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DIGITALLY TRANSFORMED LEARNING ENVIRONMENT: AN OBLIGATORY DISRUPTION FOR EDUCATION IN AFRICA

¹ Dr. Amoran O. B, ² Fakuade Olubusayo Victor (Ph.D.), ³ Alamu S. S &
⁴ Mary Aminat Fakuade

¹ Department of Vocational and Technical Education, Ekiti State University, Ado- Ekiti, Ekiti State
Email: bayode.amoran@eksu.edu.ng

² College of Education, Open, Distance and E-Learning Kampala International University Kampala, Uganda.,
Email: olubusayo.fakuade@kiu.ac.ug

³ Department of Vocational and Technical Education, Ekiti State University, Ado- Ekiti, Ekiti State
Email: solomonalamu@gmail.com

⁴ Department of Access, Special Needs & Early Childhood Education, Kampala International University,
Email: aminat.fakuade@studmc.kiu.ac.ug

Abstract

Control and development of education as they affect the performance of students in Africa are issues that have received various reactions from scholars. There are myriads of challenges in this regard among which are inconsistencies in policy and meager funding. Attitudinal challenges from both the teachers and students to the learning environment over the years need re-evaluation from the stakeholders in order to adopt relevant, digital, and transformation technologies that are capable of redefining the educational system in Africa. Digitisation has brought with it numerous solutions that can transform the current situation and possibly make a pathway for future growth and development of the learning environment bedeviled by anxieties about how to use technologies to mitigate and augment the system. This paper systematically used secondary sources of information to position digital transformation as a mandatory force that the African education system needs to shore up areas of deleterious concerns and fashion out an enduring system. As the learning environment changes, the society can leverage on the technological advancement available to it and enrich the performance of teachers and learners. Conclusion and recommendations were based on the need to transpose the learning environment away from the traditional goals that are no longer beneficial that which positions Africa as an all-inclusive haven for knowledge acquisition, peace, safety, and fulfillment of potentials in teaching and learning.

Keywords: Digital Transformation, Africa, Digital Technologies, Education, Learning Environment.

Introduction

Education sector when put in proper perspective is a critical part of the economy and it epitomises the substratum where leaders and the society derive their understanding for advancement. However, the learning environment and the achievement of students have been affected by the digital transformation brought about by advancements in technology. Chetty et al. (2018) opined that, to support digital transformation, equivalent importance should be placed on digital skills growth in relationship to the

structural improvement obtainable. Although, this appears not to be the approach in most developing nations in Africa as COVID19 exposed majority of them as ill-prepared for effective learning environment that can cope with exigencies of time and circumstances outside the walls of classroom. It is pertinent to state that no nation was absolutely proficient during the period but the advanced nations that were caught up in the quagmire were able come up with workable solutions as a result of the preparations they made ahead of time.

The disruption can be considered as desirable for both the teachers and learners as the environment for learning has been challenged to break new grounds through digitisation for a transformation that is not only lively but appealing. Learning environment becomes desirable when appropriate and enhanced space are made available to learners for opportunity to learn under a healthy and relaxed environment. Thus, it has been acknowledged that students have shown significant relationships between the classroom environment and school achievement (Ezike, 2018). Therefore, what happens in the place of learning would invariably impact the success of the students. Consequently, the use of technologies as an expedient disruption in the education landscape, is germane to modern day learning setting that had moved beyond walled classrooms. Thus, the cooperation of all institutions and government agencies that are relevantly connected to ensuring that learning succeeds in getting to the targeted learning audience must be enlisted. The propositions of the institutions comprise the classroom, the aesthetic environment, the location of study, the teachers, accessibility to instructional materials, competence of lecturers and the teaching learning processes.

Learning environment differ from one location to the other, but the effect of the environment that learners are exposed to, has the tendency of stimulating whether or not effective learning would take place. Occasionally, the conventional learning environment may be unfriendly because of the tasks demands on the lecturers and environmental stance. Even so, some are not subject of duties, but occurrence that involves the character of the teachers and demands of the institutions. Laleye (2015) emphasised that public schools in Africa are subjugated by the traditional process of learning environment which positioned those exposed to the usage of technology in private institutions to to be coerced into paying inflated fees. This could be rationalised to mean that the funding from government for public schools are not forward looking and proactive as individual investors who are in business of education. This is because these investors ventured into education for monetary gains and they should be appreciated for adding value through technology to create competitive and attractive market for private or commercial education. Diverse research on learning environment, the phenomenon of digital transformation and technologies have been considered by scholars in relation to its appurtenant role as a constrained disruption to education. Thus, this study discussed digital transformation in education, its advantages, changing learning environment and the implication of the interloping transformations in the digital Learning Environment.

