfully selected and complementary face -to-face and online approaches and technologies (Graham, 2006).

Blended learning is not new. The modality dates back to medieval period when technology of text books was introduced into the classrooms where traditionally the professor could read to the students from the only existing manuscript (Norberg, 2017). Blending learning, by interacting with

almost every aspect of higher education, provides opportunities and challenges that we are not able to fully anticipate. This pedagogy alters many assumptions about the most effective way to support the educational environment. For instance, blending, like its counterpart active learning, is a personal and individual phenomenon experienced by students. Therefore, it should not be surprising that much of what we have called blended learning is, in reality, blended teaching that reflects pedagogical arrangements (Norberg, 2017).

Mobile technologies are playing an increasingly important role in learners' academic lives in Higher Education. Devices such as smartphones, tablets, and laptops connect users to the world instantly, heightening access to e-learning materials and enabling collaborative learning. The use of mobile technology in learning has enabled learners to learn anytime, anywhere and also at their own pace. Consequently, working learners are able to learn in a more flexible mode which is convenient to their working schedule. Since mobile technology allows learners to design their own learning contexts of when, where and how they feel more motivated to learn and learning becomes self-directed. Culture is also an aspect that needs to be considered carefully along with other context in mobile technologies for learning (Hooft, 2014).

Technology has become so much part of our lives in the 21st century that even being fully literate now includes an aspect of 'computer literacy'. The latest explosion in this field is the development of the so-called mobile devices (also referred to as hand-held devices) such as ipads and smartphones. These mobile devices have become affordable and hence are within reach of the masses. They have also introduced a variety of new tools that improve user-friendliness to the extent that they can even support education. Likewise, developments in wireless communication networks such as the 3G/data card, data bundles, Bluetooth, Wi-Fi and general packet radio service (GPRS) further extend this opportunity for mobile technology users. The term 'mobile technology', includes mobile computers (such as laptops), mobile devices and wireless communication tools (Mayisela,2013).

According to Bates (2020), COVID-19 has demonstrated the current inequalities in the system and the need for universal and low-cost access to the Internet for education. This failure cannot be attributed to e-learning itself, but to the fact that the potential of this teaching method has been underestimated and excluded from the digital education projects of educational organizations. The future of e-learning must be built on principles of openness and equality with an education in digital competence (Vázquez-Cano *et al.*, 2020). From an economic point of view, the industry of e-learning has developed considerably in the last decade. According to Statista (2020), the market of e-learning all over the world will be over 243 billion dollars in 2022.

E-learning program presents challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries. For example, whilst 95% of students in Switzerland, Norway, and Austria have a computer to use for their schoolwork, only 34% in Indonesia do (OECD data, 2020). In the US, there is a significant gap between those from privileged and disadvantaged backgrounds: whilst virtually all 15-year-olds from a privileged background said they had a computer to work on, nearly 25% of those from disadvantaged backgrounds did not. While some schools and governments have been providing digital equipment

to students in need, such as in New South Wales, Australia, many are still concerned that the pandemic will widen the digital divide.

According to The Republic of Kenya (2006), Kenya ICT Authority (2014) and Kandiri (n.d), Kenya has shown greater efforts in ensuring awareness that ICT has a significant role in greatly improving socioeconomic and political development as embedded in the country Vision 2030. In this respect, the Government of Kenya drafted its first National ICT Policy in 2006. To achieve this, the Government of Kenya drafted its first National ICT Policy in 2006. Republic of Kenya (2006), Kenya ICT Authority (2014) and Kandiri (2014), identifies the policy as a prosperous ICT-driven Kenyan society, while its mission is to improve the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services. Distance learning and e-learning have become a critical mode of delivery and assessment in institutions of higher learning in Kenya (Republic of Kenya, 2006). There is quite a wide range of use of computers in the schools and colleges. However administrative use and examination processing remains the most frequent followed by teaching of basic computer skills.

Although the above achievements, there has been a numberless challenge that affect use of ICT in our institutions. These include a lack of ICT-skilled personnel; a lack of adequate ICT equipment; a lack of reliable electricity/source of electric power; cases of burglary/insecurity; fear arising from the misconception that that ICTS will end-up replacing teachers in the classrooms as well as the general techno-phobia among teachers and administrators (Karsenti *et al.*, 2012).

