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Faculty of Community and Health Sciences

**UNDERSTANDING NURSING STUDENTS' EXPERIENCES OF
ONLINE LEARNING AT A UNIVERSITY IN SOUTH AFRICA
DURING THE COVID-19 PANDEMIC.**

A mini-thesis submitted in partial fulfilment of the requirements for the Degree
of Master in Nursing (Education) in the School of Nursing, Faculty of
Community and Health Sciences, University of the Western Cape

By

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KEYWORDS

COVID-19

Digital technologies

eLearning

Mitigation

Online learning

Pandemic

South Africa





DECLARATION

I declare that *Understanding Nursing Students' Experiences of Online Learning at a University in South Africa during the Covid-19 Pandemic* is my own work, that it has not been submitted before for any degree or examination to any other university, and that all sources I have used or quoted have been indicated and acknowledged as complete references.

Name: Boitumelo Sebeela

Signed:



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Date: 02 December 2021

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It is with the utmost gratitude that I wish to acknowledge every individual that gave me strength, motivation and support throughout my Masters in Nursing Education journey:

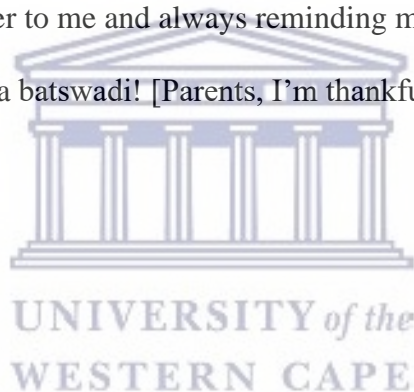
- God, the author of my life, and my ancestors for wisdom, light and strength.
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DEDICATION

I dedicate this thesis to my mother Junia Sebeela and my late father Robert Mothusiemang Sebeela.

For the vision and mandate that my father was unable to fulfil. For being an angel that is at the feet of God, looking over me to break a generational chain that once imprisoned us. For being a father that allowed me to follow my dreams without imposing his dreams on me.

To my mother, for being a father to me and always reminding me of the spirit of my father that lives within me. Kea leboga batswadi! [Parents, I'm thankful!]



LIST OF ABBREVIATIONS

ALT: Assessment, Learning and Teaching

CHS: Community and Health Sciences

COVID-19: Coronavirus

CSSS: Centre for Student Support Services

DHET: Department of Higher Education and Training

ECP: Extended Curriculum Programme

FGD: Focus Group Discussion

HEI: Higher Education Institution

H1N1: Swine flu

HSSREC: Humanities and Social Sciences Research Ethics Committee

ICT: Information and Communications Technology

LMS: Learning Management System

NDP: National Development Plan

SA: South Africa

SANC: South African Nursing Council

SAQA: South African Qualifications Authority

SoN: School of Nursing

WHO: World Health Organisation



ABSTRACT

Digital integration is evident in many countries and across all sectors. The need for integration of Information and Communications Technology with higher education was almost inevitable because of the effect of the COVID-19 pandemic. The closure of higher education institutions in South Africa has made it mandatory for institutions to transition from traditional face-to-face classroom learning to online learning. This mitigation left minimal time to achieve institution readiness in adopting this new manner of learning and subsequently will influence the students' learning experiences.

The aim of the study is to explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic. A qualitative research approach with an exploratory and descriptive design was utilised. Snowballing was adopted as a sampling method, in which a semi-structured interview guide was used to collect experiences of undergraduate nursing students. Data saturation was achieved after thirteen participants were interviewed. ATLAS.ti 8 software was used to assist with the management of data. Data were analysed inductively following the six steps of thematic analysis. The generation of initial codes resulted in a total of 188 codes, that were inductively analysed and two themes, five sub-themes and ten categories emerged. The findings indicated that lack of physical interaction between students and nurse educators led to perceived academic disengagement. However, students demonstrated self-directed attributes that allowed them to be resilient. Furthermore, the overall academic performance was adversely affected by online learning, online assessments, and unfavourable home environments.

The results of the study demonstrated the importance of technological readiness and support to ensure undergraduate nursing students maintain positive experiences in online learning and teaching platforms.



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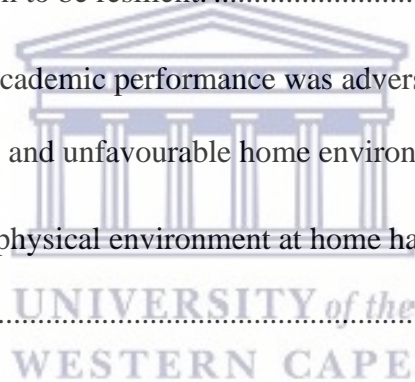
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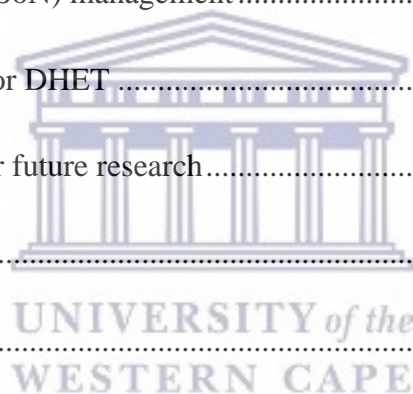
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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

The chapter provides an orientation of the phenomenon under study. It provides an overview of the researched topic, research problem, research aim, question, and objectives. The research methods are briefly described while a detailed description is provided in Chapter Three. The chapter ends by providing a summary of the chapters covered in this thesis.

1.2. BACKGROUND

Education is a universal human right (United Nations, 1948). In Africa, Article 17 of the African Charter on Human and Peoples' Rights (1981) stipulates that all individuals have the right to education. Similarly, the Constitution of South Africa (1996) stipulates in section 29 that all individuals have the right to basic education, which includes basic education and tertiary education, and the South African government is mandated to ensure that education is available and accessible to all its citizens. These legislation pieces underpin the provisioning of education that need to be globally maintained.

Currently, the world is confronted with the Coronavirus (COVID-19) pandemic that has threatened to infringe on the right of access to education because of school closure and/or suspension (Jandrić, Hayes, Truelove, Levinson, Mayo, Ryberg, Monzó, Allen, Stewart, Carr, & Jackson, 2020). The pandemic has impacted on basic education as well as higher education access. This infringement is related to the measures that have been implemented to curb the effects of the pandemic. These measures, such community mitigation (Fung, Gambhir, Glasser,

Gao, Washington, Uzicanin, & Meltzer, 2015), aim to decrease social interaction and thus decrease the transmission of the COVID-19 virus. On the 27th of March 2020, the President of South Africa declared a national lockdown in terms of the National Disaster Management Act of 2002. This lockdown impacted on many sectors, including the education sector of the country (Jadhav, Bagul, & Aswale, 2020).

To continue the provisioning of education in South Africa, educational syllabi and curricula were provided by means of an online platform. It is important to take into consideration the pre-existing challenges that the South African higher education sector experienced, in relation to technology. Since 2000, many higher education institutions (HEI) had invested a large portion of their budget on Information and Communications Technology (ICT) (Muianga, Hansson, Nilsson, Mondlane, Mutimucuo, & Guambe, 2013). Yet, the Financial and Fiscal Commission reported that online learning in South Africa appears to be sub-optimal, with characteristics of continuous relegation of students in marginalised communities (Sibanda, 2012).

With just under ten years till the deadline to achieve the National Development Plan (NDP) (2012), the pandemic has facilitated and accelerated the remote and potential realisation of the recommendations relating to the use of technology in education. One of those recommendations includes expanding distance education, which is evident in the introduction of online learning in higher education. Furthermore, the pandemic has fast-tracked the proposal of the Green Paper on Post-School Education and Training (2012) which calls for the collaboration of stakeholders to increase bandwidth (internet-access) at a reduced cost for educational purposes.

The transition from traditional classroom learning and teaching to online learning and teaching in nursing is questionable, considering the South African Nursing Council's (SANC) requirements for progress from one academic year to the next till completion, requires students to gain both clinical and theoretical competencies (Solwandle, 2018).

In establishing academic and/or institutional readiness, the university under study distributed a survey to identify the needs of students concerning access to online learning. Table 1.1 displays the response of nursing students regarding their needs for them to successfully access online learning. The findings of the survey revealed a need for an electronic device and mobile data by undergraduate nursing students enrolled in an extended curriculum programme and the main curriculum programme in a School of Nursing at a university in South Africa.



Table 1.1 Needs of students identified regarding access to online learning ¹

Year level	Total no. of students	Mobile data needed	Percentage of mobile data needs	Electronic device needed	Percentage of electronic device need	Mobile data & electronic devices needed	Percentage of mobile data & electronic device need	No need for neither data and/or electronic device	Percentage of no need for data and/or electronic device
ECP 1 (R174)	243	31	12.76%			20	8.23%		
ECP 1 (R425)		45	18.52%			13	5.35%		
MCP 1 (R425)		17	7%	0	0	4	1.65%	1	0.41%
MCP 1 (R174)		57	23.46%	1	0.41%	28	11.52%	14	5.76%
MCP 2	307	95	30.94%	0	0	97	31.6%	49	16%
MCP 3	273	230	84.25%	0	0	40	14.65%	1	0.37%
MCP 4	203	72	35.47%	0	0	123	60.59%	0	0
Total	1026	547	53.31%	1	0.41%	325	22.9%	65	6.34%

Source: School of Nursing Administrator

The above table illustrates that undergraduate students expressed the greatest need for mobile data only, and the greatest portion of students expressed a need for both mobile data and an electronic device. With only 6.34% of students not requiring mobile data and/or an electronic device.

1.3 SIGNIFICANCE OF THE STUDY

The findings of this study will provide the university stakeholders, i.e., nursing educators, Assessment, Learning and Teaching (ALT) team and departmental management, with a reference point when addressing the standardisation and improvement of online learning and teaching at higher education institutions (HEIs). Furthermore, the findings of the study provide guidance for the future adoption of online learning and teaching through Learning Management Systems (LMSs) under circumstances that don't allow for the traditional face-to-face learning and teaching process. Adoption of online learning and teaching through LMSs will advance elements of ICT in curricula at a macro, meso and micro level. The advancement of ICT in the nursing curriculum supports the mandate and recommendations of legislation that regulates the standard of higher education in South Africa (Grayson, 2013).

