The Use of E-learning during Covid-19 Pandemic Era

Communication in teaching and learning space has never been the same following the outbreak of the COVID-19 pandemic. The crisis of the COVID-19 has brought about an urgency for most higher education institutions to adopt e-learning. This response was in an attempt to save the academic year. Hence, this study explores how e-learning has aided African universities to engage their students for teaching and learning. A quantitative research method was adopted for the collection of data. The survey was made up of 400 questionnaires which were randomly administered to the second- and third-year students in the selected South African university. The findings of the study show that e-learning trends prior to COVID-19 were unappreciated and unaccepted. Meanwhile, following the outbreak of the coronavirus, e-learning has become one of the most sort-out phenomena. However, several factors such as unawareness, lack of funding, poor internet connectivity, amongst others which have always hindered the use of e-learning platforms. Hence, the study recommends amongst others that adequate awareness be made to educate both lecturers and students on the importance and for the continuous use of e-learning. Also, funding should be made available for institutions of learning to enable them to adapt to e-learning. It is vital that the gains achieved are maintained and continue in post COVID-19.

Keywords: African universities, COVID-19, Coronavirus, e-learning

Introduction

The recent trend in the development of digital technology has advanced rapidly changing the way we communicate and operate in the business world as well as the academic field. For instance, the concept of E-learning has brought a wide development in our educational system. Yakubu and Dasuki (2018) as well as Tossy and Brown (2017) argue that e-learning is assisting the higher institution of learning by enhancing the quality of education provided and minimizing various educational costs. Pham et al. (2019) opine that the adoption of e-learning at higher institutions of learning has the potential of assisting the institution by creating solutions to the problem of limited lecture space and also allowing students to earn at their convenience to digital course content.

Akoi et al. (2021); Saragih et al. (2020) is of the opinion that there are several mitigating factors hindering institutions from being able to equip their students. Vis-à-vis, there are other factors hindering students themselves from being equipped with digital devices that promote e-learning. The study conducted by Almaiaih et al. (2020) on factors hindering universities and students from being equipped for e-learning show four factors which hinders e-learning, and these are technological factors, individual factors, cultural factors and course factors. Previous studies conducted by Aung and Khaing (2015) as well as Dhawan (2020) indicate that insufficient technical support, poor
internet connectivity and lack of e-learning policies are factors that hinder universities from equipping lecturers and students for the use of e-learning.

Azmi et al. (2018) mentioned that in the educational sector, the awareness regarding the 4IR is relatively low because it is a recent aspect that involves the inclusion and use of technologies in teaching. On the other hand, the issue of fourth Industrial revolution (4IR) tends to be receiving very minimal recognition in the African continent, in different systems and parastatals, inclusive of education (Uleany & Yu, 2019). Aristovnik et al. (2020) opines that with the outbreak of the COVID-19 pandemic, the subject of the 4IR tends to have received due attention abruptly, especially in the education system. Naidoo and Israel (2020) aver that the COVID-19 disruption has indeed led higher education to the reordering of priorities, with a focus on how to salvage the academic year. They further state that traditional delivery of pedagogy had to be placed on hold, e-learning perhaps became the only medium of choice for universities (Naidoo and Israel, 2020).

Suffice to say from the views and discussion of the previous scholars, it has shown that e-learning is significant to the growth of the educational system and cannot be without it in our institution of learning. Furthermore, in this 21st century, it is of necessity for students to acquire the necessary skills to be able to compete and meet the demands from the global world. Therefore, the study investigates the use of e-learning during COVID-19 pandemic at two universities as a case study.

**Literature Review**

**Learning Management Systems**

Naidu (2020) explains that the Covid-19 pandemic has prompted many higher institutions of learning to shift their learning practices from traditional style of learning to online learning. This can be viewed from the area of the use of e-learning platforms such as MOODLE Learning Management Systems (LMS), Blackboard, amongst others which were relatively in low usage, receiving little or no attention before the outbreak of Covid-19 (Herayanti et al. 2018). In addition, Chaka (2020) added that the recent outbreak of the Covid-19 pandemic, has provided the opportunity for e-learning not only in the business and education world as well as other spheres of human endeavors such as politics, economy, amongst others. Furthermore, through e-learning various meetings, conferences, seminars, symposia, amongst others are being held online using various platforms like Zoom, Skype, Cisco WebEx Meeting Center, Microsoft Teams, HighFive, BigBlueButton, ON24, Zoho Meeting amongst others. (Chaka, 2020).

