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Experiences of B. Ed Students on the use of E-Learning as a Vehicle to Learning during the COVID-19 Pandemic

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ABSTRACT

E-learning has become a common dialect nationally and internationally, particularly during the COVID-19 context. During the lockdown period in South Africa, e-learning, which was experienced differently by different Higher Education Institutions and students, became one of the preferred ways students could access learning. Therefore, e-learning as a vehicle for quality education became a human rights issue in the Higher Education space. Consequently, literature seems to imply that lack of access to e-learning, internet laptops and smartphone connectivity and online gadgets may be an exclusionary learning factor for the majority of students.Underpinned by Engestrom Activity Theory, this qualitative study used telephonic assisted open-ended interviews to provide the four selected Bachelor of Education students with the opportunity to share their experiences on how they have experienced the use of e-learning in a South African university. It emerged from the data that even the students from the same institution had varied experiences in terms of e-learning. Furthermore, the findings revealed that students' social realm, such as internet connectivity and lack of online gadgets such as laptops and smartphones influenced their e-learning. This study concludes that the students' experiences suggest that the university should respond to the students' contextual factors and make appropriate sustainable teaching and learning plans post-COVID-19 era.

Keywords: *E-learning, Learning experiences, Diversity, Learning tools, Teaching and learning*

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INTRODUCTION

E-learning is a buzzword nationally and internationally, particularly during the COVID-19 context. During the coronavirus outbreak, all countries were compelled to introduce COVID-19 regulations which forced students to maintain a social distance from their peers and family and adapt to online learning.[1] Since the outbreak of COVID-19, e-learning has become the norm to avoid the wide-reaching and transferable contagious disease. The worldwide educational system was disrupted and

[1] Ana Nurdini Sharin, "E-Learning During Covid-19: A Review of Literature," *Jurnal Pengajian Media Malaysia* 23, no. 1 (May 18, 2021): 15–28, https://doi.org/10.22452/jpmm.vol23no1.2.

educators had to switch to online teaching mode, especially at the university level.[2] As a strategy to flatten the curve and control the transmission of the disease, lockdown regulations which included staying at home, were put in place by almost all the countries.[3] In South Africa, during the hard-lockdown period, e-learning, which was experienced differently by different Higher Education Institutions and by students, became one of the preferred ways students could access learning. This means that e-learning as a vehicle for quality education became a human rights issue in the Higher Education context. Hence literature seems to imply that lack of access to e-learning, internet laptops and smartphone connectivity and online gadgets may be an exclusionary learning factor for the majority of students.[4] COVID-19 has also exposed deep inequalities across the world along the lines of race, class, gender and geography, as well as the digital divide.[5] The majority of previously disadvantaged rural and township black South African students seem to have suffered immensely in terms of internet connectivity and access to e-learning. This digital divide hampered the feasibility of e-learning.[6] Thus, this paper aims at providing the selected Bachelor of Education students with the opportunity to share their experiences about how they have experienced the use of e-learning in a South African university.

The COVID-19 pandemic has adversely affected the normal operations of the countries and South Africa is no different. It has also exposed deep inequalities across the world along the lines of 'race,' class, gender and geography, as well as the digital divide or access to internet facilities and connectivity.[7] To mitigate and manage the spread of COVID-19, unpopular lock-downs were introduced in most countries, resulting in closures of businesses, schools and institutions of higher learning.[8] Most countries worldwide experienced the devastating impact of the pandemic, which collapsed economies, resulting in unprecedented job losses, catastrophic loss of lives, overburdening health facilities and aggressive race and competition for the COVID-19 vaccines. Omodan stated that the first-time new entrants (FTNEs) admitted in 2021 experiences were worrisome as they struggled to cope with a new level of university education and worsened by the COVID-19 pandemic, which totally interrupted teaching and learning and forced South African universities to adopt online and blended learning.[9]

Traditional teaching and learning practices have become obsolete and inadequate in mitigating the social distancing requirements of COVID-19, coupled with the need to prepare and equip students