A study conducted in Sri Lanka revealed that the pandemic had posed significant challenges to education in TVET institutions as instructors and students were struggling with online learning, which was introduced abruptly under the new norm of social distancing. TVET institutions experienced a significant challenge of providing hands-on practical training using tools and machines through online training. It was further noted that only one in five households owned either a desktop or laptop in Sri Lanka. The study recommended that further policy planning and implementation was needed to address the challenges experienced during the COVID-19 pandemic (ADB Briefs No. 168 March, 2021).

Gharmallah, and O'Toole (2017) investigated student experience with the Internet, and their attitudes towards using it, in an attempt to determine the impact of these experiences and attitudes on their view of the implementation of blended learning. Data from 142 Saudi students at a leading university in Saudi Arabia were collected via an online questionnaire. The results reveal that students have both experience with and positive attitudes towards using the Internet. Demographic variables had no effect on these attitudes, but experience variables showed significant effects. Interestingly, there were mixed interactions regarding student study year; negatively with Internet experience and positively with preference for the implementation of blended learning. Neither experience with the Internet nor program of study appeared to influence student preference for blended learning but age, study year, and attitudes towards the Internet were associated with positive attitudes towards blended learning. Importantly, students in the present study supported the implementation of blended learning, but not entirely online learning. Student attitudes towards the Internet in general appeared to influence their attitude to learning approaches that use the Internet in blended learning environments. Discussion of these results is presented with suggested implications.

Ustun (2019) examined the effective integration of mobile learning into blended learning environments in order to determine the impacts of these learning environments on students' learning acquisition, academic achievements and attitude. This literature review selected twenty-two peer-reviewed journal articles according to the pre-determined criteria (E.g., studies using a quantitative research design such as quasi-experimental and experimental, etc. or types of research designs such as mixed-method, case study, etc. including at least a quantitative aspect in their data collection procedure) and carefully analyzed these articles to extract reliable and meaningful information from them. The findings demonstrate that the integration of mobile technologies into a blended learning environment significantly influences students' learning acquisition in a positive way although there are few empirical findings from the reviewed articles which highlight no significant effect on their learning acquisition. With regard to student attitude, students were satisfied and motivated to use mobile technologies in blended learning environments for academic purposes according to the majority of the reviewed articles.

Sung, Chang, Liu (2016 noted that mobile devices such as laptops, personal digital assistants, and mobile phones have become a learning tool with great potential in both classrooms and outdoor learning. Although there have been qualitative analyses of the use of mobile devices in education, systematic quantitative analyses of the effects of mobile-integrated education are lacking. This study performed a meta-analysis and research synthesis of the effects of integrated mobile devices in teaching and learning, in which 110 experimental and quasi experimental journal articles published during the period 1993–2013 were coded and analyzed. Overall, there was a moderate mean effect size of 0.523 for the application of mobile devices to education. The effect sizes of moderator variables were analyzed and the advantages and disadvantages of mobile learning in different levels of moderator variables were synthesized based on content analyses of individual studies. The results of this study and their implications for both research and practice are discussed.

Maina, Njoroge, Waiganjo and Gitonga (2015) investigated the learners' perceived benefits and challenges on the introduction of tablets in blended learning in Higher Education. Purposive sampling was used to select learners who had received their learning materials through these tablets. The findings revealed that the tablets were highly accepted as a learning device due to their convenience and it was noted that there were some learner factors such as work schedules influenced their use. It was noted that learners experienced hardware, software and instructional design challenges in their use of these tablets. Tablet features, instructor availability, the quality of learning recourses were some of the areas which needed improvement.