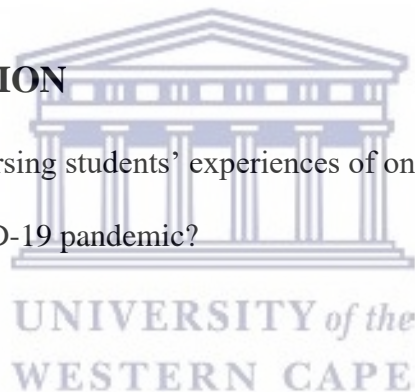
1.4 PROBLEM STATEMENT

Globally, there is a need to incorporate ICT into curriculum (Ghavifekr, Afshari & Amla Salleh, 2012), however, infrastructure and technical support have been shown to be the major barriers (Ghavifekr, & Rosdy, 2015). South African legislative documents, such as the National Education Act 27 of 1996 and the White Paper on Education and Training (1995), emphasises the importance of integrating Information and Communications Technology (ICT) in improving the quality and standard of higher education (Department of Education, 1996; Department of Higher Education, 2013). The Department of Higher Education and Training (DHET) in South Africa acknowledges the benefits of this integration, however, the socio-economic context of the country has contributed to the slow adaptation and adoption of ICT mediated learning and teaching in HEIs (Huang, Blaschke, & Lucas, 2017; Makura, 2014). The COVID-19 pandemic has resulted in the national lockdown of HEIs and subsequently, a transition of nursing education from a traditional pedagogy approach to progressive online

learning. This transition is worrisome as eLearning readiness, which relates to psychological and technical readiness such as uniform access to data, connectivity, and technological devices by all students, has not been satisfactorily documented in the literature. Generally, literature acknowledges a relative preference of traditional face-to-face learning by students due to identified challenges that are related to online learning (Blackmon & Major, 2012). It is through the understanding of the experiences of undergraduate nursing students with online learning during the pandemic that measures can be established that can facilitate and/or guide the process of integrating ICT and higher education. These measures could also contribute to improving and standardising the online learning experiences of students

1.5 RESEARCH QUESTION

What are the undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic?



1.6 AIM

To explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic.

1.7 OBJECTIVE

To achieve the above aim, the following objectives were developed to guide the study:

- To explore the online learning experiences of undergraduate nursing students.
- To describe the online learning experiences of undergraduate nursing students.

1.8 RESEARCH METHODOLOGY

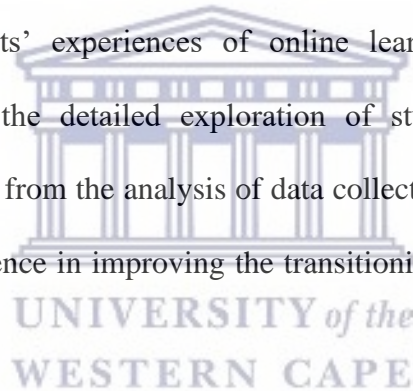
This is a brief outline of the research methodology of this study, which will be explicitly detailed in Chapter three.

1.8.1 Research approach

A qualitative research approach was adopted to meet the objectives of the study.

1.8.2 Research design

An explorative and descriptive research design was adopted to explore and describe the undergraduate nursing students' experiences of online learning during the COVID-19 pandemic. This allowed for the detailed exploration of students' experiences and the description thereof as retrieved from the analysis of data collected. These experiences can act as fundamental points of reference in improving the transitioning and maintenance of online learning at HEIs.



1.8.3 Population and sampling

The population of a study (N) is defined as an accumulation of individuals that are of interest and remains the focus of the research, whereas a sample denotes the portion of the population that will be studied (Garg, 2016). The total population comprised of 1026 undergraduate nursing students at the identified university. A non-probability method of snowballing was adopted in this study. Snowball sampling was appropriate because of its chain referral process which allowed the researcher to reach students with ease (Naderifar, Goli, & Ghaljaie, 2017), especially considering the effects of the national lockdown regulations. The final sample size

of thirteen students was determined by data saturation. Data saturation exists when there are no new emerging ideas from collected data (Houghton, Casey, Shaw, & Murphy, 2013).

1.8.4 Selection criteria

Students that were selected for the study were all undergraduate nursing students that are enrolled in the mainstream programme for the 2020 academic year.

1.8.5 Data collection tool

A self-developed data collection tool (see Appendix 1) was utilised to collect data from each student. Data included the academic year level of the student, gender and questions related to the nursing students' experiences of online learning during the COVID-19 pandemic.

1.8.6 Pre-test of the instrument

The data collection instrument was pre-tested with two undergraduate nursing students, to ensure that it was appropriate to address the aim and objectives of the study as well as to allow the researcher to practise an interview process.

1.8.7 Trustworthiness

Creswell (2018) defines qualitative reliability as a measure of consistency across research data and qualitative validity as the truthfulness of reported findings. Reliability was established by safeguarding the pre-testing of the data collection instrument while the validity was maintained by ethics and the principles of data analysis.

1.8.8 Data collection

The researcher functioned as the key instrument by collecting the study's data through a self-developed interview guide that was used during semi-structured telephonic interviews (Creswell, 2016; Rossman, 2016).

1.8.9 Data analysis and interpretation

Data were analysed inductively using the six steps of thematic analysis by Braun and Clarke (2013). Transcripts and notes were loaded on ATLAS, ti.8 software for coding and the identification of themes that contributed to data analysis.

1.8.10 Ethics

Ethics relates to a collection of widely acknowledged moral principles that guide and influence how research is conducted, and behavioural expectations of researchers (Creswell, 2013). Ethical approval was granted (Ethics reference HS20/6/17) by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee (HSSREC) (see Appendix 3). Electronic mailing was used to seek additional permission from the University's Registrar (see Appendix 4) as well as the Director of the School of Nursing (see Appendix 6) prior to commencement of the study. Informed consent was obtained by the researcher using the informed consent form (see Appendix 8). All students were informed of their right to autonomy and that they may retract their consent to participate without any consequence. To uphold confidentiality and anonymity of students, the transcripts of their experiences will be stored without any identifying labels, and aliases will be used to replace names. Ethical principles of beneficence and non-maleficence were also upheld and where the risk of harm arises, support

would be provided to students. After data collection, the researcher had an ethical duty to report the findings correctly, without contamination with her own perspective and/or opinions.

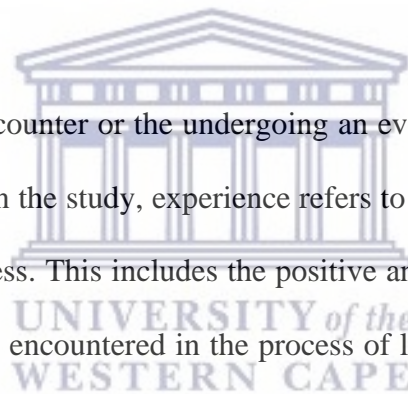
1.9 OPERATIONAL DEFINITIONS

1.9.1 COVID-19

COVID-19 is the newly discovered, infectious Coronavirus disease that is primarily transmitted through droplets and was declared a pandemic by the World Health Organisation (WHO) in March 2020 (WHO, 2019).

1.9.2 Experience

Experience is defined as an encounter or the undergoing an event and/or occurrence (Oxford Dictionary of English, 2010). In the study, experience refers to any interactions or events that occur during the learning process. This includes the positive and/or negative interactions that undergraduate nursing students encountered in the process of learning during the COVID-19 pandemic (Omer, 2016).



1.9.3 Online learning and teaching

This aspect describes learning and teaching situations in which the educator and the student or students are geographically separated and therefore rely on electronic devices and/or print materials for instructional delivery (Frehywot, Vovides, Talib, Mikhail, Ross, Wohltjen, Bedada, Korhumel, Koumare, & Scott, 2013). In the study, this denotes the learning and teaching approach that was implemented at a university in South Africa to facilitate nursing education between undergraduate students and nursing educators.

1.9.4 Pandemic

A pandemic refers to the global spread of a new disease (WHO, 2019). In the study, the pandemic that will be referred to as worldwide spread of the COVID-19 virus.

1.9.5 Undergraduate nursing student

An undergraduate nursing student is a learner nurse that is enrolled at an accredited higher education institution, in basic training (SANC, 2005). In this study, an undergraduate nursing student is a learner nurse in basic training that is enrolled and registered in the mainstream or the Extended Curriculum Programme (ECP) in terms of regulation 425 or 174 of the SANC.

1.9.6 Understanding

This is a state of insight and having knowledge about a subject (Oxford Dictionary of English, 2010). In this study, understanding relates to exploring and describing students' experiences with online learning during the COVID-19 pandemic at a university in South Africa.

1.10 OUTLINE OF THE STUDY

The chapters of this study are outlined as follows:

Chapter one focuses on the introduction of the problem being researched, the background, the significance of the study, aim, objectives, and provides a detailed description of operational concepts/terms as well as a brief outline of the research methodology applied in the study.

Chapter two discusses the literature that is relevant to the adaptation of online learning at a higher education institution and is presented, deliberated, and described. The literature reviewed outlines: Learning theories and technology; Impact of COVID-19 pandemic on the

pedagogy of higher education institutions/ education system; institutional readiness of online learning and online learning in low resource settings.

Chapter three provides an overview of the applied research methodology and comprises of the research approach, research design, data collection tool and sampling procedure.

Chapter four presents and discusses the research findings of the study as substantiated by relevant literature.

Chapter five imparts a summary of evidence-based recommendations and concludes on the comprehensive findings of the study and its limitations.

1.11 CONCLUSION

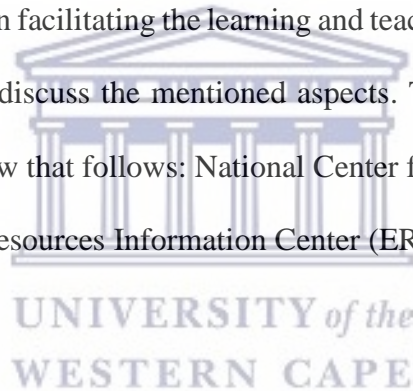
In this chapter, the researchable problem has been presented and contextualised. A clear statement of the researchable problem was provided and a concise outline of how to achieve the research aim and objectives were stated. Literature that supports the study phenomenon will be discussed in the next chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The integration of information systems and/or ICT into higher education is evident both nationally and globally (Ghavifekr, Razak, Ghani, Ran, Meixi, & Tengyue, 2014). When the notion of online learning is addressed, it is important to research and report on the socio-economic context where online learning will be utilised, institutional readiness to adopt online learning, and the role of LMSs in facilitating the learning and teaching processes. In the chapter, literature will be employed to discuss the mentioned aspects. The following databases were accessed for the literature review that follows: National Center for Biotechnology Information (NCBI), PubMed, Education Resources Information Center (ERIC), Springer, Science Direct, and JSTOR.