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[2] Sharin, "E-Learning During Covid-19: A Review of Literature."
[3] Edgar John Sintema, "Effect of COVID-19 on the Performance of Grade 12 Students: Implications for STEM Education," *Eurasia Journal of Mathematics, Science and Technology Education* 16, no. 7 (April 7, 2020), https://doi.org/10.29333/ejmste/7893.
[4] Yusuf Sayed and Marcina Singh, "Evidence and Education Policy Making in South Africa during Covid-19: Promises, Researchers and Policymakers in an Age of Unpredictability. ," *Southern African Review of Education with Education with Production* 26, no. 1 (2020): 21–39, https://journals.co.za/doi/pdf/10.10520/ejc-sare-v26-n1-a3.
[5] Sara, Black, Carol Anne Spreen, and Salim Vally, "Education, Covid-19 and Care: Social Inequality and Social Relations of Value in South Africa and the United States ," *Southern African Review of Education with Education with Production* 26, no. 1 (2020): 40–61.
[6] Cedric B. Mpungose, "Emergent Transition from Face-to-Face to Online Learning in a South African University in the Context of the Coronavirus Pandemic," *Humanities and Social Sciences Communications* 7, no. 1 (December 2, 2020): 113, https://doi.org/10.1057/s41599-020-00603-x.
[7] Black, Spreen, and Vally, "Education, Covid-19 and Care: Social Inequality and Social Relations of Value in South Africa and the United States ."
[8] Folasade Esther Jimola and Graceful Onovughe Ofodu, "Sustaining Learning during COVID-19 Seismic Shift: The Need to Develop Flexible Pedagogy," *Interdisciplinary Journal of Education Research* 3, no. 1 (March 9, 2021): 14–26, https://doi.org/10.51986/ijer-2021.vol3.01.02.
[9] Bunmi Omodan, "Deconstructing the Challenges of COVID-19 on First-Year Rural University Students in South Africa," *African Journal of Inter/Multidisciplinary Studies* 3, no. 1 (2021): 229–42, https://doi.org/10.51415/ajims.v3i1.930.

with 4IR skills.[10] In the midst of the pandemic, Higher Education Institutions (HEI) globally adopted and adapted online learning (e-learning) so that students were not left behind as they were barred from attending lectures during the lockdown. The advent of the COVID-19 pandemic forced all sectors of society to depend on technology because of technological progression and HEIs were invariably compelled to utilise technology in teaching and learning.[11] Institutions of higher learning were forced to cooperate with all stakeholders to adapt to the new mode of learning and navigate the COVID-19 lockdown restrictions.[12] Despite the lockdown restrictions, online learning enabled students to access learning materials and practice their skills at any time in the privacy of their homes.[13] As the pandemic trajectory decreased, teaching and learning had already changed drastically. Blended learning, a combination of online and face-to-face learning, emerged as an inevitable complement to traditional ways of contact teaching at universities. Combining the two approaches creates a rich learning experience for the student and better prepares the student for the world of work.[14]

Although there was no other option but e-learning for teaching and learning to continue, this amendment has not offered benefits for the majority of previously disadvantaged black South African students in terms of access to e-learning.[15] COVID-19 has also deepened the inequalities across the world along the lines of race, class, gender and geography, as well as the digital divide.[16] The digital divide became wider and huge,[17] hindered e-learning in South African universities and deprived learning opportunities for students from disadvantaged communities. This study, therefore, sought to investigate the experiences of B. Ed students on the use of e-learning as a vehicle for learning during the COVID-19 pandemic

Research Questions

- What are the students' challenges/experiences with e-learning during the COVID-19 pandemic?
- How have students coped with e-learning during the COVID-19 pandemic?

THEORETICAL FRAMEWORK

Engestrom Activity Theory

The study was underpinned by Engestrom's 1987 Activity Theory (AT). Activity Theory is based on cultural-historical psychology. Hassim and Jones contend that AT zooms into the history of a person's environment, culture, motivations, and complexity of real-life activities.[18] The activity is broken into

