International Journal of Social Science Research and Review

ijssrr.com
editor@ijssrr.com
Volume 9, Issue 9
September 2026
pp. 358–369

FACTORS IMPACTING E-LEARNING AMID COVID-19: A CASE OF THE DEPARTMENT OF PUBLIC ADMINISTRATION AT A SELECTED UNIVERSITY IN SOUTH AFRICA

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DOI: https://doi.org/10.47814/rznmb984

Abstract

E-learning has gained momentum since the struck of Covid-19 pandemic globally. The transition to e-learning in higher education institutions was anticipated to commence as fourth industrial revolution is gradually looming in South Africa. The overall introduction of e-learning in Higher Education Institutions has been regarded as a measure to enhance the state of academics through digital platforms. It is worth noting that high standard education is one of the contributing factors to economic growth. Nonetheless, such transformation requires adequate decision making suitable for the environmental setting to which is it introduced. Provided such, the transition to e-learning has been experienced with progressive predicaments which hinders the reliability on enhancing the standards of education with specific reference to a previously disadvantaged University. It is with such predicament that the researcher found it valuable to study the factors impacting e-learning amid Covid-19 within the Department of Public Administration at the selected University. The objectives of the study entails; determining the factors impacting e-learning amid COVID-19 within the Department of Public Administration, determining the impact of e-learning on students' performance within the Department of Public Administration at the selected University, assessing strategies to deal with factors impacting e-learning amid Covid-19 within the Department of Public Administration at the selected University, and to recommend a socio-economic disparity-based, decentralised, and localised implementation of the Disaster Management Act of 2002 in terms of similar unforeseen crisis in tertiary institutions. The study employed the qualitative research design through the guidelines of interpretivism philosophy. Through the implementation of the study philosophy, data collection instruments entail semi-structured interviews and documentations used for referral through the aligning existing views and data collected by the researcher. The study revealed that there are several e-learning factors determined amid Covid-19; such as, lack of skills, poor network connectivity, affordability crisis, unconducive environments, and communication barriers. These factors emanated as a result of failure to develop proper decision-making prior introducing the transition to e-learning. As a result, there is still a need for proper planning to enhance academics within the Department of Public Administration at the selected University.

Keywords: *E-learning; COVID-19 Pandemic; Education; Fourth Industrial Revolution*

INTRODUCTION

The World Health Organization (WHO) proclaimed COVID-19 as a pandemic on March 11, 2020 (Motala and Menon, 2020). The virus did not remain in the same area; but, spread to a global scale. Diverse sectors of institutions had difficulty, resulting in stringent restrictions (Raphela, 2020; Tanga, Ndhlovu, and Tanga, 2020). As a result, the pandemic affected education institutions on a worldwide basis, with a particular emphasis on underdeveloped parts of the world. Although the COVID-19 intensified, the effects were seen on a worldwide scale, it was then suggested that the repercussions were hard on the vulnerable society at a global scale (Saeed, 2020). Similarly, Almaiah, Al-Khasawneh and Althunibat (2020) posits that the pandemic effects on education differed from country to country; provided the state of preparedness and willingness to perceive technology as an effective learning approach.

According to Schleicher (2020), South Africa exists with inequalities in many facets because of the previous apartheid regime. The education system, like any other service and resource distribution, is skewed, and restrictions

revealed the inequalities between various tertiary institutions across the country. Although tertiary institutions had long introduced digital resources; their use varied from one institution to another. The continuous use and success of digital resources have been pragmatically influenced by the environment to which it exists. Extending on the assertion, actual evidence demonstrated that electronic gadgets were largely used within the university's grounds for specific academic purposes, limited to any form of network disruptions and electricity shutdowns.

Tadesse and Muluye (2020) assert that education remains a key factor to every country's growth and development and any lack thereof may pose a threat to the economic growth. The growing spread on COVID-19 infections driven the WHO to enforce regulations which entails social distancing, wearing of masks, self-isolating and hand sanitising (Pather and Booi, 2020). It has been noted that the Coronavirus mutated from one variant to another; leaving the country to enforce a stricter lockdown level (Gurajena, Mbunge and Fashoto, 2021). As the health crisis became intense, emergency response led to the cut off on contact classes in order to protect academic staff and students. As a result, tertiary institutions were forced to transition into remote learning despite possible implicating factors of students and preparedness of lecturers (Ramrathan, 2020). The transition was abrupt; with little time to properly plan for lessons and curriculum suitable for e-learning. The main goal was not to lose the academic year; and such was achieved. As far as acknowledging the Department of Higher Education and Training (DHET) in introducing the provision of digital resources such as internet data and laptops to other parts of academic institutions, the reality of past socioeconomic issues remained unresolved (Okoye, 2021).