Digital Transformation in Education

Education has experienced some digital transformations through novel technologies that are standardised in the management of contemporary teaching and learning environment. Such standards that have ensued include changing the business of education, novel educational activities and impelling economy in which educational institutions operate interrelatedly. It is a modification from the traditional approach to a digital infrastructure with educational technologies and solutions for learning. Elbyaly and Elfeky. (2023) posited

that augmented reality affect student skills acquisition in an environment different from the accustomed technique of learning prevalent among teachers and learners.

While the learning environment might be discussed in the context of space, architecture, design and culture, digital transformation appears to have brought changes to these factors because the issue of space and culture can be ascribed to change on most digital platform where learning are occurring. E-learning environment solved a lot of the difficulties confronted when using traditional learning environment (Elbyaly & Elfeky, 2023a). Although Buhl-Wiggers et al. (2023) argued that there are benefits of learning in the conventional method, it is yet to be resolved with the use of e-learning. It is noteworthy that, the digital transformation has resulted in approaches whereby more convenient teaching methodologies are possible using the conventional method with connected learning techniques (Alzahrani & Alhalafawy, 2023). It stands to reason that understanding the advantages of digital technologies in education will strengthen its significant attempt to transform the learning environment.

Advantages of Digital Technologies in Education

Digital transformation holds a lot of advantages that can be of benefit to teaching and learning, however, for the purpose of this study, the following advantages are germane:

- 1) As emphasised by Alharbi et al. (2023), electronic collaborative learning environment is crucial in enabling critical thinking in students. This is important for competence in students as they become independent in reasoning.
- 2) The use of digitalised learning methods might appear costly, but it is cheaper on the long run because it will reduce inefficiency, assist in complementing inadequate manpower and also enable the workers to improve on their technical skills as they use the facilities.
- 3) It enables the education sector to be abreast of the developments in the digital world as they relate to other sectors by providing unrestricted means for learners to get educated.
- 4) It provides for enhanced access to a personalised learning for learners with high prospect of eliminating favoritism in evaluation.
- 5) Digital infrastructure can assist in increasing the number of students assigned to a defined teaching learning process or platform.
- 6) It will facilitate easy access, increased engagement, quick and effective communication within and without the educational system.

In view of all the benefits derivable from employing these technologies, some of the transforming potentials for the learning environment are discussed to elicit their impact over time. According to Guney and Al (2012) learning environments are defined based on educational philosophy, societal environment and the curriculum policy. Igbafe and Anyanwu (2018) posited that the environment could aid learning.

Emerging Transformations in the Learning Environment

Social network platforms, mobile learning environment, web-based platforms, blended learning, artificial intelligence are few of the transformations that scholars have identified as imminent education (Ajuwon et al, 2018; Sobowale et al., 2020; Elbyaly & Elfeky, 2023a; Igbokwe, 2023). The skill of the teachers in successfully managing the classroom, promises to impact on what the students' outcome can produce. However, for a learning environment to be effective, factors as inherent ability of the teacher, the

involvement of the student and the backing of the institution where the learning is done is imperative (Prameswari & Budiyo, 2017). Anderson (2017) termed the learning environment by human resources (pupils and teachers), taking into account the mental conditions, locations of the institution, their planning and the procedural delivery of learning and teaching. The teacher's obligation is to have a learning environment which possesses qualities that are helpful, constructive, organized, and favourable for the students (Cane & Tertemiz, 2015). This could differ from one age group to another. For example, while role playing in classroom environment was highlighted to be vital for young students (Rance et al., 2023), the adult literacy learning environment is expected to provide instant learning that can be implemented by students. Thus, the understanding of this is critical to experts when learning environments are being planned or considered for specific goals.

Today humanity is committed on an environment ruled by high-tech in households, workplaces, businesses, universities, and the total civilization. Thus, a learning environment lacking in knowledge and skills can become obsolete when the purposes it intends to serve are not adequately delivered to the learners and the objectives of the teachers in the environments. Researchers over the years have investigated the learning environment based on diverse parameters as the students' behaviour, gender, age and other variables (Gurpreet, 2015; Panneer & Kumar, 2015; Mocumbe, 2016). Understandably, Eimuhi and Ogedegbe (2016) observed that when the learning environment is enhanced in schools, the better and extensive the profits for educational routine and students' performance. Odeh et al. (2015), corroborated this with the submission that school environment impacts the academic success of students.

Nassar (2016) asserted that the rise of social networks has created an environment for self-directed learners exposed to interactive platform for teamwork. Visvanathan and Panneer (2015) opined that learning environments that possess the capability to frequently improve education quality are disregarded. Guney and Al (2012) however asserted that those saddled with the responsibility of creating a learning environment should be thorough in their disposition to build such an environment effectively.