[10] Jennifer Groff, "Technology-Rich Innovative Learning Environments," *OCED CERI Innovative Learning Environment Project*, 2013, 1–30, https://www.oecd.org/education/ceri/technology-rich innovative learning environments by jennifer groff.pdf.
[11] Emma Coleman and Sive Mtshazi, "Factors Affecting the Use and Non-Use of Learning Management Systems (LMS) by Academic Staff," *South African Computer Journal* 29, no. 3 (December 8, 2017), https://doi.org/10.18489/sacj.v29i3.459.
[12] Tamika K Williams, Robert W McIntosh, and William B. Russell, "Equity in Distance Education During COVID-19," *Research in Social Sciences and Technology* 6, no. 1 (May 24, 2021): 1–24, https://doi.org/10.46303/ressat.2021.1.
[13] Aditya Sinha and Debabrata Basu, "Journalism Education in India: The Widening Gap Between Research and Practice," *Asia Pacific Media Educator* 30, no. 2 (December 25, 2020): 200–210, https://doi.org/10.1177/1326365X20970419.
[14] Anita L. Cloete, "Technology and Education: Challenges and Opportunities," *HTS Teologiese Studies / Theological Studies* 73, no. 4 (April 21, 2017), https://doi.org/10.4102/hts.v73i4.4589.
[15] Mpungose, "Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic*."*
[16] Black, Spreen, and Vally, "Education, COVID-19 and care: Social inequality and social relations of value in South Africa and the United States."
[17] Mpungose, "Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic*."*
[18] Nor Hazlina Hashim and M.L. Jones, "Activity Theory: A Framework for Qualitative Analysis," *Information Systems and Activity Theory. University of Wollongong Press*, 1998, 19–38.

the analytical components of the subject, tool and object, where the subject is the person being studied, and the object is the intended activity. Morf and Weber are of the view that AT activity is primary and precedes thinking (in achieving one's goals, it becomes a bridge or mediating device between the individual and the social reality or desired object.[19] It uses the whole work activity to assist the individual in achieving the set goals. The aim of the activity in AT is carried out in the midst of tensions and contradictions. Students' experiences in online learning would allow researchers to unearth the contradictions that are believed to be sources of learning and development. Nardie emphasises the importance of mediation in the activity theory.[20] In mediating learning, lecturers and students had to use an e-learning platform to access students from different parts of the country in different contexts. Mwanza and Engestrom developed the activity system triangle model in which artefacts are important for human performance and are integral parts of it.[21] Hence, the activity theory was seen as relevant.

LITERATURE REVIEW

This section will conceptualise e-learning/online learning and gives the benefits of e-learning/online learning in HEIs. For the purpose of this study, e-learning and online learning will be used interchangeably.

The concept of e-learning

E-learning is referred to as the use of networked information and communication technology in teaching and learning.[22] Other terms such as online learning, virtual learning, distributed learning, network and web-based learning are also used to describe this mode of teaching and learning.[23] It is the combination of two main areas, learning and technology with a view to enhancing students'/learners' knowledge and skills.[24] Learning is a cognitive process for achieving knowledge, and technology is an enabler of the learning process, meaning that technology is used like any other tool in teaching and learning.[25] E-Learning, therefore, is the means that support the educational process and its transformation from the stage of indoctrination to the stage of students' creativity, interaction and skills development.[26] It is about collecting and utilisation all electronic forms of teaching and learning and research by adopting computers, storage media and networks. Its applications include online learning, computer learning, virtual classrooms and digital collaboration. During e-learning, online tutorial content, audio tapes, videos and discs are offered.[27]

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[19] Martin E Morf and Wolfgang G Weber, "I/O Psychology and the Bridging of A. N. Leont'ev's Activity Theory.," *Canadian Psychology / Psychologie Canadienne* 41 (2000): 81–93, https://doi.org/10.1037/h0088234.

[20] Bonnie A Nardi, "Studying Context: A Comparison of Activity Theory, Situated Action Models, and Distributed Cognition.," in *Context and Consciousness: Activity Theory and Human–Computer Interaction.* (Cambridge, MA, US: The MIT Press, 1996), 69–102.

[21] Daisy Mwanza and Yrjö Engeström, "Pedagogical Adeptness in the Design of E-Learning Environments: Experiences...," in *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare,...*, ed. A. Rossett, vol. 2003 (Chesapeake, VA: Association for the Advancement of Computing in Education (AACE), 2003), 1344–47, http://www.editlib.org/p/11892/.

[22] A. Pauline Chitra and M. Antoney Raj, "E-Learning," *Journal of Applied and Advanced Research*, May 10, 2018, S11–13, https://doi.org/10.21839/jaar.2018.v3iS1.158.

[23] Carol A. O'Neil, Cheryl A. Fisher, and Matthew J. Rietschel, *Developing Online Courses in Nursing Education*, *Developing Online Courses in Nursing Education* (New York: Springer Publishing Company, 2019), https://doi.org/10.1891/9780826140579.