2.2 LEARNING THEORIES AND TECHNOLOGY.

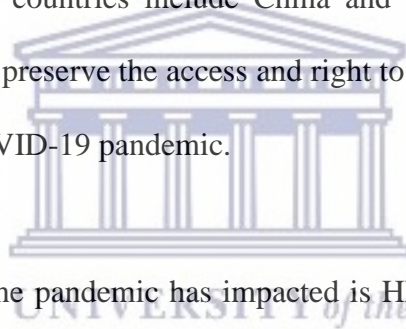
Experiential learning theory was developed by Dewey (1938). It is a theory that base learning on experience(s) and/or learning emanating from doing (Dewey, 1938; Murray, 2018). It is premised on active pedagogical strategies that immerse students in an experience to reflect on the experience to develop new skills and knowledge (Patil & Meena, 2018). These strategies are, for example, simulations, role-playing, and clinical experiences, case studies, problem or inquiry-based learning, and concept mapping. These strategies are typically used in nursing undergraduate education.

The impact of the COVID-19 pandemic has led to the dampening and/or substitution of these strategies when adopting online learning. It can be argued that the use of case studies can still be maintained with online learning. Koivisto, Niemi, Multisilta and Eriksson (2017) acknowledge that the integration of ICT into the nursing curriculum is a potentially good strategy, however, it's important to be able to translate the clinical skills and knowledge necessary and essential to the nursing curriculum. The findings of Koivisto et al. (2017) were consistent and parallel to that of Ulrich, Farra and Hodgson (2014) that also highlight how students have become familiar with technology and the increased need for the integration of technology into education.

Another learning theory fundamental to online learning is Connectivism (Downes, 2005; 2006; 2012). Connectivism describes a prominent network learning theory that supports and advances online learning environments (Gerard & Goldie, 2016). Siemans (2016) discusses learning as a network phenomenon that is impacted by technology and socialisation. This theory explains that learning occurs when knowledge is acquired by students collaborating and participating in a learning community that results in nodes and ultimately, networks (Goldie, 2016). Ally (2008) argues that connectivism can be considered as an important instructional guide or theory to develop previous learning theories for their application to a globalised and networked world but cannot be considered as a standalone learning theory. Furthermore, connectivism supports the learning theory of Piaget (1977) as connectivism offers technological opportunities for students to be actively involved in acquiring knowledge. This enables students to recognise and interpret knowledge by connecting to diverse representative networks (Duke, Harper & Johnston, 2013).

2.3 IMPACT OF COVID-19 PANDEMIC ON PEDAGOGY

Pandemic outbreaks have been documented in literature dating back to as early as 3000 years before Christ (BC) with the prehistoric epidemic of Circa which was reported in China (Saunders-Hastings & Krewski, 2016). The WHO reports that pandemics commonly lead to school closure that results in a quantifiable effect on influenza transmissions with a reported decrease of transmission with a mean of 29,7% and delays the peak of the pandemic by a median of eleven days (Jebril, 2020). The COVID-19 pandemic (WHO, 2019) has impacted on the schools in approximately 107 countries which accounts for approximately 50% of the total global student population (Viner, Russell, Croker, Packer, Ward, Stansfield, Mytton, Bonell, & Booy, 2020). Such countries include China and South Africa. Amongst other contingency plans, in efforts to preserve the access and right to education, online learning has been introduced during the COVID-19 pandemic.



One of the many sectors that the pandemic has impacted is HEI through the introduction of school mitigation. School mitigation is a non-pharmaceutical intervention (Aravindakshan, Boehnke, Gholami, & Nayak, 2020), to curb the spread of transmission of the infectious COVID-19 virus, whereby learning institutions close the physical learning and teaching setting (Aravindakshan et al., 2020).

In SA, in terms of the Disaster Management Act No. 57 of 2002, the Presidency and the National Coronavirus Command Council declared a “nationwide lockdown” which was effective from 27 March 2020 (South African Government, 2020). This lockdown only allowed for the movement and operations of essential services, which excluded the physical learning and teaching system of the country.

This decision can be viewed as evidence-based driven and was appraised by the WHO (Haider, Osman, Gadzekpo, Akipede, Asogun, Ansumana, Lessells, Khan, Hamid, Yeboah-Manu, & McCoy, 2020). Such strategies and policies are developed based on a mathematical and computational disease spread model (Overton, Stage, Ahmad, Curran-Sebastian, Dark, Das, Fearon, Felton, Fyles, Gent, Hall, House, Lewkowicz, Pang, Pellis, Sawko, Ustianowski, Vekaria, & Webb, 2020).

Literature reports the advantages of such a strategy, which include delaying the pandemic peak, allowance for a time to develop a vaccine and stabilising the healthcare system (Overton et al., 2020). The strategy of school mitigation was also implemented during the swine flu (H1N1) pandemic (Cauchemez, Van Kerkhove, Archer, Cetron, Cowling, Grove, Hunt, Kojouharova, Kon, Ungchusak, Oshitani, Pugliese, Rizzo, Saour, Sunagawa, Uzicanin, Wachtel, Weisfuse, Yu, & Nicoll, 2014). However, the advantages of these strategies are questionable as Earn, He, Loeb, Fonseca, Lee and Dushoff (2012) report in Canada that while school mitigation allowed for the interruption of the H1N1 virus spread, once schooling commenced, a peak wave was observed.

School closure affects approximately 70-91% of the total world's student population resulting in interrupted learning and ultimately lead to increased dropout rate due to access to online learning amongs other factors (Pragholapati, 2020). To mitigate this risk, the South African government mandated electronic Communications Service Licenses to provide zero-rated access for local educational content website (Department of Cooperative Governance and Traditional Affairs, 2020).

2.4 LEARNING MANAGEMENT SYSTEMS IN LEARNING AND TEACHING

The healthcare sector has been impacted by ICT and is instrumental in achieving online healthcare learning and teaching (Tassi, 2016). Nonetheless, the challenge exists in the willingness and acceptance to utilise technology platforms (Holtz & Krein, 2011). Moreover, through the incorporation of a LMS as an academic tool supports the preparation content of courses, reduces the preparation time involved in course delivery, and facilitates the administration of courses (Chipps, Kerr, Brysiewicz, & Walters, 2015).

Tassi (2016) states that LMS in academia has improved communication between students and educators. The incorporation of technology has advanced elements of pedagogy (Trayek & Hassan, 2013), in learning and teaching by encouraging interaction between educator and student. Furthermore, technology alleviates the inability of students to relate learning content from various sources to substantiate reasoning for their own assumptions (Trayek & Hassan, 2013). LMS shifts the classroom from being teacher-centred to being learner-centred (Castro Sanchez & Aleman, 2011). Through LMS, students can establish new perspectives and understanding of learning experiences (Chai, Koh, & Teo, 2019) and thus develop creative thinking skills.

It is critical to develop LMSs that will address the academic needs of students and aligned to learning content, to minimise the risk of the LMS not being used optimally (Suorsa & Eskilsson, 2014). Students are satisfied by learning content that is recent, relevant to the learning experience, clearly described and interactive (Suorsa & Eskilsson, 2014).

Ironically to the main objectives of LMS, Suorsa and Eskilsson (2014) reported a significant perception of LMSs being solely a communication tool between educators, the Higher Education Institution (HEI) and students. The researcher also reported that students found it challenging to access learning content easily and efficiently because of inadequate search functions.

Many studies investigated mostly students' perceptions and attitudes. Al-Dosari (2011) study in India found a positive attitude is extremely important for the successful implementation of an eLearning programme. Pingle (2011) defines attitude as the way a learner perceives, believes, reasons, and imagines the eLearning programme. The way students perceive LMS as easy to use and useful to their learning experience, impacts the attitudes they will develop towards the LMS (Trayek & Hassan, 2013). Chipps et al., (2015) investigated students' perceptions of LMS, in a low resource geographic location and reported that students perceived the LMS as being easily accessible and useful to complete academic assessments. These findings were consistent with the use of LMS.

Coleman and Mtshazi (2017) conducted a qualitative case study that identified the factors that affect the use and non-use of a LMS by educators in a South African university. The main findings were inadequate continuous training, advanced features of technology and pre-existing practises contributed to the non-use of LMS. This is fundamental as educators are instrumental in motivating students to access and use LMSs (Coleman & Mtshzi, 2017). It is important to note that faculty members still display positive attitudes towards LMSs in higher education (Alshorman, & Bawaneh, 2018), irrespective of factors such as a lack of computer skills that contributes to the non-use of LMSs.

2.5 INSTITUTIONAL READINESS OF ONLINE LEARNING

To date, there is an emerging need for the integration of Information and Communications Technology into learning and teaching, particularly pedagogy of higher education (Bozalek, Ng'ambi, Wood, Herrington, Hardman, & Amory, 2017). This integration reinforces the principles of flexible, progressive learning and teaching experiences (Willemse, 2015). eLearning can potentially advance the government's requirement that HEI delivers improved learning opportunities through diverse modalities that increase student access to and success in higher education (Department of Higher Education, 2013).

This correlates to the vision set out in the NDP in which it visualises standardised access to higher education as it is the cornerstone upon which social mobility, equality, justice, economic development, and democracy are dependent (National Planning Commission, 2012). However, the literature acknowledges some challenges with online learning experienced by students. These challenges include, but are not limited to, collaborative learning tasks (Davidson, 2015), varying limitations in technical capabilities of students, perceived and true functionality of the LMS and student access and participation (Gillett-Swan, 2017). Another important factor outlined by Gillett-Swan (2017) is that some learning content is not easily translated on an online learning platform.

Institutional readiness denotes the evaluation of the degree of readiness of a HEI to adopt and implement online learning (Webster, & Gardner, 2019). This includes the factors that need to be considered and achieved prior to implementing online learning (Odunaike, Olugbara, & Ojo, 2013). Institutional readiness thus allows for the development of appropriate and contextualised strategies to cater for the specific needs of students (Nyoni, 2014). Such factors include lecturers/educators, technology, and the environment. Bhuasiri et al., (2012) deem

technology as an important factor as it contributes to providing a platform for learning and teaching to occur and in instances where poor technological related issues arise, there is reported frustration and dissatisfaction with learning (Wang, Hsu, Bonem, Moss, Yu, Nelson, & Levesque-Bristol, 2019).