Murshitha and Wickramarachchi (2016) indicated that because of the pandemic, it has created an opportunity for LMS (Learning Management System) which is an ICT platform through which teaching and learning is delivered. Uziak et al. (2018) adds that LMS provides an opportunity by which
teaching and learning occurs electronically and also provides multiple content functionalities. Moorhouse (2020) views that the use of LMS in higher institutions of learning will enhance teaching and learning activities between the lecturer and the student as well as assist in improving the academic performance of the students. Davis et al. (2017) opines that LMS provides a significant function in higher education such as the elimination of physical location for teaching and learning, provides access to information and creates an attractive learning environment. Nadeem et al. (2021) observes that the use of LMS in higher education creates a virtual environment which creates and delivers course content to the students as well as monitor the students’ involvement during lecture. Pappas (2020) notes that LMS provides students with the possibility to interact through its features such as video conferencing, threaded discussion and discussion forums. Turnbull et al., (2019) argues that the main attribute of LMS is the delivery of educational materials and assessment of learning activities. Ghilay (2019) mentions some of the benefits that the higher institutions of learning enjoy through the use of LMS such as: lecturer and students access to learning materials and content at anytime and anywhere, a unified place of learning, increase in student effectiveness in terms of assignment submission and good learning analytics. Nevertheless, having considered LMS, there is need to gain clarity as regards the term blended learning.

**Blended E-learning**

Saragih et al. (2020) describes blended e-learning as the combination of face-to-face learning, synchronous and asynchronous. Harahap (2019) indicates that this kind of e-learning is used in the facilitation of efficient and effective delivery of courses through the combination of the use of digital technologies and face to face teaching techniques. Medina (2018) explains that with regards to this type of setting, both the face-to-face and online presences happen continually amidst lecturers and students. Kristanto (2017); Medina (2018) indicate that blended learning involves the incorporation of traditional ways of learning and online way of learning. Furthermore, diverse educational experts have reported that blended learning is an efficient method of learning because it incorporates both traditional methods of learning and online learning style. Shu & Gu, (2018); observe that the combination of traditional face-to-face instruction, asynchronous e-learning and synchronous e-learning will assist lecturers to gain access to interactive communication between lecturers and students using communication devices. According to Tsai and Tang (2017); Dwiyogo (2018) and Lestari et al. (2019); shows that blended learning assists students to develop both their digital skills and communication skills which enables them to search and download online materials by themselves and communicate freely with other classmates. Anthonysamy et al. (2019) add that since blended learning comprises the mixture of online and face-to-face learning, this will
assist and interest students to learn at their speed and on their own time. Sahni (2019) notes that if blended learning is appropriately integrated, it is an alternative form of learning which will enhance students’ academic excellence and student retention. Blau et al. (2020); believe that blended learning presents students with diverse learning materials which can be used to communicate and share information with lecturers and classmates. However, this can result in plagiarism. Nevertheless, note that blending learning can add to lecturers’ work schedule thereby making it difficult for lecturers to choose the proper learning style. While there may be challenges experienced by the institution, lecturer and students there are also many advantages that e-learning offers.

Advantages of E-Learning

E-learning has brought numerous advantages through its adoption in the educational sector, especially higher education. Akoi et al. (2021) and previous research Raspopovic et al. (2017) and Algahtani (2011) concur that e-learning has a wide range of advantages compared to the traditional mode of learning if it is used properly. Govender and Khoza, (2017) and Anwar (2017) reveals that e-learning is significant in the educational sector because it centres on the necessities of each student as an essential factor in the activity of learning instead of the instructors or the institutional needs. Ismael et al. (2021) maintain that many of the advantages of e-learning are centred on students. Azzi-Huck and Shmis (2020); Shahzad et al. (2020ab) opines that e-learning has surfaced as an essential and crucial influence in academic institutions of learning and institutions should endeavour to shift to this learning service. In this regard, Ali et al. (2021) opines that potential challenges such as lack of a venue for gatherings, shyness on the part of students, fears experienced by students when having physical contacts and conversation with people, amongst others are eliminated using e-learning. Suffice to state that in the advent of the recent COVID-19 outbreak, e-learning in this instance helps to ensure health and safety of lives as physical contacts which can allow transmission of the Coronavirus disease from one person to another are avoided.