[24] Archana Mantri, "A Blended Learning Model to Achieve Academic Excellence in Preparing Post Graduate Engineering Students to Become University Teachers," in *2015 IEEE 3rd International Conference on MOOCs, Innovation and Technology in Education (MITE)* (IEEE, 2015), 9–14, https://doi.org/10.1109/MITE.2015.7375278.

[25] Mantri. A Blended Learning Model to Achieve Academic Excellence in Preparing Post Graduate Engineering Students to Become University Teachers,"

[26] Mohamed Hissouf et al., "Numerical Study of a Covered Photovoltaic-Thermal Collector (PVT) Enhancement Using Nanofluids," *Solar Energy* 199 (March 2020): 115–27, https://doi.org/10.1016/j.solener.2020.01.083.

[27] Hissouf, et. al. "Numerical study of a covered Photovoltaic-Thermal Collector (PVT) enhancement using nanofluids."

The benefits of online learning

Some of the benefits of harnessing educational technologies include the promotion of collaboration among students, the ease of information sharing across a group of students on a common platform, the ability to conduct teaching and learning with students in various, diverse locations, discussion panels and interactive sessions, information retrieval that is not bound by time or space and flexible learning time.[28] Thus O'Neil, Fisher and Newbold regard online learning as distributed pedagogy that encourages student participation in the construction of knowledge in their own space.[29] Mantri argues that by embracing digital learning, universities achieve two goals; achieve course learning outcomes and develop students' creative thinking skills to assist in mediating societal challenges.[30] The post-school online learning benefits include preparing students for the competitive, technological workforce, helping institutions keep pace with society[31] and broadening collaborative, constructive and computer-aided learning scopes.[32]

The challenges of online learning

Some South African universities are in the rural parts of the country and draw most of their FTNEs from these communities. This technological integration is crucial in the context of traditional African universities as the majority of FTNEs were previously unable to access technology for learning and were the cause of students dropping out. According to Dube, most of these FTNEs lack adequate resources,[33] such as the internet and its usage and this lack manifests itself as social inequality issues.[34] The inequality gap exposed by the COVID-19 pandemic is not exclusively evident in South Africa but also finds its expression globally as well.[35] Kponou states that there is evidence presented by studies into the relationship between inequality and the diffusion of technology in most African countries clearly shows that rather than decreasing the inequality gap, technology actually widens the gap.[36] This is because the complexities around what enables an individual from a disadvantaged community to successfully adopt a given technology are always oversimplified. Muhuro and Kang'ethe echo the widening of the inequality gap, that the adaptation and adoption of online learning, particularly in rural institutions are exacerbated by inadequate resources.[37]

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[28] Gloria Adedoja et al., "Learners' Acceptance of the Use of Mobile Phones to Deliver Tutorials in a Distance Learning Context: A Case Study at the University of Ibadan," *The African Journal of Information Systems* 5, no. 3 (July 1, 2013), https://digitalcommons.kennesaw.edu/ajis/vol5/iss3/3.

[29] O'Neil, Fisher, and Newbold, "Developing an online course: best practices for nurse educators."

[30] Mantri, "A blended learning model to achieve academic excellence in preparing post graduate engineering students to become university teachers."

[31] D. Kalyani and K. Rajasekaran, "Innovative Teaching and Learning," *Journal of Applied and Advanced Research*, May 10, 2018, S23–25, https://doi.org/10.21839/jaar.2018.v3iS1.162.

[32] Lata Dangwal Kiran Lalima, "Blended Learning: An Innovative Approach," *Universal Journal of Educational Research* 5, no. 1 (January 2017): 129–36, https://doi.org/10.13189/ujer.2017.050116.

[33] Bekithemba Dube, "Rural Online Learning in the Context of COVID 19 in South Africa: Evoking an Inclusive Education Approach," *Multidisciplinary Journal of Educational Research* 10, no. 2 (June 15, 2020): 135, https://doi.org/10.17583/REMIE.2020.5607.

[34] Dube, "Rural online learning in the context of COVID-19 in South Africa,"135- 157.

[35] Göran Therborn, "How the Dimensions of Human Inequality Affect Who and What We Are," 2020, https://theconversation.com/how-the-dimensions-of-human-inequality-affect-who-and-what-we-are-137296.