The existing disparities in South Africa herald digital divide, too complex and less limited to just lack of internet connection. In essence, digital divide provides a division between persons with access to information technology versus those without access (Pather and Booi, 2020). Despite the intentions to save the academic year, academic alterations loomed with factors such as network problems, load shedding and lack of digital skills. E-learning skills where uncertain wherein lecturers in tertiary institutions lacked the knowledge to facilitate virtual classes through online platforms (Chisadza, Clance, Mthembu, Nicholls, and Yitbarek, 2021). It remains pivotal to stress on the mental issues caused by the abrupt transition to e-learning. It is important to note that enormous impacts were borne within previously disadvantaged institutions than tertiary institutions with historical privileges.

LITERATURE REVIEW

Theoretic literature reveals existing literature and their relationship toward a certain phenomenon (Becker, Arendse, Tshetsha, Davids and Kiva-Johnson, 2022). For this article, Technology acceptance model and connectivism are perceived compatible for the study on Factors impacting e-learning amid Covid-19. The article is rooted in e-learning approach. On this basis, it is important to understand the theories associated with learning in the following paragraphs. Although all theories are discussed within a context of e-learning, one should note that some are general theories tend to apply in several institutional facets (Ananga, 2020).

Technology Acceptance Model

Transition to e-learning is deemed as an emergency measure to facilitate continuous learning where both students and instructors were required to accept contemporary conditions (Mseleku, 2020). As a result, this study explores Technology Acceptance Model (TAM) as a theoretic framework within a learning environment. The model was initiated in 1989 by Davis who believed that an individual's Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are critical principles to determine one's Intention to Use (IU) certain resources (Ndebele and Mbodila, 2022). Maphalala, Khumalo and Khumalo (2021); Skhephe (2022) describe Davis's principle of Perceived Usefulness as a prospective operator's belief that the use of technology systems sustains a likelihood to positively influence outcomes; meanwhile Perceived Ease of use is described as the prospective user's perception that technological use is associated with less effort.

Ottenbreit-Leftwich, Liao, Sadik and Ertmer (2018) overall acceptance of technological use is influenced by certain surrounding aspects. Perceived usefulness can be influenced by the views of prospective user's peers or other groups of society, and Perceived Ease of Use can be influenced by an individual's skills and abilities on digital use. In relation to the abrupt catastrophe and e-learning, the theory explains that moving towards progressive digital learning, stakeholders ought to apply technology acceptance. However, a study by Becker, Arendse, Tshetsha, Davids and Kiva-Johnson (2022) revealed Davis's (1989) notion that technology use motives should be developed for the purpose of advising and promoting technology use. This study's main purpose is to explore the factors impacting e-learning during Covid-19, perhaps underlying factors explains the difficulty in technology acceptance, perceived as extended factors. As a result, Ndebele and Mbodila (2020) asserts that digital efficiency, technological resources, and psychological health issues may assist predict PU and PEOU. Nonetheless, to enhance technology acceptance, there is a need for providing digital support through resources and digital education to

support student and lecturers Perceived Usefulness and Perceived Ease of Use (Drueke, Mainz, Lemos, Wirtz and Boecker, 2021).

The Theory of Connectivism

Connectivism is a theory through which digital connections are used to facilitate effective learning. According to Kajiita, Nomngcoyiya, and Kang'ethe (2020), connectivism theory posits that information and knowledge can be accessed through different platforms which entails videos, images, and online audios, this is in practical with the current e-learning which makes use of learning management systems (blackboard, YouTube and google meet platforms). The theory uncovers a paradigm shift and is more based on the idea that information and knowledge exist through technical interactions and networks than in books (Sekome and Mokoele, 2022). Moreover, connectivism is grounded on the use of timeous information through which technology makes possible to access. Also, the theory fosters unlimited and flexible learning connections possible to access across diverse geographical areas (Danfodiyo, TemitayoSanusi, Alexander, Sunday, Agbo, Obaido and Aruleba, 2021).

The theory gives emphasis to a more autonomous approach in contrary to some traditional learning theories such as the behaviourism theory, stating that one's behaviour is influenced by conditioning, and constructivism theory with the notion that knowledge is acquired through experiences (Mafenya, 2021). To elaborate further on the theory, Mpungose (2020) asserts that the theory of connectivism provides no barriers to knowledge, it allows accessibility of various learning content at one's convenient time and place, thus the emphasis on digital resources and connection. Significantly, learning methods ought to transition towards meeting growing educational patterns and contemporary needs. As a result, connectivism is believed to be student centred. The theory therefore explains the transition to e-learning as an effective requirement for sustainable learning.