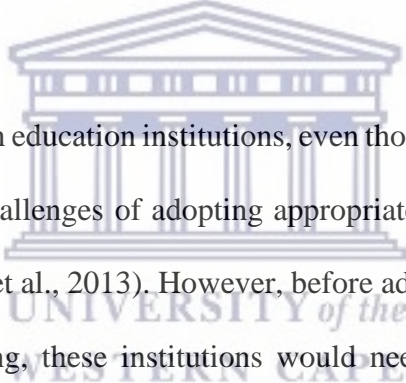
There is a need for asynchronous methods to compensate for the environment that exists within online learning. Literature reports challenges that are related to the online learning environment which includes, but are not limited to, no social interaction (Tayebnik & Puteh, 2012) and difficulties experienced by students with transitioning to virtual classrooms (Kamal, Shaipullah, Truna, Sabri, & Junaini, 2020).



2.6 ONLINE LEARNING IN LOW RESOURCE SETTINGS

While the transition of eLearning has occurred rapidly, there is a slow transition in low-resourced countries and its significance in health education and training is not documented in the literature (Barteit, Jahn, Banda, Bärnighausen, Bowa, Chileshe, Guzek, Jorge, Lüders, Malunga & Neuhann, 2019). These gaps are fundamental and need to be addressed as low-resourced countries are characterised by fragile and burdened healthcare systems (Huang, Blaschla & Lucas, 2017). In Sub-Saharan Africa, a shortage of medical graduates has been reported (Talib, Narayan, & Harrod, 2019). As a result, literature recognises the need for Sub-Saharan African countries to up-scale the existing educational infrastructure to meet the large and increasing number of young people striving for education (Barteit et al., 2019). Additionally, HEIs that offer medical and nursing training and education, have limited capacity, insufficient infrastructure, and an inadequate number of educators (Bvumbwe & Mtshali, 2018).

Technologies in the teaching and training sector can be integrated using tablets, mobile phones, laptops, and virtual reality headsets and this allows for a progressive change in the educational approach that can potentially facilitate an improved healthcare delivery (Barteit et al., 2019). While this is known, there still exists an unequal distribution of digital resources. Frenk et al., (2010) highlight that there is a need to narrow the existing digital gap by increasing the development of and access to resources. In the context of most African countries, there's evidence of increased use of mobile technologies (Hampshire et al., 2015). This evident increase is the basis on which most eLearning is achieved in African countries, including SA which allows for flexible learning, time efficiency, standardisation of course content, distance delivery, and scalability.



Medical schools and other health education institutions, even those in the most resource-limited areas, will be faced with the challenges of adopting appropriate eLearning solutions into the educational process (Frehywot et al., 2013). However, before adopting an eLearning approach to higher education and training, these institutions would need to establish their capacity, readiness and needs (Frehywot et al., 2013).

2.7 CONCLUSION

This chapter has outlined and discussed the previously reported literature that is relevant to the phenomenon that was investigated in this dissertation. Evidence supported the need for the integration of technology with higher education, the benefits thereof as well as the aspects that need to be considered to allow for successful and positive experiences of students when adopting technology into educational systems. The methodology used to understand the experiences of undergraduate nursing students with online learning during the COVID-19 pandemic will be discussed in Chapter Three.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The preceding chapter discussed literature relevant to the study phenomenon. Chapter 3 aims to describe the research methodology with reference to the research design, population, sample, data collection method, data analysis and ethical considerations. In this chapter, the research methodology will be described and discussed in detail. Sileyew (2019) defines research methodology as the philosophical paradigm that influences the way a researcher conducts their study. Creswell (2014) argues that the researcher's philosophical paradigm has a direct influence on the research methodology they choose to investigate and the phenomenon of interest. The qualitative paradigm that was assumed for this study is the interpretivist paradigm. This paradigm allowed the researcher to gain understanding of the world through the experiences of the study participants (Alharahsheh, & Pius, 2020).

3.2 AIM

To explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic.

3.3 RESEARCH QUESTION

What are the undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic?

3.4 OBJECTIVES

An objective is the specified goal of the research (Creswell, 2018). The objective of this study is:

- To explore the online learning experiences of undergraduate nursing students.
- To describe the online learning experiences of undergraduate nursing students.

3.5 RESEARCH METHODOLOGY

The research approach, design, setting, population, and sampling will be outlined in the following section.

3.5.1 Qualitative research approach

According to Sileyew (2019), research approach is defined as the research procedure that influences the method of data collection, analysis, and interpretation. This means that a research approach guides the research process by outlining how the research aim and objectives of a study will be achieved (Abutabenjeh, & Jaradat, 2018). A qualitative research approach was adopted to achieve the aim and objectives of this study. This approach allowed for the non-numeric representation of data, by using words to provide meaning, feeling and to describe the research topic (Naderifar, Goli, & Ghaljaie, 2017; Clark, & Vealé, 2018).

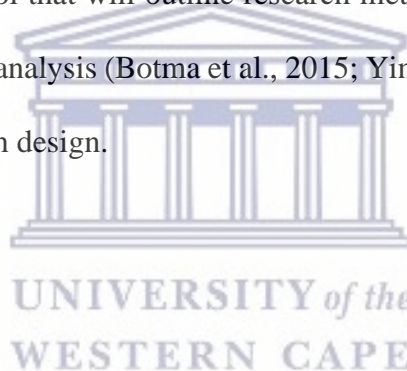
3.5.1.1. Justification for adopting a qualitative design

Qualitative research is usually employed to better understand people's beliefs, experiences, and interactions (Pathak, Jena, & Kalra, 2013; Creswell, 2015; Holloway & Galvin, 2016; Munhall, 2012). The study design allowed the researcher to set aside theories, hypotheses and

explanations relating to science or the environment and report on experiences (Lauterbach, 2018). The experiences of undergraduate nursing students in online learning during the COVID-19 pandemic is a phenomenon that is unique and new, and qualitative research allowed the researcher to gain deeper insight and understanding of the students' experiences (Botma, Greeff, Mulaudzi, & Wright, 2015; Clark, & Vealé, 2018).

3.5.2 Research design

The appropriate framework that a study adopts to achieve the aim and objectives of a study is described as the research design (Sileyew, 2019). This implies that the research design constitutes the plan and protocol that will outline research methodology and include detailed methods of data collection and analysis (Botma et al., 2015; Yin, 2016). This study adopted an exploratory-descriptive research design.



3.5.2.1. Exploratory design

An exploratory design was adopted to explore the research question of the study that denotes the experiences of undergraduate nursing students with online learning during the COVID-19 pandemic (Lewis & Thornhill, 2012). Exploratory design is an approach that allows for the discovery and generating of new theories and meaning (Creswell, 2013; Botma et al, 2015; Swedberg, 2020). This design allowed the researcher to explore the undergraduate nursing students' experiences of online learning during the COVID-19 pandemic.

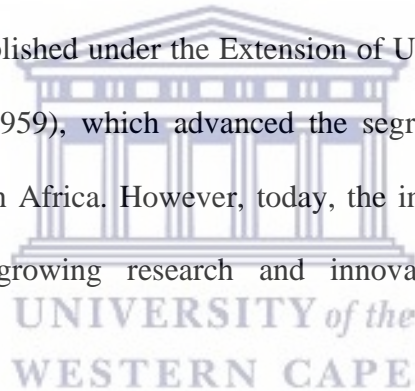
3.5.2.2 Descriptive design

Descriptive design was adapted to provide a comprehensive description of the experiences of undergraduate nursing students regarding online learning during the COVID-19 pandemic (Kim, 2017). Descriptive design is an approach that allows for the researcher to describe the

experiences of a population (Reiter, & Human, 2017). The researcher will describe the experiences of students through emerged themes, sub-themes, and categories. The combination of these two designs allowed the research to explore and describe the phenomenon and its characteristics, i.e., the experiences of the students (Nassai, 2015).

3.5.3 Research setting

Research setting specifies the geographical location in which the study was conducted (Gray, Grove, & Sutherland, 2017). This study was conducted at a university in the South Africa. South Africa has nine provinces, and the study was focused on a HEI located in the Western Cape. The university was established under the Extension of University Education Act 45 of 1959 (Apartheid legislation, 1959), which advanced the segregation mandate of the non-democratic leadership of South Africa. However, today, the institution is an integrated and multiracial university with growing research and innovative learning and teaching methodologies.



This HEI constitutes of seven faculties, with the Community and Health Sciences (CHS) Faculty being the umbrella under which the School of Nursing (SoN) is situated. The SoN provides comprehensive training in both undergraduate and postgraduate nursing programmes. The chosen HEI offers a Bachelor qualification that is regulated by the SANC, and its undergraduate qualifications are registered with the South African Qualifications Authority (SAQA). At an undergraduate level, nursing programmes are offered through two streams, i.e., the four-year mainstream and five-year ECP programmes, and find students competent in General Nursing Science, Community Nursing Science, Psychiatric Nursing and Midwifery under SANC Regulations 425 and 174.

3.5.4 Research population

The research population of a study represents the complete set of potential students with a set of unique characteristics that are of interest to the researcher (Grag, 2016; Brink, Van der Walt, & Van Rensburg, 2017). The total population comprised of 1026 undergraduate nursing students enrolled for the mainstream undergraduate degree programme under SANC Regulations 425 and 174.

3.5.5 Sampling technique and sample size

3.5.5.1 Sampling technique

According to Gray et al. (2017), sampling occurs to select a collective of individuals, events, behaviour, and other elements that are necessary to conduct a study and achieve its aim and objectives. A non-probability sampling technique of snowballing was used in this study (Etikan, Alkassim & Abubakar, 2016). Snowballing is a sampling technique whereby a researcher initiates data collection with one consenting student that meets the inclusion criteria of the study and will subsequently suggest other students who may be willing to participate in the study (Korstjens, & Moser, 2018).

In this study, exponential non-discriminative snowballing was implemented. Exponential non-discriminative snowballing denotes the initial student encouraging other nursing students with similar and/or different experiences of online learning during the COVID-19 pandemic to participate in the study (Etikan et al., 2016).