Problem Statement

Learning in Kenya Medical Training College has traditionally been done using the face to face approach. However, the onset of COVID-19 pandemic made face to face learning not practicable as social-distancing was required so as to curb the spread of the COVID-19 virus. The ministry of education recommended blended learning in tertiary institutions in Kenya so as to ensure continuity in learning. Feasibility study on this mode of learning in Kenya Medical Training College was not done before full implementation neither were the trainers and learners adequately trained and prepared to use this approach. It was assumed that the learners and trainers had access to internet connectivity and the necessary hardware to enable them access on-line lessons. This posed a challenge in the delivery by trainers and the uptake of blended learning by learners. A

study by Lalima & Dangwal (2017) noted that blended learning is not easy and require certain fundamental preparations in all the elements of teaching- learning process, for the trainers and learners, content design and infrastructure. Based on the circumstances where Kenya could no longer continue offering training in tertiary institutions using purely face to face approach and with no prior experience of blended learning, there was need to evaluate the effect of blended learning on the academic performance of learners in Kenya Medical Training College

METHODOLOGY

A cross-sectional descriptive study will be done. In the KMTC campuses the average student population is thirty thousand (30,000). The research will use simple random sampling in the selected campuses. The sample size will be 384. Primary data will be collected using questionnaires and Quantitative data will be analyzed using descriptive statistics whereas qualitative data will be analyzed using content analysis. Qualitative data will be transformed into themes and analyzed with the helped of SPSS version 25. Collected data will be edited, sorted, cleaned and coded for data analysis.

RESULTS

Socio-economic factors

Device for E-learning

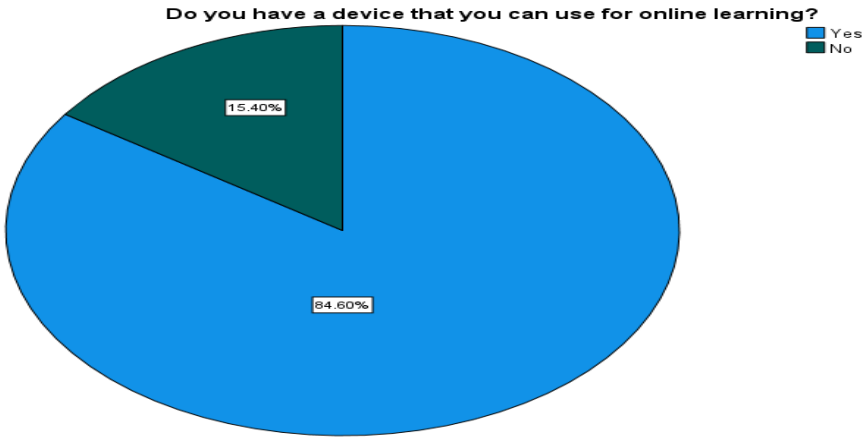

Figure 1: Do you have a device that you can use for online learning?

It is evident from the figure above that 84.6% of the students sampled have devices that they can use for online learning while 15.4% do not have the devices.

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Frequency of E-learning access

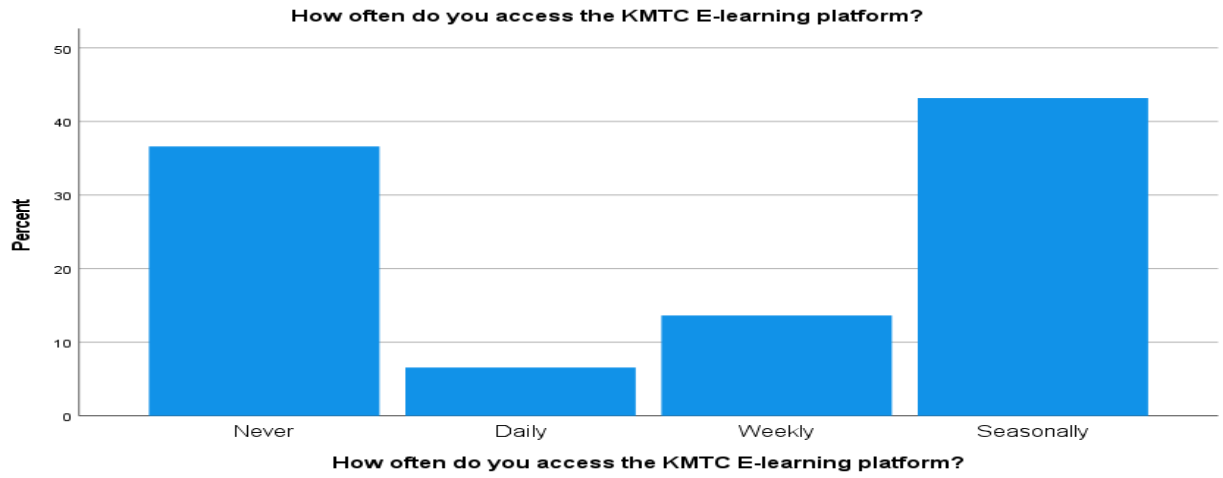

Figure 2: How often do you access the KMTC E-learning platform?