The Factors impacting e-learning amid Covid-19

The pandemic imposed intense difficulties within several higher education institutions across the globe. The struck resulted in a total shutdown within different sectors across countries including the education sector. Although different states developed various strategies and policies to respond to academic interests; e-learning remained a common strategy under the motive of progressive academic year. The global paradigm shift heralded numerous opportunities and challenges such as the need for digital resources, which were catered for at a later stage in many parts of the globe. Towards the shift to online learning, many students and lecturers were left under the urge of anxiety and confusion. A study conducted in China shows that many students endured psychological distress due to the education system alteration (Pragholapati, 2020). While a study by Shrestha, Haque, Dawadi and Giri (2021) conducted in Bangladesh and Nepal revealed socio-economic and technological factors being the main barriers towards achieving e-learning. However, it is a different case in other well-established countries such as Canada and United States of America, where e-learning became more advantageous due to the availability of digital skills and resources.

Subsequently, Africa is populated with underdeveloped areas where the use of technology exists with enormous digital divide. It is then worth noting that most African countries relied on contact-based classes to facilitate learning, therefore, online learning has brought more than just health distress in these societies but educational distraction as well (Maphosa, 2021). According to Paschal and Mkulu (2020), it is apparent that facilitating proactive e-learning within different African countries varied in terms of availability of technical resources, digital literacy, and connectivity systems. The author further highlighted that Zambia is one of the countries which encountered difficulties during the transition to e-learning due to poor network connectivity. Contemporary, unstable network connectivity is visibly a challenge within most developing countries, opposing the motive of e-learning as known to be one of the effective approaches to learning (Gurajena, Mbunge and Fashoto, 2021).

According to Maluleka (2021) South Africa is recorded as one of the countries with high rate of inequalities. Such conclusions have been supported by Makumbe (2020) who argued that South African disparities are visible through imbalance access to socio-economic resources, two-tier health facilities and bicameral education systems which separates the low income and the privileged populace. Over the past years, education segregation existed amongst the black minority as a result of apartheid systems, till date evidence shows that the distribution of education is still skewed and previously disadvantaged groups still encounter negative implications (Mashau, Ravhuhali and Kena, 2020). A similar assertation by Kativhu (2021) has been brought forward with the view that the apartheid systems primarily imposed racial separation between higher education institutions for the purpose of inferiority and poor education towards the disadvantaged groups. Therefore, any radical innovation brought forward by the government may exist with biases towards the historically affected populace.

South Africa has been experiencing an ongoing debate within the area of fourth industrial revolution (4IR) and the state of preparedness. It has been argued that despite the easy access the fourth industrial revolution may introduce, there are several negative impacts to be presented. Similarly, Kativhu (2021) highlighted that the phenomenon of fourth industrial revolution has been shortly reaching out within certain sectors; although South Africa still has a long way to go, digital technology is the next future. Abruptly, the pandemic outbreak indirectly pushed the state to a transformation into technological means to survive; under the context of education, yet more impacting factors were revealed (Monareng, Ramraj and Mashau, 2020).

A study by Maphalala, Khumalo & Khumalo (2021) revealed that in March 2020, the increase in Covid-19 infections led to higher education institution shutdown. Subsequently, the Department of Higher Education called on all universities in South Africa to introduce a contingency plan, therefore, e-learning became the resolution to save the academic year (Dube, 2020; Okoye, 2021; Ndebele and Mbodila, 2022). E-learning is not a new concept, yet most universities were not practically dependent to it for facilitating education, implementation within the certain spaces of South African higher institutions required much effort; from developing technological site to resource need (Mashau and Nyawo, 2021). In this essence, to aid support towards the transformation, the Minister of Higher Education and Training, Dr Blade Ndzimande announced that only National Student Financial Aid Scheme (NSFAS) beneficiaries will be catered for data bundles and electronic gadgets such as laptops; and further mentioned that the missing middle class will have to rely on the university's provision (Okoye, 2021). This has left students without funding with no access to laptops, while other students had to opt for debt under their student account.

The application of e-learning is known for its effectiveness through promoting flexibility, saving time, and effort to attend conventional classes. Despite the notion of e-learning being the only viable approach during the pandemic, Sonn, Du Plessis, Jansen Van Vuuren, Marais, Wagener and Roman (2021) asserts that such action has not been evaluated towards the realities of the state. Historical events in South Africa imposed permanent social injustice; inequalities, and such are difficult to address. Educational inequalities are ever present, dating from fighting for free education to suit the previously disadvantaged populace, the effort is minimal, and the government cannot be blamed, social demands are progressive (Ndebele, 2020).

Mseleku (2020) stressed that a developing country like South Africa with an unpleasant historical background may experience difficulties to manoeuvre through instant changes. As a result, institutional backdrop towards innovation and development remains within the line of fiscal constraints. In support of the statement, Makgahlela, Mothiba, Mokwena, and Mphekgwana (2021) argues that the Department of Higher Education and Training encountered challenges through which the distribution of digital resources required financial injection which were not planned for. Although the pandemic came abruptly, survival means, and certain collaborations were necessary (Kativhu, 2021).