Al Rawashdeh et al. (2021) explains that e-learning helps to motivate and encourage students to interact with one another, thereby expressing their opinions and exchanging views over issues. In this regard, interaction between students and lecturers are duly encouraged. Jamal (2021) notes that students get to freely express themselves over the subject of discourse, especially those who tend to struggle when interacting with their lecturers. Pande et al. (2016) states that lecturers get to easily communicate with their students as barriers such as classroom management are avoided in this instance.

Pande et al. (2016) indicates that the cost of e-learning is effective because it enables students to avoid travelling long distances. Uleanya et al. (2019) consider the distance between students’ homes and campus as learning challenges that hamper the learning abilities and academic performances of students. However, with the use of e-learning, such challenges would be avoided. Similarly, distance to campus also poses a challenge to lecturers.
Thus, with e-learning, lecturers can overcome such challenges. Baczek et al. (2021) views that e-learning enables the institutions to save cost and expenses in erecting structures for teaching and learning. However, with e-learning, such challenges would be catered for, without the nation having to bother so much on required physical facilities and resources.

**Disadvantages of E-Learning**

A review of a study conducted by Al Rawashdeh et al. (2021) as well as Yusuf and Al-Banawi (2013) shows that e-learning has some disadvantages such as students having low motivation towards study. Favale et al. (2020) note that students who have bad study habits or are slow in assimilation may fall behind in their academics. Furthermore, some students might get confused regarding the course content or class activities when there is no proper class situation. Pande et al. (2016) views that e-learning can create laxity on the part of students who may be less interested in following the lecture. Dhawan (2020) opines that physical contact in a teaching and learning setting has a way of ensuring the participation of students regardless of their disposition at that very moment. However, in the case of e-learning, this tends to be difficult or impossible in some instances. (Dhawan 2020).

Aslan et al., (2020) note that with the use of e-learning, it may be difficult for a lecturer to spot students who are emotionally stressed and fail to participate in class activities especially in small classes compared to what is obtainable in an e-learning platform. For example, a tired and sleepy student may easily be motivated to stand and take part in-class activities in a physical contact setting, compared to an e-learning setting.

Pande et al. (2016) opines that e-learning may negatively affect students who may be academically knowledgeable and sound but poor in the use of online communication skills. This adversely affects the learning abilities of such students and puts them in a disadvantaged position. Similarly, Rucker & Downey (2016) as well as Schmidt et al. (2016) opine that lecturers may be knowledgeable and well-grounded on the subject to be taught but may lack the skills to teach using e-learning platforms.

Puljak et al. (2020) indicated another disadvantage which involves assessing students using e-learning in some instances may be difficult or impossible. For instance, assessing students on practical courses may be difficult or impossible where they are expected to role-play in class or perform certain activities which require physical contact with others. Pathak and Vyas (2019) view that e-learning tends to create room for students to cheat compared to when they are assessed through the traditional face to face method. A review of the works of Dhawan (2020) and OECD Policy Responses to Coronavirus (COVID-19) show that despite the disadvantages of e-learning, it still has a lot of advantages that inspires users to continue its usage and also to limit its disadvantages. Following the focus of this study which centers on South Africa, there is a need to explore the trend of E-learning in South Africa.
Hence, the next sub-heading gives a brief on e-learning in the nation: South Africa.

**E-Learning in South Africa**

According to the report from the Department of Education (2003), South Africa is trying all its efforts to become one of the leading countries in Africa in the use of ICT. Government Communication and Information System GCIS (2002) explains that the South African government sees e-education as an important approach to become competitive in this global world. As a result of this, the South African government adopted the white paper on e-Education policy which was instituted into schools with the objective of implementing ICT in transforming teaching and learning (DoE 2004). The South Africa’s e-Education policy states that “Every South African learner in the general and further education and training bands will be ICT capable (that is, use ICT confidently and creatively to help develop the skills and knowledge learners need to achieve personal goals and to be full participants in the global community) by 2013.” (DoE, 2003:19).

The works of Bagarukayo and Kalema (2015) as well as Venter et al., (2012) show that South Africa like many other nations within Sub-Saharan Africa have adopted the use of e-learning systems and platforms. Review of the work of Naidoo et al. (2019) shows that the student population in South Africa is rapidly changing and there are an increased number of students that are considered digital learners. These students tend to crave for digital applications; thus, any other older method or process of learning seems to be very reluctantly embraced. Hence, this makes the task of the DoE (2004) on the implementation of ICT in transforming teaching and learning crucial. The work of Naidoo et al. (2019) further indicates that students enjoy learning that has a seamless and uninterrupted flow of information. However, e-learning has remained a slowly growing phenomenon in South Africa as well as other African societies. According to Uleanya and Gamede (2019), the slow growth of e-learning in South Africa like other developing and underdeveloped nations is hinged on various factors such as the high rate of poverty, ignorance, low level of exposure, low acceptability rate, amongst others. However, in the subject of e-learning, there is a need to explore some of the factors mitigating against South African universities in equipping their students for e-learning. Hence, the following sub-heading identifies and explains some of the factors hindering universities from equipping their students for e-learning in South Africa.