Implication of the Digital Transformation in Learning Environment

The learning environment has unequivocally been impacted by digital transformation from the use of computers, mobile devices, augmented reality, gamification, adaptive learning, automated assessments, cloud computing, social networks and now the advance technology of artificial intelligence for the teaching learning processes. Neha (2020) asserted that artificial intelligence in education has generated a potency for learning environments that encourage collaborative know-hows for students in the institutions over time. It can be deduced therefore, that the learning environment is undergoing digital transformation even as scholars as Shamaki (2015) emphasise that the learning environment for students should be ideal for positive results to be experienced. What can be referred to as an ideal learning environment prior to these scenarios may not be so described in this era of technologies and emerging novel skill sets. This is because moribund or obsolete learning environments will not live up to the demand of the modern day teaching and learning situation. However, Teng Ong and Choon Lang (2023) asserted that, an ideal learning environment that is technologically enhanced, offers students opportunities to accomplish more academic feats with improved commitment in teacher student interaction. Waldman (2016) observed that before students can thrive intellectually, they are mentally stable towards their safety in the environment. This aspect of safety connotes the physical, emotional relationship as well as psychological well being they derive from the place of their study. This position was corroborated by Mudassir and Norsuhaily (2015) that

for productive learning to occur, the environment must be satisfactory and appropriate. However, what is appropriate can also differ because of infrastructure. Jain and Jain (2019) opined that global interest in computers has also given rise to intelligent learning environment desire. While the use of video conferencing tools like google meet, zoom, Skype are being used to enhance the frontiers of teaching and learning in contemporary classroom, their absence could affect the learning goals and even impact negatively on the performance outcome of the students where the infrastructures are lacking. Students appear feel safe when they can interact with their teachers without undue fear for penalty. This is because they perceive that they are secure from harm from intruders or aggression, and they are sure of getting an unbiased assessment from any judgment in relation to their learning procedures. The learning environment therefore, should not be a graveyard-like setting with no life but excessive suspense. They must be valued and reasonable level of freedom for students to develop themselves while undergoing the various processes for the attainment or their progressions in school.

Methodology

The learning environment has divergent standpoints hence, this paper is a review that used secondary sources of information to ascertain the influence and disruption that digital transformation has caused in education. Evaluation parameters were based on reports of scholars, journals of education, journals of Social and Behavioral Sciences and other applicable journals with information that could be construed for the study's use of keywords as learning environment, effective learning environment, digital transformation in education, new approach to teaching, digital Technologies and education. The diverse selected reports, studies and records used were itemized in the references provided.

Findings

A relationship between the digital transformation and the changes in the learning environment was revealed from the diverse studies evaluated to influence the teaching learning processes globally. The learning environment is observed to be of critical impact on the student's achievement and the way learning is attained by learners. Therefore, administrators of educational institutions need to prioritise modifications in the outlook of their learning environment and evaluate areas where inadequacies ripe for vital corrections can be done. Policymakers and government agencies saddled with the responsibilities of accrediting educational institutions require more emphasis on a conducive learning environment and setting that will assist the teachers' desire to perform their best.

Conclusion

The learning environment is transforming from the traditional setting to one that is more integrated and digital. Even though, this is a competitive global issue, Africa needs to be aware of her current position and the urgency of the demands for unavoidable but resourceful competition with developed nations of the world. Therefore, as the digital transformation comes as a disruption force in education due to advancements in technologies, government and relevant stakeholders in education in developing nations of Africa need to restructure their education architecture. It is a challenging period to focus on building the emerging skill-sets that are digital in infrastructures and are supportive of a learning environment that can improve students' performance and safety of implementation.

Recommendations

Based on the conclusions, the following recommendations are made:

- 1) The learning environment should be upgraded to meet with the realities of the technological on-going global transformations for the improvement of the teaching learning process.
- 2) Better funding for the provision of up-to-date technologies for enhancing the development of the teaching and learning process that are in tandem with UNESCO's recommendations of 26% of national annual budget should be reconsidered.
- 3) Workshops and seminars should be organised for appraising the learning environment for equitable identification of areas needing improvement through regular initiatives and research.
- 4) The learning environment should be developed to reflect a realistic understanding of the culture and the needs of the citizens. This would prevent unwarranted adoption of contents that are alien and irrelevant to the practical lives of the learners and teachers.
- 5) In adopting foreign learning environmental concepts, there is a need to assess and prove that such initiatives can be useful blends to the existing curriculum of the nation concerned.

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