3.5.5.2 Sample size

Korstjens, and Moser (2018) state that when exploring the experiences of participants, it is important to ensure appropriate sampling. This means that sample size is critical to be established to ensure adequate understanding and descriptiveness of experiences. Sample size is described as the portion of the total population that participated in the study (Vasileiou, Barnett, Thorpe, & Young, 2018), and is influenced by criteria sampling (Korstjens, & Moser, 2018).

In a qualitative study, the final sample size is set by data saturation (Gray et al., 2017). Data saturation is defined as a state during data collection where no new data emerges and, therefore, no new themes, sub-themes and categories materialise (Saunders, Sim, Kingstone, Baker, Waterfield, Bartlam, Burroughs, & Jinks, 2018). In this study, data saturation was achieved at thirteen students.



3.5.5.3 Inclusion criteria

The inclusion criteria of a study represent the key features and/or characteristics of the target population that will allow the researcher to answer the research question and subsequently address the study aim and objectives (Patino & Ferreira, 2018). The following inclusion criteria were set:

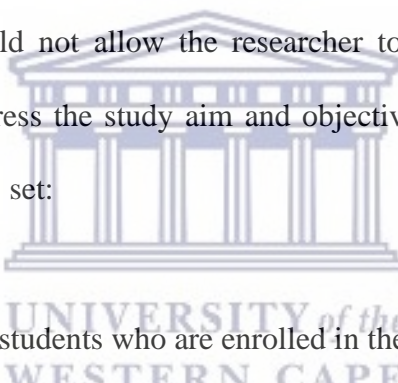
- Undergraduate students enrolled in the mainstream programme.
- All undergraduate nursing students who have access to online learning through internet access and an electronic device, continuously for the data collection period.

- Undergraduate nursing students who do not have access to online learning during the COVID-19 pandemic.

Undergraduate nursing students would need to have had access or lacked access to be able to provide experiences of how the access or lack thereof, impacted on their learning and teaching experience.

3.5.5.4 Exclusion criteria

The exclusion criteria of a study represent the key features and/or characteristics of the target population that would not allow the researcher to answer the research question and subsequently address the study aim and objectives (Garg, 2016). The following exclusion criteria was set:

- 
- Undergraduate nursing students who are enrolled in the ECP.
 - Undergraduate students who were ill at the time of data collection. Undergraduate nursing students who were ill during data collection would not have been able to adequately provide experiences as their wellbeing would have been impaired.

3.5.6 Data collection methods

Data collection refers to the process whereby the researcher actively selects students and gathers data (Gray et al., 2017). Data were collected by means of telephonic semi-structured interviews. The data collection tool as well as the data collection process are discussed below.

3.5.6.1 Data collection tool

A data collection tool is defined as the device used to collect data, such as questionnaires, individual interviews or focus groups interviews (Creswell, 2014). The researcher used a self-developed interview guide to collect data from students (Botma et al., 2015) (see Appendix 1). The interview guide consisted of one main- and five sub- open-ended questions that guided the interview and allowed students to narrate their experiences freely without guidance. To ensure that the researcher obtained the necessary depth during data collection, probes were used appropriately depending on the students' responses (see Appendix 1). The phenomenon that is being researched is unique and the free expression of experiences surrounding it is crucial in developing a comprehensive and detailed understanding of the phenomenon (Botma et al., 2015). Interviews were digitally recorded using an audio recorder, to allow for an audit trail and to be transcribed, analysed to report on the experiences described by students.

3.5.6.2 Pre-test of data collection tool

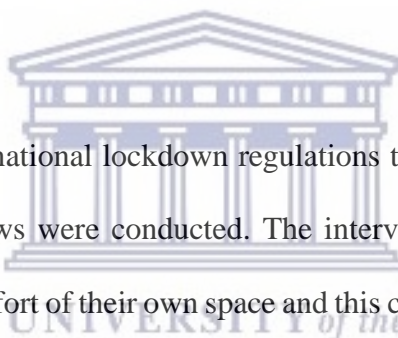
Pre-testing of a data collection tool is the process of simulating the data collection process on a small scale to identify practical problems in relation to the interview guide, sessions, and methodology (Hurst et al., 2015). This process allowed the researcher to ensure that the data collection tool is appropriate to the study's aim and objectives and that the interview questions are understood by students (Hilton, 2015).

The researcher pre-tested the interview guide, with two undergraduate students, to determine clarity and the appropriateness of the questions, which points to an indication of the viability of the study as well as to obtain experience in conducting an interview (Majid, Othman, Mohamad & Lim, 2017). The feedback received included that the researcher needed to allow

the students time to grasp questions and not to rush the interview sessions, as this would allow students to express their experiences broadly. The feedback received from the pre-test enhanced the interviewing skills of the researcher.

3.5.6.3 Data collection process

The data collection process commenced once the researcher had been granted ethical clearance and permission was granted from the relevant authorities. The researcher provided the briefing session information sheet and the consent form electronically (see Appendix 9) to students, and any questions of clarity that arose were communicated telephonically and/or via email.



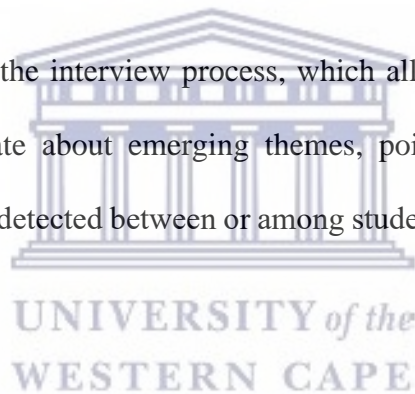
Due to the implications of the national lockdown regulations that enforced social distancing, telephonic one-on-one interviews were conducted. The interviews occurred at a convenient time for the students, in the comfort of their own space and this contributed to a non-threatening environment (Botma et al., 2015; Creswell, 2013). The researcher informed all the students that they are being audio recorded and that field notes were being taken during the interviewing process. Consent for participation in the study and for audio recording the interview were sought and verified before commencing the interview (Botma et al., 2015).

Data collection occurred by means of a semi-structured interview with open-ended questions that allowed students to elaborate freely on their experiences. A semi-structured interview guide (see Appendix 1) allowed the researcher to elicit rich, detailed, and pertinent experiences of students that could be used in qualitative analysis (Botma et al., 2015). When necessary,

probing questions were used to encourage students to elaborate or clarify a response and/or explore broad experiences.

To sustain the credibility of the data collected, students' experiences were explored in depth during interviews. Interviews were between 32 to 45 minutes. The audio recordings were carefully transcribed (see Appendix 2) verbatim in a Microsoft Word document by an experienced transcriber because accurate transcripts are fundamental for correct analysis and interpretation of interview data (Akinyode, & Khan, 2018). This data collection process commenced in September 2020 to February 2021.

Field notes were taken during the interview process, which allowed the researcher to probe during the interviews, speculate about emerging themes, points of clarification, and any connections that the researcher detected between or among students' perceptions (Botma et al., 2015).



3.5.7 Trustworthiness in qualitative research

Trustworthiness is also known as the rigour of a study. Trustworthiness describes the extent to which a study sustains confidence in data, interpretation, and methods used to ensure its reliability (Polit, & Beck, 2014; Amankwaa, 2016). The principle of trustworthiness is significant to this research approach as it aims to ensure that the study findings are a honest representation of the participants' experiences. Trustworthiness was ensured by safeguarding the following principles:

3.5.7.1 Credibility

Credibility is the authenticity and accuracy of the qualitatively attained data (Polit, & Beck, 2014; Connelly, 2016). This includes validating the collected data and providing a report of the data in a manner that reflects the participants' experiences and is not obscured, by mitigating any bias that potentially exists by separating their own thoughts and perspectives from the gathered data (Ghafouri & Ofoghi, 2016). A member check follow-up session occurred after data analysis where the students authenticated the transcribed and reported data (Creswell & Creswell, 2018).

3.5.7.2 Dependability

Dependability refers to the truthfulness and explicit representation of data (Ghafouri & Ofoghi, 2016). The principle of dependability was achieved by ensuring respect and protection of ethical considerations applicable and the reporting of experiences from the perspective of the students and not of the researcher. The pre-test of the data collection tool was conducted to ensure its appropriateness to the research topic. Furthermore, data collection and data analysis, which included coding, generating sub-themes and themes, were strictly monitored by the study supervisor to ensure accuracy.

3.5.7.3 Transferability

Transferability refers to the validity, consistency, and applicability of research data, and the degree to which the outcomes can be applicable in another context (Ghafouri & Ofoghi, 2016). Therefore, an in-depth description of the research setting, study participants, methods of data collection and analysis is accounted for in this chapter.

3.5.7.4 Confirmability

Ghafouri and Ofoghi (2016) define confirmability as the extent to which other researchers can corroborate the research findings. Confirmability was accomplished by relating the data to its sources. To ensure that study conclusions, interpretations and recommendations can be drawn back to the data source all field notes, memos, transcripts, and the researcher's reflective report will be stored safely and only be made available upon request. Additionally, interpretations were confirmed by the supervisor and co-supervisor of the study. Verbatim quotes are used in the discussion of data collected.

3.5.7.5. Bracketing

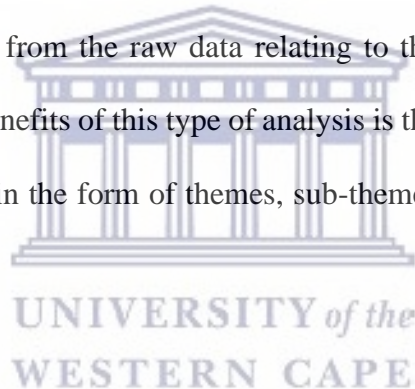
Bracketing denotes the process of acknowledging and maintaining in abeyance preconceived beliefs, opinions and/or judgement about the natural world and focusing on the analysis of the experiences (Botma et al., 2016; Tufford & Newman, 2012). Freeman (2011) asserts that understanding cannot be regarded as fixed meaning but rather how the meaning is generated and transformed. To discover meanings in data, one needs have an open perspective to let unexpected meanings emerge (Giorgi, 2011). The fundamental methodology of bracketing ensured that the researcher's own experiences as a student during the pandemic, did not influence the students' understanding of the phenomenon.

The researcher held all preconceptions related to previously reported studies in abeyance. A reflective diary was kept and utilised by the researcher since the commencement of interviews (Chan, Fung, & Chien, 2013). The diary allowed for the personal documentation and bracketing of thoughts, feelings and perceptions and thus didn't contribute to data collection or analysis. The researcher remained objective throughout the interviews and the researcher's active listening skills contributed to an understanding of experiences from the perspective of the

students. The use of bracketing made it possible for the phenomena under study to emerge clearly.