**Challenges Universities experiences when Equipping Students for E-Learning**

In the context of South Africa as is the case with many underdeveloped and developing nations across the globe, which is predominantly African
nations, even with the e-education policy on the implementation of ICTs in schools across the country, there are still gaps in the policy and challenges in their implementation (Mdlongwa, 2012). According to the report from PanAf (2008-2011); Nkula & Krauss, (2014) indicate that despite the significance of e-learning in education, many institutions in South Africa still have challenges in acquiring adequate e-learning facilities. The study conducted by scholars in South Africa on e-learning revealed that the main problem is not because of lack of ICT resources, but many instructors are not competent to implement and maximize the possibilities of ICT resources for teaching purposes. Instead, it is being used for administrative purposes such as tying lecture notes, conducting tests and entering marks (Howie and Blignaut, 2009; PanAf, 2008-2011; Mofokeng & Mji, 2010; Ndlovu & Lawrence, 2012; Makgato, 2012). Olasina (2018) conducted a study on the effect of human and social factors on affecting the decision of students to accept e-learning at KwaZulu-Natal University. The findings of the study revealed that attitude, social influence, perceived usefulness, and perceived satisfaction are essential to students’ behavioural intention to accept e-learning.

Almaiah et al. (2020) identified several factors or challenges related to the integration and implementation of e-learning and have been classified into four categories namely: individual, course, technological, and cultural factor. Furthermore, in their explanation, these factors or challenges varies from one country to another due to readiness to accept e-learning, diverse cultural beliefs and environment. For instance, Aung and Khaing (2015) observed that the poor network facility, poor content development and lack of digital learning and skills are the major challenges in the adoption of e-learning in many developed countries. Suffice to say that there are quite a lot of challenges which influence the implementation of e-learning.

In brief, the reviewed literature shows that South Africa, like other developing nations across the globe also experience challenges in attempting to equip students for eLearning in the nation. This is due to various factors which cut across individual students, institution related, as well as nation based. Hence, this study examines e-learning as a channel of communication in African Universities. To achieve the objectives of this study, an effort is made to provide answers to the following research question: What are the factors hindering universities in equipping students for e-learning in the selected South African University?

**Conceptual Framework**

In this study, the Shannon and Weaver Model of Communication was adopted. Drew (2021) states that the aim of Shannon and Weaver model is to describe how communication can be processed and received. Pearhtres (2016) explains that a proper or structured communication model should adopt the following elements: Source, Message, Encoder, Channel, Receiver/Decoder, Feedback, and Noise.
Figure 1. Shannon and Weaver’s model of communication

Source: Adapted from Hartley & Bruckmann (2002:12)

The diagram in figure 1 shows the processes involved in the flow of communication which begins with the sender. The sender, according to Kapur (2020) in the process of communication, is regarded as the most significant person in initiating communication. Nordquist (2019) adds that when the sender initiates communication, it needs to be in a friendly manner. The next is the message which Kapur (2020) refers to as information that is transmitted from the sender to the receiver which can be embedded in an oral, non-verbal, and written forms. Wrench and Punyanunt-Carter (2012) sees a message as an idea which the sender is transmitting to the receiver. This means that the message in communication is the central point, idea or focus for which a sender and a receiver meet. Channel is referred to as a means through which a message or information is delivered (Eke et al. 2020). Umeozor (2020) adds that the channel of communication could be oral, electronic, the use of public address systems, mobile technology, and video conferencing. In the context of this study, the channel can be the adoption of technology.

The receiver in the opinion of Umeozor (2020) refers to the recipient of the information who decodes the message for it to be understood. Eke et al. (2020) notes that the ability of a message to be properly decoded relies on the receiver's ability to interpret it correctly. In the context of this study, the recipients serve as the students in the selected institutions of learning. While feedback assists the sender to know how the receiver interprets the message (Umeozor 2020). Eunson (2012) observes that feedback allows interaction between the sender and the receiver of the information. In this study, the feedback can be considered as the reactions and responses from students to lecturers and the university community at large with regards to the transformation being experienced following the experiences in the fourth
industrial revolution (4IR), especially with regards to the transition from onsite
to online learning.