It is evident that 43.2% of the students access the college e-learning platform on season basis, 13.6% weekly, 6.6% daily while 36.6% have never accessed the platform. The bar chart for the data is shown in Figure 2

Cost of internet per day

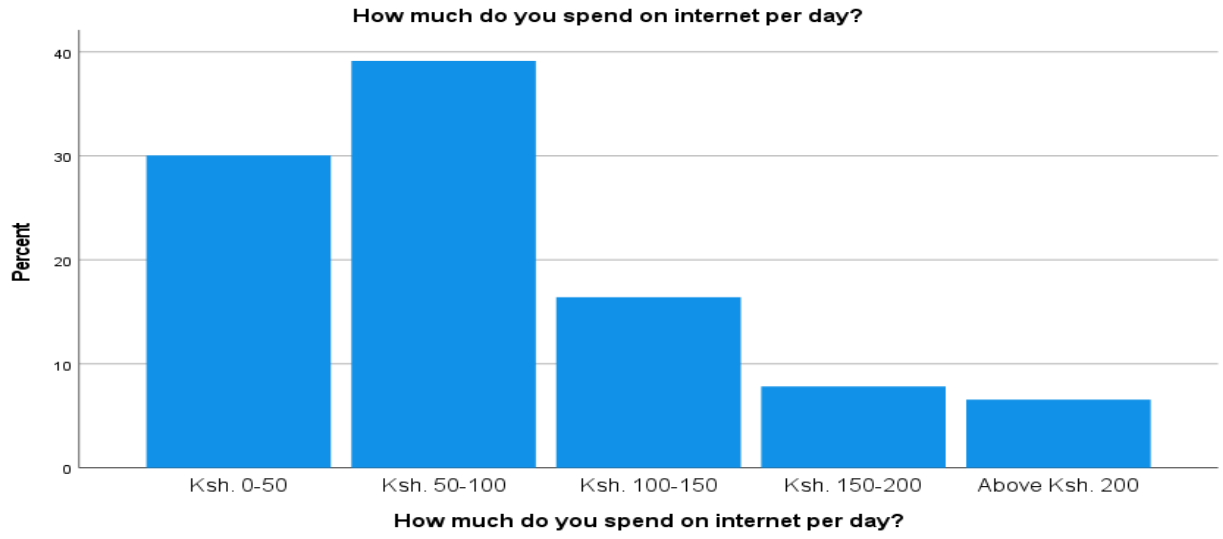

Figure 3: How much do you spend on internet per day?

Student's daily average spending on the internet. Clearly, 39.1% of the students spend between Kshs. 50 – 100, 30.1% spends between Kshs. 0 and 50 while 16.4% spends between Kshs. 100 and 150. Only 7.8% and 6.6% of the students spend between Kshs. 150 – 200 and above Kshs. 200 respectively.

At 5% level of significance, there is no association between the stability of the campus WIFI network and the percentage of attending virtual classes, χ^2 *(1, N= 230) = 18.408, p = .104*.

At 5% level of significance, there is no association between student's spending per day on internet and the percentage of attending virtual classes, χ^2 *(1, N= 230) = 15.354, p = .223*.

Conclusions

The study concluded that Proficiency in the use of a learning device and cost are major challenges that hinder success of blended learning. Most respondents feel that blended learning is expensive. The study also concluded that students have devices that they can use for online learning and that students can access the college e-learning platform on season basis,

Recommendations

The study recommends that the institutions should Strengthening of campus internet services to support E learning. The study further recommended that the policy on delivery of learning instructions and materials should be reviewed to reflect the changing times. Further, policy makers need to consider the characteristics of the learners and trainers so as to reduce the barriers to successful implementation of blended learning by applying different strategies to each category of adopters.

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