3.5.8 Data analysis

Data collection and analysis occurred concurrently. The audio recordings were transcribed verbatim, with the assistance of a professional transcriber. Transcripts and notes were loaded on ATLAS, ti.8 software for coding and analysis of data and an audit trail was maintained to ensure dependability. Data were analysed inductively following the six steps of thematic analysis (Clarke & Braun, 2017). Inductive data analysis is an approach whereby the researcher develops concepts and themes from the raw data relating to the experiences of participants (Azungah, 2018). One of the benefits of this type of analysis is that it is inductive and provides meaning of emerged concepts in the form of themes, sub-themes and categories (Neeley and Dumas, 2016).



Thematic analysis is described as a method for identifying, analysing, and reporting data as passively emerged and coded themes and/or patterns. Inductive analysis allowed the researcher to build patterns, categories, and themes into abstract subunits of information by means of the analysis of data (Creswell, 2016). Thematic analysis occurred by means of the following six steps:

Phase 1: Becoming familiar with the data: A professional transcriber assisted with generating verbatim transcripts. Thereafter the researcher read through the transcript thoroughly. The researcher listened to the audio recordings repeatedly while reading through the transcripts.

Phase 2: Generation of initial codes: The researcher began to distinguish meaningful data into codes systematically. Codes are units of analysed data that will subsequently be developed into themes. Codes were developed without limit and inclusively to relating data.

Phase 3: Searching for themes: The coded data were actively refocused and analysed at a broader level. The researcher used a thematic map to represent relationships that potentially existed to develop candidate themes and sub-themes.

Phase 4: Reviewing of themes: The ATLAS, ti8 software enabled the researcher to map out themes identified where candidate themes will be reviewed to form a coherent pattern. Themes were reviewed in relation to the entire data.

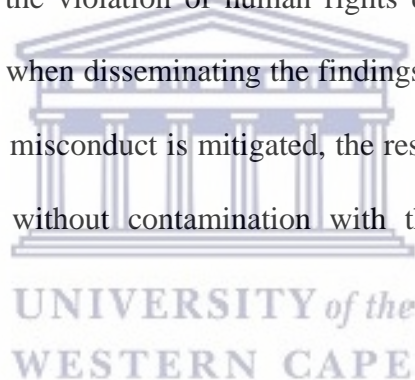
Phase 5: Refining and naming themes: The researcher identified the importance of each theme and the aspect of the data each theme captures. Thereafter, the researcher was able to develop themes with titles that are concise and reflects what the theme is about. These themes were confirmed by the supervisor and co-supervisor of the study.

Phase 6: Producing the report: The researcher then described the qualitatively gathered data in a concise, coherent, logical, and interesting manner, and incorporated sufficient data extractions to emphasise the prevalence of the themes. This report will follow later in the dissertation.

3.6 ETHICS

Ethics are a set of commonly accepted moral principles that guides and influences the conduct of research, and behavioural expectations of researchers (Creswell, 2013). Due to a qualitative approach, distinctive ethical issues arise because, as has been earlier indicated, it commonly involves emergent and flexible research designs, and involves collecting relatively unstructured data in naturalistic settings (Silverman, 2016; Creswell, 2013; Iphofen & Tolich, 2018).

The implementation of ethical considerations ensures that scientific misconduct does not occur. Scientific misconduct denotes the violation of human rights during a study and falsifying results or behaving dishonestly when disseminating the findings (Gray, Grove, & Sutherland, 2017). To ensure that scientific misconduct is mitigated, the researcher has an ethical duty to report the findings correctly, without contamination with their own perspective and/or opinions.



For this study, ethical approval was granted from the University of the Western Cape's HSSREC. In respect of gatekeepers, permission to conduct the study was sought and granted from the University's Registrar (see Appendix 5), as well as the Director of the School of Nursing (see appendix 7), prior to commencement of the study.

3.6.1 Informed consent

Informed consent is the process of students agreeing to participate in a study, being aware they are being researched, and understanding the nature of the research (Silverman, 2016). This ethical consideration is linked to autonomy. All students were informed of their right to autonomy and that they may withdraw from the study anytime without any penalty. Informed

consent was obtained by the researcher using the Informed Consent Form (see Appendix 8). Informed consent forms are signed by the students before they engage in research. This form acknowledged that students' rights will be protected during data collection (Creswell, 2018).

3.6.2 Confidentiality and anonymity

Confidentiality denotes the obligation of the researcher to protect the students' identity, place and setting of the research, thus ensuring anonymity (Silverman, 2016). To uphold confidentiality and anonymity of students and minimise the potential risk of anxiety and fear associated with the truthful answering of questions related to their experiences, the descriptions of students' experiences are stored without any identifying labels, and aliases were used to replace participants' names.



3.6.3 Non-maleficence and Beneficence

Non-maleficence denotes not causing harm to students during the research process (Das & Sil, 2017). Beneficence denotes acting in the best interest of the students. This includes transparency of potential risks and benefits of participating in the study, where there are maximum benefits and minimum risks (Das & Sil, 2017). Due to the nature of the study, there was a minimal potential risk of emotional distress linked to negative and/or positive experiences shared during the telephonic interview. Students were encouraged to inform the researcher of any distress so that referral to the Centre for Student Support Services (CSSS) could be sought.

Where issues of access to online learning existed, for example, lack of internet and/or electronic devices arose, the researcher referred the need to the year level coordinator, with permission of

the student. Furthermore, no reward was offered or paid to the students for participation in this study.

3.7 CONCLUSION

This chapter has outlined and discussed the research methodology that was adopted in the dissertation. A qualitative research approach, with exploratory-descriptive design were implemented to understand the experiences of undergraduate nursing students through the use of telephonic semi-structured interviews. The results obtained will be discussed in the chapter to follow.



CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 INTRODUCTION

The preceding chapter described the research methodology that was adopted to achieve the aim of the study. This chapter Provides a detailed description of the study findings with reference to the available literature. Thirteen semi-structured telephonic interviews were conducted, and the audio recordings were transcribed verbatim. A six-step thematic analysis approach by Braun and Clarke (2017) was employed to analyse the data using ATLAS, ti.8 software.

In this chapter, the findings from the data analysis are presented. The generation of initial codes resulted in a total of 188 codes. Two themes, five sub-themes and ten categories emerged from the data analysis. The two main themes that captures the findings of this study are as follows:

i) Lack of physical interaction between students and nurse educators led to perceived academic disengagement. However, students demonstrate self-directed attributes that allowed them to be resilient, ii) The overall academic performance was adversely affected by online learning, online assessments, and unfavourable home environment. Table 4.2 summarises the findings.

4.2 PARTICIPANTS' CHARACTERISTICS

A total of thirteen undergraduate nursing students enrolled in the mainstream programme participated in the study. Most participants were female students, constituting 76.9% of the sample, while the remaining 23.1% were male students. Students from all academic year levels

were represented. Of the thirteen (13) participants, one (1) was in the first year of study, five (5) in second year, four (4) in third year and three (3) in fourth year. Table 4.1 presents the characteristics of the participants.

Table 4.1 Participants' characteristics

Participants	Gender	Year Level
Participant 1	Female	Fourth
Participant 2	Female	Second
Participant 3	Female	Second
Participant 4	Female	Second
Participant 5	Male	Third
Participant 6	Female	Third
Participant 7	Female	Fourth
Participant 8	Female	First
Participant 9	Female	Second
Participant 10	Male	Third
Participant 11	Female	Second
Participant 12	Female	Fourth
Participant 13	Female	Third

4.3 DISCUSSION OF THEMES, SUB-THEMES AND CATEGORIES

Data analysis revealed that nursing students had both negative and positive experiences regarding online learning during the COVID-19 pandemic. During data analysis, two themes, five subthemes and ten categories emerged and will be discussed below. The study findings

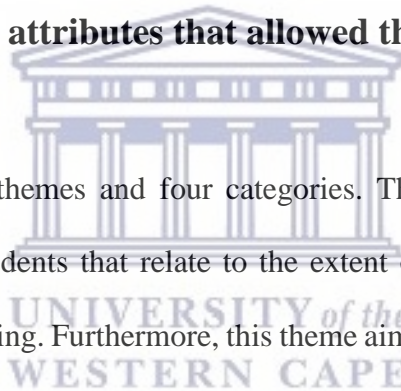
are presented alongside relevant literature. Table 4.2 below, presents a summary of the themes, sub-themes, and categories.

Table 4.2 Summary of the themes, subthemes, and categories related to the nursing students’ experiences of online learning during the COVID-19 pandemic.

Themes	Sub-themes	Categories
<p>1. Lack of physical interaction between students and nurse educators led to perceived academic disengagement. However, students demonstrate self-directed attributes that allowed them to be resilient.</p>	<p>1.1. Students perceived inadequate social and academic engagement.</p>	1.1.1 Interactions among students and nurse educators
		1.1.2 Students’ academic commitment.
	<p>1.2. Academic engagement facilitated through peer support and the use of social media.</p>	1.2.1 Peer support during online learning
		1.2.2 Information sharing via WhatsApp group.
<p>2. The overall academic performance was adversely affected by online learning, online assessments, and an unfavourable home environment</p>	<p>2.1. The physical environment at home has an impact on effective online learning.</p>	2.1.1 Household chores as a barrier to learning from home
		2.1.2 Support from family plays a vital role during online learning
	<p>2.2 Overall academic performance was affected by online learning</p>	2.2.1 Inability to participate and/or complete online assessments.
		2.2.2 Uncertainties related to theory and clinical progress.

	2.3 Learning was negatively affected by the inability to access online learning material and platforms on demand.	2.3.1 Affordability of data/Wi-Fi and poor internet connection
		2.3.2 Loadshedding

4.3.1. Theme 1: Lack of physical interaction between students and nurse educators led to perceived academic disengagement. However, students demonstrate self-directed attributes that allowed them to be resilient.



Theme 1 consists of two sub-themes and four categories. Theme 1 aims to elaborate and describe the experiences of students that relate to the extent of socialisation, and academic engagement during online learning. Furthermore, this theme aims to describe the measures that allowed the students to remain academically engaged.