Lastly, Weihrich et al. (2010) refers to noise as any unwanted thing in the
process of communication. Umeozor (2020) refers to noise as any obstacles or
interference which distort the flow of information from reaching its destination.
Suffice to state that noise results in failure in the communication process. In
this study, factors hampering the flow of communication from the university
community to the students are classified as noise.

Research Methodology

A quantitative method was adopted for this study which provides access to
the collection of larger data which aids the generalization of the results. Kumar
(2019) explains that quantitative methods can be used in a study to gather
information from a large sample size and allows generalization of the results.
Creswell (2014) views the Quantitative method as a process where data are
collected from a large sample in a numerical format. A survey method with the
use of a structured questionnaire was adopted to identify e-learning as a
channel of communication in the selected South African universities. This was
done by using google form due to Covid-19 restrictions measures. However,
the responses were limited which later resulted in administering the
questionnaire by hand when students were allowed to return to campus and
nearby hostels. Purposive and random sampling techniques were used in the
selection of the university as well as second- and third-year students who
formed the respondents in the study. The second and third students were
selected for this study because they are still undergoing higher education
training. The target population for this study comprises the second- and third-
year students from the selected universities in South Africa. According to the
online information provided by the ICT unit of the Durban University of
Technology, the number of students currently enrolled stands at an estimate of
33,000. However, the exact number of registered undergraduate students is not
stated. On the other hand, the number of currently enrolled undergraduate
students at the University of Zululand following an online release stands at 16,
118. Hence, for this study, the sample size of 400 randomly selected
undergraduate students from second year and above: 200 from each of the
selected universities were selected.

Result

What are the factors hindering the selected South African universities
from equipping students for eLearning?
Figure 2. Graphical representation showing factors militating against equipping students for eLearning

Figure 2 depicted the plans that militated against equipping students for e-learning. The first factor was whether curriculum hindered students from preparing for e-learning; 50.5% from UNIZULU and 68.5% came from DUT to support the assertion. 22% and 19% of the students disagreed while 27.5% and 12.5% from UNIZULU and DUT were neutral. This finding aligns with the study of Eze et al. (2020) and Otuka (2010) who explains that most curricula in higher institutions of learning are inadequate because it lacks the development and design of how to use e-learning embedded into it. Elumalai et al. (2020) adds that lack of alignment between curriculum and e-learning can hinder students from being equipped with e-learning. Holmes and Prieto-Rodriguez (2018) mention that lack of adequate curriculum content can affect the use of e-learning in teaching and learning. Eze et al. (2020) suggest that the curriculum needs to be designed for both the lecturers and students on how to make improvement on their digital skills. Also, the government should assist in developing a strategy through which e-learning is embedded into the curriculum so that the quality of teaching and learning is improved. Van Nuland et al. (2020) argues that the curriculum in terms of course components need to be designed and aligned with e-learning.

In terms of whether lack of exposure hinders students from preparing for e-learning; 56.5% of students from UNIZULU and 69.5% from DUT supported this claim. Meanwhile, 30% from UNIZULU and 21.5% from DUT were not in support and 13.5% from UNIZULU and 9% from DUT remained undecided. This finding shows that lack of exposure hinders students in this regard from learning. The finding agrees with the work of Sino Cruz et al. (2019) which suggests that proper exposure to the use of e-learning tools can assist its users as well as increase the use of these tools. Longhurst et al. (2020) adds that lack of exposure to technological tools can hinder students from preparing for e-learning.
On the issue of whether the modules that students did hinder them from preparing for e-learning received wholesome agreement of 61% of the students from UNIZULU and 71.5% from DUT. These findings align with Bovil (2020); Bovil and Woolmer (2018) who state that lack of adequate module content preparation or design can hinder the students from accessing the modules or not understand the module content.