Lack of skills

Given the mentioned effort by the Department of Higher Education and Training, it is important to note that the issue is beyond the provision of data and laptops to students. E-learning presents unpleasant implications for both students and lecturers; thus, numerous factors are to be discussed (Mseleku, 2020). Significantly to start with, the pandemic came in shock, where most universities have just started with the year curriculum. As such, more implications were inflicted on first entering students, who had not yet dealt away with the anxiety of being in a new learning environment. Undesirably, e-learning denied such students the flexibility and passion of being interactive on digital learning platform. Above all, using and maintaining digital system while learning from home became challenging for these students (Raphela, 2020).

A study by Mafenya (2021) revealed that there have been uncertainties for e-learning approaches to be a success in equipping students to the right direction of teaching and learning. Dlamini and Ndzinis (2020) posit that learning in a South African context is still centred on lectures than students, this has however shown the difficulties of students being self-mediated towards their education. Previously, on the normality, online platforms were utilised to dump content and study materials for students, none of those platforms facilitated a day-to day dialog between students and lectures. As a result, the actual usage to facilitate live sessions came along with complexities for lecturers to tackle (Maluleka, 2021). Although some universities provided induction to provide ways of operating Learning Management Systems, lecturers still had little time to learn basics on digital learning. The effort was minimal, therefore a gap on proper presentation of content to students is still apparent (Bhagat and Kim, 2020). Towards implementing e-learning amid Covid-19, the skills to properly navigate along different online platforms remains uncertain. Thus, abrupt proper induction was required (Sonn et al, 2021).

Psychological impacts

Subsequently, the paradigm shift from contact learning to e-learning has brought anxiety and psychological implications to higher education institution lectures (Okoye, 2021). It is evident that preparing for online classes from contact-based information posed enormous pressure and stress on lectures. Even prior to the pandemic, working within academics possess more pressure on lecturers, it is then significant to note that the struck of Covid-19 together with the daily updates on number of infections instilled fear on the society. It is significant to note that, despite the need for professionality, one's psychological state directly influences the overall performance (Dabrowsk, 2020).

Practically, working from home in times of the pandemic meant being in closed spaces with family, as a result, disruptions from family members and poor connectivity to facilitate e-learning became apparent (Sahu, 2020). It has often been visible that facilitating full sessions was difficult and frustrating for lecturers who had drafted to reach a certain target periodically; with internet disconnection, such targets remained unrealistic (Motala and Menon, 2020). Connectivity related issues are beyond educational institutions, there is still a need for responsible authorities to view social injustices impairing the success of e-learning; particularly in rural areas (Carr, 2020).

Internet connection

The provision of internet data to students have not solved the issues of little or no access to internet, and this is due to poor network in unprivileged socio-economic backgrounds per ser (Jappie, 2020). Mseleku (2021) asserts that the network connectivity issue is most apparent in rural areas, and in most cases, those living in urban areas encounter little to no network connectivity as an impacting factor. Given the issue of connectivity encountered by students and lecturers, it can then be concluded that there is still a huge gap towards e-learning efficiency in South Africa. According to Mncube, Mutongoza and Olawale (2021) the pandemic has disinterred how South African socio-economic issues negatively affect the society and intensely towards the higher education sector amid the novel of corona virus. Electricity power cuts also known as load shedding have been an economic norm to be borne by the society daily (Gurajena, Mbunge and Fashoto, 2021). As such, Ndebele (2020) asserts that network connectivity is intensely affected in the event of electricity power cuts, therefore, it become impossible for students to participate in e-learning with these progressive of issues.

Unconducive environment

Although e-learning is perceived as a necessity amid the novel of Covid-19 unconducive environments made it difficult for student particularly in poor backgrounds to form part, the reality is that most households are congested and spaces for private study are not provided for (Landa, Zhou and Marongwe, 2020). Chang and Fang (2020) add that remote learning under an unconducive space is associated with disruption and noises from the background; thus, studying from home affected the performance of many students. It is therefore significant for institutions to take note of unfavourable environments in the process of e-learning implementation (Daniel, 2020).

Affordability

Moreover, stakeholder partnership has been enormously visible, inclusive of all universities, there has been great partnership with different private companies for the provision of internet data which enabled e-learning (Landa, Zhou and Marongwe, 2021). However, it is with realisation that the provision of the internet data remains limited to sustain students throughout the provided period (Kativhu, 2021). It is with such rationale that Monareng, Ramraj and Mashau (2020); Pather, Booi, and Pather (2020) argue that e-learning is an expensive academic approach which remains difficult to maintain outside university's premises, where under normal circumstances students and lecturers would utilise the institution's Wi-Fi. Subsequently, a study by Mafenya (2020) revealed that student's concerns revolve around the current internet data pricing which widens the gap between affordability and accessibility. The initiative of "no student left behind" as affirmed by the Minister of Higher Education and Training remains impractical when a student-centred approach is overlooked.