4.3.1.1. Sub-theme 1: Students perceived inadequate social and academic engagement.

Many learning theorists such as Dewey (1963) and Piaget (1936) have developed theories that advocate for the importance of physical interaction in developing knowledge (Collins, 1998). Furthermore, Vygotsky (1978), Lindeman (1926) and Dewey (1963) postulate that learning is primarily a social activity. These theories are of seminal value and will be referenced in discussing the category of students perceived inadequate social and academic engagement. This subtheme describes how participants socialised, interacted, and sustained their academic commitment during their online learning experience and constitutes two categories, namely:

students perceived inadequate social and academic engagement, and academic engagement facilitated through peer support and the use of social media.

4.3.1.1.1. Category 1: Interactions among students and nurse educators

Vygotsky's (1978) sociocultural theory emphasises the importance of social interaction within a community of educators and peers, in the development of cognition and making meaning of concepts. The theory also advances the principles of social constructivism such as collaboration and engagement (Thomas, Menon, Boruff, Rodriguez, & Ahmed, 2014). These are the same principles that participants were generally accustomed to, prior to online learning because of the COVID-19 pandemic.

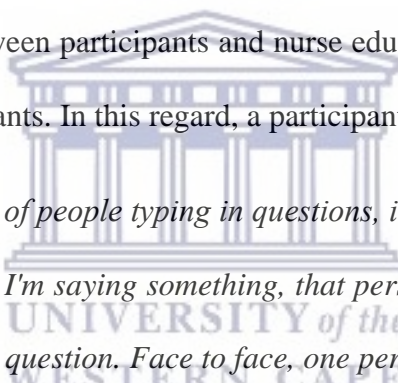
Social interaction is a critical element of learning (Hurst, Wallace & Nixon, 2013), however, with the shift to online learning, participants perceived social interactions as inadequate. In a previous qualitative study by Tichavsky, Hunt, Driscoll and Jicha (2015), 90% of undergraduate sociology students preferred traditional classroom learning over online learning because of interaction with their educators. It can be argued that the findings of Tichavsky et al. (2015) cannot be generalised to the current study because of differences between sociology and the nursing curriculum. These sentiments were echoed by the study participants.

One participant stated:

“Face to face is nice because you understand the stuff and you meet different people; you guys are able to discuss and just that scenery of being in class and like also you learn better.” (Participant 6)

The participant described the interactive nature that characterises traditional classroom learning in contrast to online learning, particularly the opportunity to discuss learning content and a “scenery” that facilitates and is conducive to learning. Likewise, the findings of an in-depth qualitative study conducted by Wut and Xu (2021) at a university in Hong Kong demonstrated that students were concerned with interactions amongst themselves. Wut and Xu’s (2021) findings support the findings of the present study in which students expressed that interaction was relatively easier during face-to-face classrooms sessions than online learning.

As a result of the shift from the traditional classroom learning to online learning, the culture, and methods of interaction between participants and nurse educators created an unfavourable learning experience for participants. In this regard, a participant stated that:

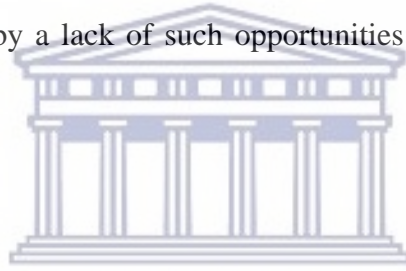


“... there would be a lot of people typing in questions, imagine how overwhelming that was to the lecturer. I'm saying something, that person is typing in something, everyone is just typing a question. Face to face, one person is going to raise their hand and then they're going to deal with your question and then the other persons question, not this thing of everyone is just typing their own questions, it's a whole flood of questions, the lecturer doesn't even know who to answer first and then maybe my question is not going to be answered, maybe she doesn't see them because there's a lot of everything happening. So, the interaction wasn't what I expected it to be, or what I would love it to be.” (Participant 5)

Another participant stated:

“Usually with face-to-face classes, we wouldn’t have such problems. We could ask in class, or even go for consultations with the lecturers but with online learning you don’t have any of those.” (Participant 10)

Mohd, Aluwi, Hussein and Omar (2016) explain that educators need to enhance a student’s engagement with the learning content. This can be achieved through creating a platform that allows students to pose questions for clarification (Modh et al., 2016). The latter contradicts what is considered as acceptable in the learning and teaching setting, as Participant 5 described a setting that is characterised by a lack of such opportunities of engagement in addition to interrupted communication.



The participants’ experiences created an imagery that is suggestive of an unorganised learning and teaching process during online learning (Alluis, 2014). This is critical to note because literature mandates curriculum design and delivery to be systematic and sustained in a manner that allows students to be meaningfully inducted into learning and teaching (Alluis, 2014; Davey, Elliott, & Bora, 2019). The researcher, therefore, deduces that curriculum delivery needs to sustain interaction between students and their peers as well as between students and educators, as this impacts on the learning and teaching experience.

4.3.1.1.2. Category 2: Students’ academic commitment.

Piaget (1977) played a role in the development of the constructivism theory of learning, which indicates that students learn by interacting with their experiences and ideas. This theory promotes students being actively involved in their own learning process (Brau, 2020). Active

learning allows students to engage and improve learning outcomes (Cavanagh, Chen, Bathgate, Frederick, Hanauer, & Graham, 2018).

In this study, while challenges existed with online learning during the COVID-19 pandemic, participants showed commitment to their academics. Commitment is defined as being dedicated (Oxford Dictionary of English, 2010), in this case, participants' dedication to their learning process.

One participant stated that:

“We only had one group work, it was positive, and everyone was committed, and we just wanted to finish. We finished the group work in a week, we had a lot of stress so we wanted to push so we had time for other assignments.” (Participant 12)

The experience of the participant indicates that participants maintained principles of active learning. The two principles of active learning that participants maintained were those of motivation and self-efficacy (Kiyamanesh & Meraji, 2011).

One participant noted that:

“I learned that... I can be able to cope by myself. I don't really need extra push as I thought I did. I push myself because I wanted to pass” (Participant 1)

Gbollie and Keamu (2017) note that students' commitment to academics impacts on academic performance. In contrast, a correlation and structural equation modelling study conducted by

RezaeiGazki, Delavar and Samavi (2019) revealed that meaningful commitment couldn't be attributed to positive academic achievement. As a result of the present study's participants' experiences, it can be argued that students' commitment to academic learning is critical and further methods of sustain students' commitment and motivation during online learning should be explored.

4.3.1.2 Sub-theme 2: Academic engagement facilitated through peer support and the use of social media.

Academic engagement relates to a student's psychological and behavioural efforts in the learning and teaching process (Kim, Hong, & Song, 2018). It is critical to sustain engagement as it allows for learning, understanding, and mastering of skills and knowledge. In this sub-theme, a discussion ensues of how student level leadership and the use of an affordable communication application enabled students to remain academically engaged and transmit academic information effectively amongst themselves. Two categories emerged from this sub-theme, namely: peer support during online learning, and information sharing via WhatsApp.

4.3.1.2.1. Category 1: Peer support during online learning

Academic support is defined as the interventions introduced to assist students in achieving their learning and teaching outcomes (Department of Higher Education and Teaching, n.d; Lorenzetti, Shipton, Nowell, Jacobsen, Lorenzetti, Clancy, & Paolucci, 2019). The benefits of peer support include familiarising students to academic learning and favourable learning outcomes (Snowden & Hardy, 2012; Browne-Ferrigno & Muth, 2012 and Chester, Burton, Xenos, & Elgar, 2013).

In this study, participants were able to maintain supportive peer engagement due to the functions of the WhatsApp platform that allowed for the creation of private communication groups (Tang & Hew, 2017). In the current study, one participant stated that:

“We created a WhatsApp group so if you have a problem with the connectivity, one of the class reps will send a message, and then like we’ll send a message to the class rep and then the class rep will forward it to our lecturer and I think that’s where the lecturer will answer quickly because it’s the class rep, so the class rep will give us feedback.” (Participant 4)

Another participant reported a positive experience that was characterised by unity and support, stating that:

“Yes, we felt united, and it was positive cause we supported each other.” (Participant 9).



Many researchers have identified social isolation as a contributing factor to reducing a student’s capability to maintain and develop academic skills and motivation necessary for learning (Della Sala, & McFarlane, 2013; Grady, La Touche, Oslawski-Lopez, Powers, & Simacek, 2014; Martinez, Ordu; Barry, Woods, Warnecke, Stirling, & Martin, 2018). Hence, the experience of unity is critical, especially in the context of online learning due to a pandemic, as this was a period of social isolation.

Another participant elaborated on how peer support was shown through advocacy, information sharing as well as unpacking learning and teaching content. This participant expressed that:

“I am very thankful for the support of the class rep because unlike me, they are able to talk... They were able to help me like I said to report to the lecturers. With my classmates, we supported each other.” (Participant 8)

Student leadership is fundamental in promoting engagement, collaboration, and a positive academic environment (Ghamrawi, Ghamrawi, & Shal, 2018). The experienced shared by Participant 8 substantiates the importance of student leadership in achieving learning and teaching outcomes. Furthermore, it emphasises the common knowledge that students rely on each other to regulate and direct their learning experience (Tichavsky et al., 2015).

4.3.1.2.2. Category 2: Information sharing via WhatsApp group.

WhatsApp has been reported as a useful electronic tool that can facilitate and allow access to information and enable peer-based support amongst students (Cetinkaya, 2017). Likewise, the participants of the present study expressed similar experiences with online learning during the COVID-19 pandemic.

A participant described the positive experience as follows:

“The interaction was good. There was a sense of support amongst each other. We wanted to make communication easier, so we created a WhatsApp group where everything was posted there for everyone to have access to it. I think it made things easier in the sense that there is WhatsApp data, which is much more affordable....”
(Participant 9)

Participants reported a positive experience due to the use of WhatsApp as a communication and engagement platform. This confirms the qualitative studies that reported WhatsApp as an

effective and efficient tool of communication in facilitating higher education (MI, & Meerasa, 2016; Rahmadi, 2020).

It is important to note that while other technology platforms exist, participants expressed that these platforms were not conducive for online learning in comparison to WhatsApp, with one participant stating that:

“That's why they changed the whole thing now and they said let's just do it on WhatsApp because this thing of Google Meet and Zoom is not working because other people's devices don't want to do those Google Meet stuff, so we just opted for WhatsApp. So, it was better on WhatsApp.” (Participant 5)

In a quantitative study by Minhasi, Hussain, Ghani and Sajid (2021) it was reported that 25% of students disagreed on Zoom online platform as being easy to use and an additional 13%, strongly disagreed. Minhasi et al., (2021) further state that applications like Google Meet and Zoom had not been created for the facilitation of learning and teaching, with Zoom having had pre-existing technical problems reported.