[36] Kenneth Colombiano Kponou Monsoï, "Information Communication and Technology (ICT) Diffusion and Inequality in Africa," *Journal of Internet and Information Systems* 7, no. 1 (August 31, 2017): 1–7, https://doi.org/10.5897/JIIS2016.0090.

[37] Patricia Muhuro and Simon M. Kangethe, "Prospects and Pitfalls Associated with Implementing Blended Learning in Rural-Based Higher Education Institutions in Southern Africa," *Perspectives in Education* 39, no. 1 (March 12, 2021): 427–41, https://doi.org/10.18820/2519593X/PIE.V39.I1.26.

For Badat, lack of access to technology tools poses a threat to the FTNEs' ability to acquire skills, knowledge, and competence.[38] Online learning student experiences are varied and are influenced by students' attitudes and motivation.[39] It is for this reason that this paper seeks to explore the experiences of university students on online learning. The researchers of this paper concur with Fatimah and Santiana that digital technologies can be utilised to facilitate better learning. However, the readiness of the universities and student access to these technologies hinder integration and pose a challenge, despite these students being born in the digital era.[40] Even though technology, according to Kumar, brings new opportunities for re-imagining, reconsidering and re-inventing the learning environments and changes pedagogical processes, some South African universities were caught unprepared for digital learning migration.[41] Beyond institutional readiness, students were also exposed to an unprepared psychological shift to adapt to new learning.[42]

METHODOLOGY

Research paradigm

Regarding the paradigm that guided the B. Ed students' experiences, the interpretative paradigm became relevant, as it is more focused on the mental than the physical phenomenon from the emic view.[43] In order to study produce (an in-depth analysis of the student's experiences from the students' real-life context),[44] the study adopted a case study design; the Bachelor of Education, final-year students.

Research approach

The study on the Bachelor of Education (B. Ed) students' experiences followed a qualitative approach and interpretivist paradigm. A qualitative approach, as Kozleski produces knowledge about experiences, perspectives, and settings from the participants' perspective.[45] The qualitative approach also produces a deeper understanding of the phenomenon under study.[46] It became relevant for the study as it aims to produce knowledge that has no single correct understanding of the world, as it depends on the participants' perspectives.[47]

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[38] Saleem Badat, *The Challenges of Transformation in Higher Education and Training Institutions in South Africa* (Pretoria: Development Bank of Southern Africa, 2010).
[39] Timothy McLaughlin and Z. Yan, "Diverse Delivery Methods and Strong Psychological Benefits: A Review of Online Formative Assessment," *Journal of Computer Assisted Learning* 33, no. 6 (December 2017): 562–74, https://doi.org/10.1111/jcal.12200.
[40] Asri Siti Fatimah and Santiana Santiana, "Teaching in 21st Century: Students-Teachers'perceptions of Technology Use in the Classroom," *Script Journal: Journal of Linguistic and English Teaching* 2, no. 2 (October 8, 2017): 125, https://doi.org/10.24903/sj.v2i2.132.
[41] Shivcharan Kumar, "Awareness, Benefits and Challenges of e-Learning among the Students of Kurukshetra University Kurukshetra: A Study," *International Journal of Information Dissemination and Technology* 8, no. 4 (2018): 227, https://doi.org/10.5958/2249-5576.2018.00048.1.
[42] Samantha K Brooks et al., "The Psychological Impact of Quarantine and How to Reduce It: Rapid Review of the Evidence," *The Lancet* 395, no. 10227 (March 2020): 912–20, https://doi.org/10.1016/S0140-6736(20)30460-8.
[43] Beverly FitzPatrick, "Validity in Qualitative Health Education Research," *Currents in Pharmacy Teaching and Learning* 11, no. 2 (February 2019): 211–17, https://doi.org/10.1016/j.cptl.2018.11.014.
[44] Jennifer Anne Cleland, "The Qualitative Orientation in Medical Education Research," *Korean Journal of Medical Education* 29, no. 2 (June 1, 2017): 61–71, https://doi.org/10.3946/kjme.2017.53.
[45] Elizabeth B. Kozleski, "The Uses of Qualitative Research," *Research and Practice for Persons with Severe Disabilities* 42, no. 1 (March 3, 2017): 19–32, https://doi.org/10.1177/1540796916683710.
[46] Sarah Holdsworth et al., "The Assessment of Graduate Sustainability Attributes in the Workplace: Potential Advantages of Using the Theory of Planned Behaviour (TPB)," *Journal of Cleaner Production* 238 (November 2019): 117929, https://doi.org/10.1016/j.jclepro.2019.117929.
[47] FitzPatrick, "Validity in qualitative health education research."