Communication barriers

According to Motala and Menon (2020), traditional learning method is associated with bodily language and physical interaction which is perceived to be more effective for learning as compared to e-learning. It is vital to note that a sense of self-reliance can be challenging amongst students who are used to contact classes. One can then argue that being a university student requires such characteristics of independence yet there is also a need to distinguish the nature of traditional learning and e-learning approach (Mncube, Mutongoza and Olawale, 2021). Significantly, it is important to emphasise that the current phenomenon of e-learning was introduced as an

emergency measure, meanwhile materials are still of the traditional learning which communication level may differ to what e-learning may require (Patrick, Abiolu,and Abiolu, 2021).

Postgraduates

Academics, the way of conducting research have been derailed along the existence of the stringent catastrophic phenomenon. Unlike undergraduate students having a solution to progress with the academic curriculum, postgraduate students endured unmanageable occurrences (Sonn, Du Plessis, Jansen Van Vuuren, Marais, Wagener and Roman, 2021). According to Mncube, Mutongoza and Olawale (2021), transition to e-learning imposed delay on research completion to scholars, and yet some research papers remained impossible to achieve. It is then important to note that circumstances differ from one student to the next, the effects and rationale for unviability to achieve research projects cannot be generalised. Disciplines varies on focus areas, for example, Hedding, Greve, Breetzke, Nel and Van Vuuren (2020) indicate that science researchers encountered difficulties to access laboratories and sites for data collection while social sciences student endured the barrier to conduct surveys and interviews because of the strict lockdown regulations that were put in place.

The impact of e-learning on students' performance

According to Kativhu (2021), there are several studies outlying the factors impacting e-learning across different disciplines and geographical areas; however, little research exists on the influence of e-learning on student's performance. Provided that, e-learning has been perceived as an effective method towards enhanced student performance; mainly for its increased accessibility and time reduction properties (Elfaki, Abdulraheem and Abdulrahim, 2020). However, such is in contrast in developing countries such as South Africa which exist with past injustices. In a South African context, it is evident that e-learning emerged with vast complexities and so far, remained viable towards academic progression. The shift to e-learning has left both students and lecturers uncertain as to whether e-learning will be a manageable and realistic approach (Raphela, 2021). Despite e-learning being an emergency mandatory approach towards saving the academic year as mentioned by the Minister of Higher Education and Training. It has been noted that the transition to e-learning derailed the way of progressive learning (Monareng, Ramraj and Pfano Mashau, 2020).

Pather and Booi (2021) argue that the complexities of e-learning resulted in students falling behind on academic work. Alongside, it is significant to note that the state of readiness differed from one higher educational institution to the next. Similarly, student's performance rating is directly influenced by one's experience on e-learning, thus differs from one student to another. Gender roles play a critical factor in academic performance, most specifically in African context, women bare more responsibilities such as being caretaker and taking care of house chores, as a result, learning form home is a common cause of poor performance (Hedding, Greve, Breetzke, Nel and van Vuuren, 2020). Raphela (2021) raises a similar concern that in a South African society, women are groomed to take much household responsibilities than males, also in nature, women are caregivers, it is much biological that if households have younger children, female take full responsibilities thereof. Although there is little consideration on such predicaments from home schooling and e-learning, such remains the contributory factor to academic decline.

According to Chisadza, Clance, Mthembu, Nicholls and Yitbarek (2021), factors affecting student performance with regards to e-learning also entails poor network access, poor environment, and inability to access study material as per discipline. Moreover, the author believes that students with different preference on learning or those that prefers physical communications (contact classes) between lecturers and students endured performance falloff. In support of the statement, Elfaki, Abdulraheem and Abdulrahim (2020) added that both e-learning and traditional learning exists with opportunities and threats, however, effectiveness cannot be concluded based on the learning approach but with experience and preferences of students. Because of the nature of online learning systems, lecturers find it difficult to create relationships with students, which has been shown to be the cause of low student performance. In addition, student's attitude towards e-learning has a great influence on performance (Mafenya, 2020). Raphela (2021) argues that pandemic occurred to cause progressive socio-economic impacts such as the increase in poverty, financial constraints and other issues of accessibility and social relation. As a result, such has been concluded to be the cause of poor student performance during e-learning.