Additionally, considering the factor of student-lecturer relationship, 53% of students from UNIZULU and 59% from DUT affirmed that relationship with the lecturers hindered them from preparing for e-learning. Meanwhile, 32% from UNIZULU and 27.5% from DUT did not agree with the statement, and 15% from UNIZULU and 13.5% from DUT were undecided. This finding aligns with the study of Dhawan (2020) who notes that it may be impossible for lecturers to relate with and help their students in their learning activities especially when the students fail to come forth to seek help. Zhong (2020) adds that lack of proper relationship between the lecturer and students is another major concern associated with e-learning. Uleanya (2019) argues that the relationship that exists between students and lecturers contributes to their learning abilities, self-esteem, consequently a possible increase in their level of socialization. The foregoing explain that the student-lecturer relationship is crucial for students to be assisted and successfully adopt e-learning.

Furthermore, with regards to whether policies on campus promoted e-learning, the findings showed that 43.5% of the respondents from UNIZULU and 58% from DUT believed it did not, 24.5% from UNIZULU and 21% from DUT agreed that it did, while 32% from UNIZULU and 21% from DUT were neutral. This suggests that policies influence the adoption and use of online learning platforms in universities. This implies that more of the respondents hold the opinion that policies on campus did not promote e-learning. In other words, institutions are expected to look into making policies that promote e-learning in the selected institutions of higher learning, otherwise, disruption is inevitable. This finding agrees with the work of Aung and Khaing (2016) who state that policies can disrupt the promotion of e-learning. Also, the findings of Saeed Al-Marooif et al. (2021) show that lack of proper policies and strategic plans can hinder the adoption and promotion of e-learning. In addition, Khalil Awan et al. (2021) suggest that adequate strategic plans and policies need to be put in place to enhance the successful promotion and implementation of the e-learning system in higher education. Suffice to state that the policies put in place and implemented by the institutions of learning have the capability of making students embrace or neglect the use of digital platforms in learning.

**Conclusions and Recommendations**

The study reviewed e-learning as a channel of communication in African societies, with emphasis on universities. The subject of e-learning as a channel of communication was considered from the perspective of the outbreak of the COVID-19 pandemic. Review method was adopted for the study, hence,
relevant kinds of literature were studied. The findings of the study following
the reviewed relevant works of literature show that many African nations
lagged in the use of e-learning platforms as a medium of communication in
teaching and learning environments such as universities. Nevertheless, the
outbreak of the pandemic spurred many into action in adapting one form of e-
learning platform or the other. However, despite the desire to adopt the use of
e-learning as a channel of communication in teaching and learning
environments, many universities in Africa and nations are affected following
different challenges which they seem to be experiencing. These challenges
include issues such as technical know-how, poor funding, access with regards
to the quality of education provided, amongst others.

Sequel to the findings of the study, the following recommendations are
made:

● Awareness should be made to educate people on the importance and need
for e-learning in African institutions of learning. This can be done through
advertisements using various means such as radio, television, social
media platforms, amongst others. This will help in making people
appreciate and imbibe the e-learning culture.

● E-learning should be made compulsory in all institutions of higher
learning. This could be done with regards to policies guiding higher
education systems in different nations. This would help the institutions of
learning such as universities to prepare for the uncommon normal which
is now the order of the day following the outbreak of the Coronavirus
which lead to the COVID-19. Making e-learning compulsory will also
contribute towards preparing institutions of learning for the Fourth
Industrial Revolution (4IR) which is fast becoming the norm across the
globe.

● Funds should be made available for e-learning in different institutions of
learning. Such funds should be used for making available the necessary
gadgets, skilling and reskilling staff members for relevance in the use of
e-learning, amongst others. This will help in promoting the quality of
provided education which will be useful for students, and consequently
enhance development in African societies.

● Adequate monitoring channels should be made possible. In this case, the
way messages are sent from the receiver who are lecturers in this case and
how they are received by the receivers such as students should be
checked. This will make students more discipline in the use of e-learning
platforms. It will also help to make lecturers more committed to the use of
the provided e-learning platforms.

References

Akoi, S., Ali, B., Saleh, P., Najmaldin, B., Mustafa, R., Abdulmajid, M., & Hama, A.
(2021). Elaborating the Characteristics that Affect Buyers in Online Shopping: The
Case of Generation Z Girls in Kurdistan Region of Iraq. Black Sea Journal of
Management and Marketing, 2(2), 42 - 64. https://doi.org/10.47299/bsjmm.v2i2.74


Entrepreneurship, Management, and Innovation, 3(2), 409 - 428. https://doi.org/10.52633/jemi.v3i2.106


Nkula, K., & Krauss, K. (2014). The integration of ICTs in marginalized schools in South Africa: Considerations for understanding the perceptions of in-service teachers and the role of training. In International Development Informatics Association (IDIA) conference (pp. 03-05).