Participants and Sampling

Purposive Sampling was used to select the four (4) Bachelor of Education final-year students. As the research took place during the COVID-19 Lockdown in South Africa, all the students accessed their learning virtually from their homes. These students were sampled based on access, practicality and willingness to participate in the study.[48]

Data Analysis

The study used thematic analysis to examine the experiences of B. Ed students. Lester, Cho and Lochmillar explain that thematic analysis identifies and sorts through the data set and identifies similar phrases and relationships from any data size.[49] This was relevant for this study.

Data Collection Techniques

Qualitative methodology influenced the choice of research methods used.[50] Therefore, the study selected semi-structured interviews, which allowed the participants to unpack their learning experiences during the COVID-19 lockdown in South Africa. The data was collected using WhatsApp calls, phone calls and, in some instances, face-to-face interaction, observing the COVID-19 protocols. All the interactions were recorded with the participants' permission.

Data Trustworthiness

The tape recorder was used to ensure that the researchers captured the participants' reports. Also, as a number of researchers participated in the study, research meetings took place to share the reports from the field and suggest any issues that needed follow-up.

FINDINGS

The findings are guided by the research questions, and the following themes were identified:

(a) **Profiling the participants and the research site**

The four B.Ed students that participated in this study were two males and two females. Three of the students reportedly stay in rural areas of the Eastern Cape, while one resided in an urban area of the Eastern Cape. During the study, all the students reportedly worked virtually from home due to the COVID-19 lockdown. They all studied in one higher education institution, categorised as a formerly disadvantaged institution, which according to one of the participants, *"was not ready for the virtual teaching and learning*". Even when they studied on campus, all four participating students reported difficulty accessing resources such as the library and Wi-Fi. The lack of resources is characteristic of the South African universities categorised as formerly disadvantaged institutions.

All four participants, except one, reported that they stayed with their extended families. Eric, who is staying with an extended family member, was greatly assisted by a cousin who gave him his laptop to do assignments and other tasks. This implies that Eric's stay with the extended member added value to his studies during the lockdown. The student, who reportedly stayed with her immediate family (Nomsa), has all the family support she needs.

[48] Holdsworth, et. al., "The assessment of graduate sustainability attributes in the workplace: Potential advantages of using the theory of planned behaviour."

[49] Jessica Nina Lester, Yonjoo Cho, and Chad R. Lochmiller, "Learning to Do Qualitative Data Analysis: A Starting Point," *Human Resource Development Review* 19, no. 1 (March 9, 2020): 94–106, https://doi.org/10.1177/1534484320903890.

[50] Holdsworth, et. al., "The assessment of graduate sustainability attributes in the workplace: Potential advantages of using the theory of planned behaviour."

(b) **Challenges experienced by the students studying virtually during the lockdown**
Computer illiteracy and lack of knowledge of Blackboard as a learning management system

All the participants reported that they were computer illiterate and never received any computer training from the university. Some reportedly self-taught the use of the computer. Nomsa reported:

> *I was not officially trained to use online platforms (Blackboard). All the knowledge I acquired about this platform was from the lecturers who were using this platform to give us study materials and assessments. I do not have deep knowledge of Blackboard but enough knowledge to complete any given task using this platform.*

It also emerged from the data that all selected students never received any training in using Blackboard as a learning platform from the university. Some reportedly self-taught the use of Blackboard. Nomsa, for instance, lamented;

> *I was not officially trained to use online platforms (Blackboard). All the knowledge I acquired about this platform was from the lecturers who were using this platform to give us study materials and assessments. I do not have deep knowledge of the use of Blackboard, but I have enough knowledge to complete any given task using this platform.*

Lack of online tools to access learning
Even though all the participants reported that they worked hard and were committed to their studies, the challenge expressed by the majority was the lack of laptops and even smartphones to access learning. For instance, Queen noted:

> *I do not have a laptop. I usually borrow my cousin's laptop. She is studying with UNISA. Sometimes our programmes and schedules clash, which causes tensions. It also means I submit my work full of mistakes, as I do not get time to edit the work.*