A study by Landa, Zhou and Marongwe (2020) revealed that some lecturers raised concerns on the swift change in student performance; based on the concerns that students get access to materials to assist them during an online assessment and thus, temper with the authenticity of student performance. Plagiarism is common during e-learning, from students copying exact content on articles to peers sharing answers during an assessment, performance increase from some students with online assessments have been apparent. Provided the use of

traditional established assessment, credibility of online assessments remains undermined. Moreover, Mncube, Mutongoza and Olawale (2021) state that findings from lecturer's perspective revealed that there is still a need to adopt proper means to formulate assessment suitable for e-learning; meanwhile, the quality of education remains devalued.

RESEARCH DESIGN

Research design is a plan on how data will be collected by the researcher (Mncube, Mutongoza and Olawale, 2021). Marongwe and Kariyana (2021); Raphela (2021) explain that research design is a plan that presents direction for the research procedures as planned to be utilised by the researcher. This article was conducted under the premise of a qualitative research approach. The data was collected from students as well as the lecturers from the Department of Public Administration at the selected university. The total population within the Department of Public Administration consist of 2202 registered students and 13 staff members. Purposive sampling was used to select participants from the Department of Public Administration to gain insight from the perspective of analogous discipline. On sampling size, the authors selected 20 students which is a composition of 10 undergraduates and 10 postgraduate students. However, the students interviewed ended up being 14. In addition, a total of 5 lecturers within the Department of Public Administration at the University were selected to participate in the study. For the purpose of this article, data was collected through semi-structured interviews for primary data and documents for secondary data. The use of semi-structured interviews and documentations for data collection allows the authors to gather much information as possible, based on the experience, knowledge, and existing literature relevant to the study. The data collected from interviewing students and lecturers at the university was analysed thematically; where the research summarises and develops a meaning of the collected data (Mncube, Mutongoza and Olawale, 2021). Kiger and Varpio (2020) define thematic analysis as a flexible method of arranging qualitative data into sets of themes. Therefore, analysing thematically allowed authors to descriptively group similar ideas or experiences. On ethical consideration, according to Becker et al (2022), a social science discipline requires researcher to draw findings and conclusions from people. The authors adhered to ethical considerations, namely, permission to conduct the study, informed consent by participants, confidentiality, anonymity, avoidance of harm and voluntary participation were observed during the study.

RESULTS DISCUSSION AND FINDINGS

The biographical information showed that 14 students participated on the study while 45lecturers participated. The age range for students was between 18-25 and none indicated the year above that. The race results indicated a mixed language group which included Sepedi, Tswana, Sotho, Xistonga and Siswati. The gender which most participated on the study is female accompanied by a low number of males. The imbalanced gender does not imply that males are not impacted by the factors which emanated with the transition to e-learning, however, this can indicate that females found more interest to voice out their experience more on the matter in question. In addition, a majority of postgraduate students participated on the study than undergraduate students, in essence, this may indicate the lack of awareness from undergraduate students on research projects.

As directed to lecturers, a majority of the 4 participants were males, and 1 participant was a female lecturer. This is due to the proportion of availability and accessibility within the Department of Public Administration at the university. The age group range between 25-35, 35-45, and 46 and above meanwhile, the language group indicated participants who speak Sepedi, Zulu, Sotho, Xitsonga, and other. All participants were of the African race due to the domination at the University.

Initially, students were required to answer questions under the instrument which reads; factors impacting e-learning amid COVID-19 within the Department of Public Administration. Based on the previous chapter, the discussion under this aspect was broadened and provided different experiences of students with the transition to e-learning amid COVID-19. What the analysis portrayed was the understanding of the concept of e-learning. Participants were able to raise challenges that arose as in when the COVID-19 pandemic coerced learning from home. It is often the case that experiences differ from one individual to the next. Although there were negative parts outlined, others perceived e-learning as advantageous.

Study findings also highlighted the challenges of the limited internet data provided to students which affects most. The researcher reflects this with the affordability crisis as discussed in Chapter 2 (for relevant existing literature) which was discussed in a manner that, in the event that internet data gets depleted before the expiry date, students are then implicated with the need for extra cost to top up on internet data. Despite the correlation between the current finding and the existing one, the researcher discovered a different perception raised by a small group of participants who diverged from the view that internet data does not sustain required academic activities. As a

result, it was then noted that there is a certain cause factor for the unrelated views entailing the type of device used for participating in e-learning classes and the ability to develop good management skills on the device use.

The national crisis of load-shedding has been raised several times as a cause factor in academic delay and is directly linked with poor network connectivity. Logically, the state crisis has proven a setback and the impracticality to adopt advanced technologies in South Africa. It has been discovered that most students at the selected University are from rural locations where there is no backup for electricity when load-shedding occurs. An Unconducive environment has been mentioned as an impacting factor where students indicated unavailability of personal study space, noise, and disruption from family. Altogether, the issue of power cuts with no backup reflected back to load-shedding and poor connectivity. This has proved that there are several issues affecting the students daily however left unrecognised. Although load-shedding remains a national crisis. Therefore, the transition to e-learning which is still in progress within the Department of Public Administration at the selected University still exists with impacting factors despite students being provided access to the campus.