Nomsa, who stays with her immediate family, was the only participant who did not experience challenges with accessing a laptop and data for e-learning. She commented:

> *The home environment I am currently occupying allows me a great opportunity to participate in e-learning. I have a great support system and I stay in an environment that is conducive for teaching and learning to take place. I have enough space to enable me to perform at my best without any disturbances that might derail my learning. I have network connectivity that works very well as well as devices are needed for me to be able to complete any task given.*

Lack of network connectivity and data
Queen, Shilony and Eric reported the different struggles in accessing laptops and network connectivity. Even during the data collection stage, Eric reported that he had to travel to the clinic which is far from his home, to access network connectivity. During this interview, he indicated that he was standing next to the clinic, which assisted him in accessing connectivity.
Shilony also shared a similar experience when he reported that:

> *There is poor connectivity here. The last time I managed an online search was in April. I have to stand next to the window or go to the local clinic.*

Even though most students had network connectivity challenges and lacked laptops, Nomsa had different experiences and reported that:

> *I have network connectivity that works very well as well as devices needed for me to be able to complete any task given.*

Shilony shared that even though he had access through a borrowed laptop from a family member, getting the data was a problem, as the university did not provide them with enough data.
Nomsa, who stayed with her immediate family, was the only participant who did not experience challenges with accessing the laptop and data for the e-learning. She shared:

> *The home environment I am currently occupying allows me a great opportunity to participate in e-learning. I have a great support system and I stay in an environment that is conducive for teaching and learning to take place. I have enough space to enable me to perform at my best without any disturbances that might derail my learning.*

When asked how they felt about their online learning challenges, Eric lamented, "*We have lost hope";* Queen added*, "the future is foggy," and* Shilony added, "*I see my future disappearing in front of me."* However, Nomsa indicated no negativity and whispered, "*I am not sure."* In response to these online learning challenges, Nomsa suggested that the university needed to apply diverse strategies:

> *Fast track the process of getting students severely affected by the challenges I mentioned above and get them to their residences. They should encourage students who are able to learn from home, like me, to remain in their respective homes so as not to have a huge number of students filling up the residences.*

DISCUSSION

The data showed that the participants were struggling during the COVID-19 lockdown; however, they were able to find means of accessing online learning platforms. It also emerged from the data that the participants were beginning to lose hope and showed high levels of despair and yet managed to cope with the situation. This situation and their sentiments were an indication of the interconnectedness between e-learning platforms and the student's social environment and this was in line with activity theory, which according to Morf and Weber, aims at achieving one's goals. The activity becomes a bridge or a mediating device between the individual and the social reality or desired object- e-learning.[51] Despite the sudden change of learning modalities due to COVID-19, some families seemed willing to support students, albeit in different ways due to students' social environment. This assertion of students' diverse social environment that affected their online learning experiences is in line with Muhuro and Kang'ethe's opinion that inadequate resources exacerbate adaptation and adoption of online learning, particularly in rural institutions.[52] For Kponou, this widens the inequality gap, particularly for students who come from disadvantaged communities.[53] One student had to walk a distance to access network connectivity, and all these activities represent work activities to assist them in achieving the set goals; online learning, despite the challenges.[54]

The implications of the students' experiences with regards to e-learning/online learning during COVID-19 were, amongst others, the inadequate investment in ICT student training and ICT-relevant gadgets by higher education institutions (HEIs). Furthermore, access to ICT skills, connectivity, ICT tools and the digital divide is a social justice issue that needs to be collaboratively addressed by HEIs and relevant local government structures.

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[51] Morf and Weber, "I/O Psychology and the Bridging of A. N. Leont'ev's Activity Theory."
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CONCLUSION

Despite the challenges experienced by the participants about e-learning/online learning during the COVID-19 lockdown, it appeared that the students had a way to access digital tools and some were supported by their immediate family members. Although accessing the digital tools differed from student to student, they managed to mediate the challenges experienced during the COVID-19 lockdown.It is clear from the findings that the historically disadvantaged institutions of higher learning were not ready for the sudden digital migration. COVID-19 became a wake-up call at the expense of the students who were often left to fend for themselves to succeed in their studies. However, the challenges experienced by students should be used for strategic planning by the various stakeholders in the allocation of resources.

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