So far, the above impacting factors indicated a link to one another. It is clear that there is no factor existing in isolation. This has brought closer the psychological effects that were discussed by participants due to the predicaments introduced by e-learning on students. The theme portrayed two sides of experiences where quite a number of students mentioned stress, anxiety, and mental health problems that arise when e-learning revealed skills challenges and other impacting factors as previously discussed. The ability to cope with the sudden change in learning methods from other students revealed that, through the transition, a majority of students experienced psychological factors as a result of a lack of flexibility or difficulties in adapting to change. Provided such, the latter goes back to the theory discussed on technology acceptance and ease of use which was outlined as a practical ability to find technologies easy to use when there are necessary skills and no external implications.

It is concluded that e-learning reduces the focus of students which was revealed when participants raised that concentration is minimised as it is difficult to understand the content presented through e-learning perceived to be understood better when presented during e-learning classes. This implies that there is a need to develop content that will be suitable and draw more attention and interest from students. The introduction of e-learning assessments has brought complexities for students. Such is linked to the lack of skills and connectivity issues. It has been discovered that the inability to type fast has affected students' assessment completion, while the apparent poor network perpetuated by electricity power cuts affects the effectiveness of participating in e-learning assessments. Moreover, technical issues affecting how students effectively write assessments online imply that despite having students repatriated back to campus while other students at their private accommodations cannot reduce the technical crisis previously mentioned as blackboard not saving students answers. This means that there are progressive challenges affecting how students participate in both class sessions as well as assessments.

Gender roles were also revealed as some of the challenges faced by female students while the COVID-19 pressured learning from home. The statement revealed how students from disadvantaged houses live with no study spaces to cater to any academic needs. Similar findings correspond with Raphela (2021) as stated in the theoretical literature review that it is within the nature of black households that women perform almost all household duties from taking care of kids and doing house chores. A similar crisis provides the motive why decentralisation of decision when introducing a new technique specifically in an academic setting should be considered.

The other section provided lecturers to comment on their experiences with respect to factors implicating e-learning. A similar research question as guided by the research objective guided the research instrument. As analysed, lecturers raised connectivity issues that affect the effective facilitation of e-learning classes and skill-related challenges similar to that raised by students with difficulties in navigating toward e-learning platforms. However, the difference related to skills was noted as the difficulties for lecturers to develop or design suitable content comprehensible for students through e-learning. The researcher was able to conclude that students are different in the nature of learning, the presentation of slides determines how students grasp the knowledge shared by the lecturer.

Despite the skill-related crisis, students demonstrated a passive response when being taught through e-learning platforms which then indicated a lack of focus as student participants previously mentioned. The findings present a nexus as previously discussed in Chapter 2 found by Motala & Menon (2020) who asserted that e-learning affects how students and lecturers engage in class sessions through e-learning platforms. The researcher then concludes that such a finding reveals that a relationship between students and lecturers is efficiently developed through contact classes where students are enabled to interact in a physical learning environment.

Similar aspects with the students, lecturers raised concerns with the nine completions of assessments. Additionally, the reliability of assessments was questioned by lecturers. However, provided that a strategy to

ensure that students write assessments in the campus computer lab is one of the methods that sought to increase the credibility of students' work. This implies that there is progress in the development of suitable strategies to ensure that e-learning is effective. A positive view was raised by one of the lecturer participants who projected that factors implicating e-learning shouldn't be seen as a setback to exploring new methods of learning.

The discussion on the study revolves around the notion that a South African university like the selected University is considered a tertiary institution established to cater to the previously disadvantaged population. This explains the location in which it is based. In a national context, there are several challenges outside of the educational sector scope such as loadshedding and network connectivity crisis which are of a direct nexus to how academic environments function. Conversely, academics were still lacking in a transformation to a Fourth Industrial Revolution era. However, provided the occurrence of the unforeseen health crisis at its coercion to indirectly introduce an aspect of the Fourth Industrial Revolution. The government of Higher education and training introduced e-learning without considering the effects of state crisis and other academic issues such as the lack of skills and affordability of technical issues of e-learning platforms.

RECOMMENDATIONS

Socio-economic disparity-based, decentralised, and localised implementation of the Disaster Management Act of 2002 for unforeseen crisis in tertiary institutions

Although e-learning may have been introduced at a national level for higher education and training institutions, it is important to take note of the different accessibility to technology and the student society dealing with which differed from one institution to the next. It is acknowledged that the transition to e-learning was introduced in form of a contingency plan, following the Disaster Management Act of 2002 in an academic setting. Based on the nature of location, developmental and economic status, decisions on the transition to e-learning ought to be considered as biased prior to implementation. Besides the need to find a strategic endeavour for the completion of the academic year amid COVID-19, proper research on the requirements for effective e-learning should have been engaged by the Department of Higher Education and Training. The implementation of contingency plan for unforeseen circumstances within institution of higher learning should be exercise through inclusive integration of different stakeholders as stated in section 7 subsection 2(f) of the Disaster Management Act. The Disaster Management Act caters for local response on mater pertaining to unforeseen catastrophes, such platform is to be considered as an opportunity to brainstorm localised decision suitable for disparities apparent within the institution and its background. However, the current proposal entails the Department of Public Administration creating a sustainable e-learning environment by understanding the concerns of the challenges brought forward by e-learning.

Practically, the Department of Public Administration at the selected University is required to ensure to look back at the critical factors impeding e-learning as an ideal indicator to decentralise effective decisions suitable for students and lecturers. As mentioned by previous participants the factors affecting e-learning ought not to totally shift the focus on improving education. However, what remains critical is how the transition is responded to or tackled in order to ensure its effectiveness. Ideally, this implies that perpetuating the transition to e-learning should occur with necessary measures put in place given consideration to how students and lecturers are affected. Many factors impacting e-learning were raised by students and lecturers. The researcher believes that it can be ideal to resolve such matters thereof through localising decisions, practically, all recommendations discussed below are linked to finding majors suitable for Public Administration students and lecturers at the selected University. Therefore, this remains the main contribution to the study in question.

Skills enhancement

Provided that students and lecturers were initially introduced to the use of digital platforms for achieving academic activities. It is paramount for the selected University to invest much in strengthening skills from the basis of how lecturers can establish content with visual effects to accommodate students facing difficulties in grasping the existing content previously used for contact classes. Students ought to be advanced in e-learning management skills. Critically, students should be taught how to handle artificial intelligence systems, and advanced computer lessons should be mandatory. This will allow students to handle challenges flexibly at any given point in time. Autonomous functioning should be put at the centre of the transition provided that e-learning is considered 'the new normal'. Unlike during contact learning, where the student is provided the services for application upgrades, students need the ability to upgrade any form of digital application without having to consult technical offices.

Investing in student accommodation

The transition to e-learning specifically on the basis that the selected University is situated in a rural geographical area revealed the need to invest much in student accommodation. The Department of Public Administration can urge the institution to invest in students' accommodation provided the concerns on poor internet connectivity and lack of backup when there is load-shedding. Evidently, campus students' accommodation has the right resources to cater to students when the power cuts off, however, limited student accommodation hinders the accessibility of such benefits to students taught through e-learning platforms. Investing in students' accommodation can be seen as a method to ensure that e-learning is efficiently facilitated.

Moreover, it has been discovered that students experience a depletion of internet data to participate in e-learning. In this case, students residing within the campus premises are able access to Wi-Fi connections at any time. Similarly, the provided backup can limit how students experience disturbances during load-shedding. Such endeavour is likely to enhance the effectiveness of e-learning.

Improving the learning platforms

Learning platforms require technical advancement. Students revealed the challenges on Blackboard. Significantly, there is a need to revisit how the application has been designed, and features to accommodate an effective learning experience should be looked into. It should be noted that e-learning is an aspect of the Fourth Industrial Revolution, which is a paradigm considered an advanced shift looming with ideal features aimed at unravelling contact learning limitedness. Given that the Department of Public Administration at the selected University still practices e-learning; normalised as the new way of passing knowledge to students, redefining and improving learning platforms remains a prerequisite.

CONCLUSION

The article revealed that lack of skills among students and lecturers was initially the cause factor impeding the usefulness of technology. Moreover, the issue of network connectivity has been revealed as a major challenge that requires a national response in partnership with academic institutions in order to perpetuate the effectiveness of the transition to e-learning and accelerate the preparedness towards the Fourth Industrial Revolution. The concerns raised by lecturers revolve around the demeaning academic status that exists through the use of traditional methods and digital platforms that are not easy to navigate through. There is a need for intervention on matters of students and lecturers which are resulting in failure of technology acceptance and the challenges weakening the effective use of technology platforms for academic purposes. Perhaps the Department of Public Administration at the selected University can consider the recommendations provided to identify what can work as a solution to curb the impacting factors of e-learning for students and lecturers. Above all, the study revealed different impacting factors that affected students and lecturers as the transition to e-learning was introduced. What remains significantly focal to the matter is not totally in opposition to change and transitioning to new methods of learning. in this case, the researcher proposed that decentralisation of decisions to suit the environmental and academic setting within the selected University could have improved the quality of academics amid COVID-19. As a result, the proposed such recommendation as a measure of addressing current and future academic needs within the Department of Public Administration at the selected University.

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