Furthermore, participants expressed that access to WhatsApp was easier in comparison to electronic mails, with one participant stating that:

“... We got instruction 30 minutes before a test. It is, was via email and not WhatsApp but we had said to them that it is easier to communicate in the WhatsApp groups cause we will see the communication immediately...” (Participant 12).

It can be argued that since WhatsApp is a commonly used platform, irrespective of the learning and teaching context, it could have been a contributing factor as to the reason why participants reported WhatsApp as being easier to use (Gasaymeh, 2017).

4.3.2 Theme 2: The overall academic performance was adversely affected by online learning, online assessments, and unfavourable home environment.

This theme describes the experiences of participants with reference to their academic performance during online learning within their home environments. Hatlevik, Throndsen, Loi, and Gudmundsdottir (2018) expand the definition of a home environment as an individual's family background that includes human and substantial resources available that affect an individual's living status, for example, parent's education, profession, financial status, and facilities present in the home.

This is a significant theme as it will allow us to draw comparison, through the experiences of participants, between the home environments and academic environments in determining conduciveness for learning and assessment. This theme provides a qualitative illustration of the resources necessary to ensure effective online learning and the consequences of a lack thereof, by means of a discussion of three sub-themes and six categories in totality.

4.3.2.1 Sub-theme 1: The physical environment at home has an impact on effective online learning.

According to Ali (2020), the adoption of an online learning environment isn't technical but more a pedagogical and instructional issue. While principles of adult learning regard students as self-directed (Knowles, 1968; and Sadiq, Ali, Kamar Abdulkadir, Ivor, Diyaware, & Ikunaiye, 2019), it is important to note that home environments may pose a challenge in allowing students to practise these self-directing skills (Tichavsky et al., 2015). Participants expressed different forms of disruptions within the home environment, similar to those reported by Henaku (2020), such as a lack of understanding from parents of the learning and teaching process implemented for online learning and those students were still required to perform household chores.

Furthermore, Aguilera-Hermida (2020) argued that it is pivotal to provide students with the necessary training and continuous support on new technologies. During the pandemic, participants had to abruptly transition into an online system without any preparation (Minhasi et al., 2021), and this study shows that their confidence, self-efficacy, and cognitive engagement decreased. In this sub-theme, two categories emerged, namely: i) household chores as a barrier to learning from home and ii) support from family plays a vital role during online learning.

4.3.2.1.1. Category 1: Household chores as a barrier to learning from home

Prior to the abrupt transition to online learning due to the COVID-19 pandemic, literature acknowledged household chores as a domestic barrier to participation in learning and teaching (Dida, Obae, & Mungai, 2014; Huisman, & Smits, 2015; and Wichmann, Dellazzana-Zanon, Freitas, & Teixeira, 2019).

During online learning, participants were still expected to function within the household environment and perform household chores. Household environment and the need to perform household chores contributed to a negative experience for participants and one participant stated that:

“I had to do the house responsibilities, like the other children. Then there was no person that was going to be special than the others. The shift was very bad and negative for me, but I had to endure.” (Participant 1).

As a result of needing to participate in household responsibilities, participants couldn't engage in online learning as the refusal to do household chores would introduce conflict. Another participant highlighted the latter and stated that:

“So just to avoid conflict I will stop my schoolwork and do chores. My culture doesn't allow me to say no and tell my parents that I need to focus. They will say you are rude, with the black culture its challenging cause our parents can't understand.” (Participant 12).

Culture is defined as the ideas, customs, and social behaviour shared by a group of individuals (Hanson, 2013). The definition allows the researcher to argue that culture, as expressed by the participant, was an additional barrier in the home environment that impacted negatively on online learning during the COVID-19 pandemic. Furthermore, based on the participants' experiences of online learning in the household setting it is evident that the learning environment at home did not afford students the opportunity to actively engage in the learning process.

This is confirmed by the cross-sectional study conducted by Baticulon, Sy, Alberto, Baron, Mabulay, Rizada, Tiu, Clarion, & Reyes (2021) in which medical students also reported that household responsibilities were a barrier to online learning. While Baticulon et al (2021) had a high participation rate, the data collection tool created an exclusion of students who had accessibility limitation as an online survey was used. Therefore, in the opinion of the researcher, it presents a limited overview of the true experiences of students.

4.3.2.1.2. Category 2: Support from family plays a vital role during online learning.

Shinivasan (2015) notes that parents' encouragement and motivation have a significant impact on students' academic performance. Also, the system of integrated support, mandates parents to participate in students' activities to ensure academic success (Đurišić, & Bunijevac, 2017). In this category, the experiences of participants varied with some participants having a positive experience and some having a negative experience.



Based on the experiences expressed by participants, parents' perception of the use of electronic tools to facilitate online learning was negative. This could be attributed to the lack of understanding of the processes and resources needed to provide effective learning and teaching by means of technology. It is important to note that being in front of an electronic device screen for an extended period can be perceived as not being productive (Antony-Newman, 2019).

One of the participants expressed that:

“No matter how much you try to explain... Especially if you have parents that never went to varsity and they don't get that knowledge of okay, these things work like this

now. They're just like you just on that phone the whole day. You are busy on that phone.... you're busy with social media, do this, do that. That also was just a challenge on its own. Like having to deal with that, having to explain yourself all the time... ” (Participant 5)

In contrast to Participant 5, another participant outlined the benefit of having parents that can relate to the processes and nature of online learning. The participant expressed that:

“What helped me to cope was my family, yes, they distracted me sometimes, but they also supported me. Like I said, my father studied at UNISA, so he understood the pressure and how online learning works.” (Participant 10)

Mundhe (2018) conducted a quantitative study through a structured questionnaire that was completed by a total of 120 undergraduate students and reported that parents’ education level had an impact on students’ academic progress. The findings of the present study validate the findings of Mundhle (2018) that suggest that participants who experience a of support from parents find learning at home challenging. If considered together, these findings provide strong evidence that illustrates the impact of family dynamics on students’ academic progress.

4.3.2.2 Sub theme 2: Overall academic performance was affected by online learning.

Academic performance is defined as a measure of a student’s competence (Saad, Azziz, Zakaria & Yazid, 2015) which can be determined through assessments (Lei & Li, 2015). Assessments ideally focus on measuring a student’s knowledge, skills, abilities, and proficiency (Kapur, 2018). Positive academic performance is the key objective of any student in a higher education environment. In this sub-theme, two categories will be discussed, namely

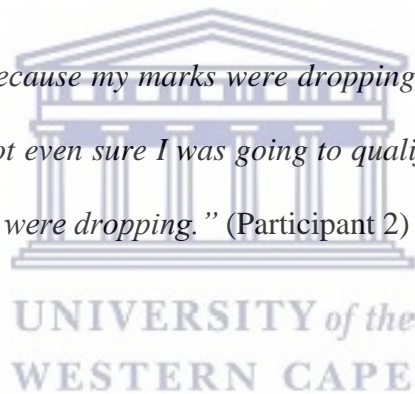
inability to participate and/or complete online assessments, and uncertainties related to theory and clinical progress.

4.3.2.2.1. Category 1: Uncertainties related to theory and clinical progress.

Academic progress is the key objective of any student. Globally, students reported concerns that they were not learning essential skills or getting ample patient exposure during online learning (Theoret, & Ming, 2020; Gallagher, & Schleyer, 2020).

As a result, participants expressed a decrease in academic progress, with one participant expressing that:

“It affected me badly because my marks were dropping and before writing the exam, the June exam, I was not even sure I was going to qualify to write the final exams for June because my marks were dropping.” (Participant 2)



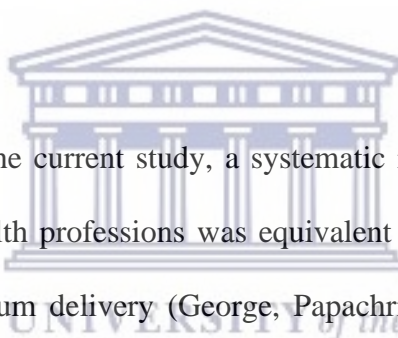
The participants' academic performance was also impacting on their confidence in their academic progress. One participant expressed:

“... not knowing what to do and stuff like that and just having a lot of unanswered questions like yes that contributed to...Especially not knowing are you going to pass, are they going to say repeat or what, yeah that contributed mostly.” (Participant 6)

Bettinger, Fox, Loeb, and Taylor (2017) report a decrease in students' academic progress during online learning which is attributed to access issues such as those identified in this study. Another quantitative study reported that 47.5% of students' academic performance were greatly impacted by online learning (Mahdy, 2020).

Furthermore, there was an uncertainty and a lack of confidence in capability to perform clinical skills, with one participant noting that:

“I struggled during my OSCE because it is difficult to learn a skill from a YouTube video or just seeing it on pictures in a book. It is different. I had to reval [re-evaluation] my OSCE and that shows that nursing shouldn’t be taught online. This year I am in final year, at the hospital and clinic, they will expect me to do a lot of work and I’m scared I won’t be able to. I think for us in CHS faculty, online learning is out. For other faculties maybe it can work.” (Participant 10)



In contrast to the findings of the current study, a systematic review highlighted that online learning for undergraduate health professions was equivalent and possibly even superior to traditional methods of curriculum delivery (George, Papachristou, Belisario, Wang, Wark, Cotic, Rasmussen, Sluiter, Riboli–Sasco, Car, & Musulanov, 2014). However, it is important to note the high risk of bias associated with reviews because of the inclusion of several studies. It can be argued that participants’ uncertainties about academic progress can be attributed to inadequate translation and alignment of anticipated, expected, and actual learning outcomes through the online learning medium (Alfauzan, & Tarchouna, 2017).

4.3.2.2.2. Category 2: Inability to participate and/or complete online assessments.

Assessments can be defined as tools that are used to measure learning outcomes and influence a student’s academic progress (Byers, Mahat, Liu, & Knock, 2018). During online learning, the ability to participate and/or complete assessments was highly dependent on participants’

accessibility and competency in the use of technology. This includes network connectivity, internet access and computer literacy.

One participant expressed that:

“I could not write some of the tests, tutorials, or quizzes that we were given to write on specific dates and yes, I couldn't write some of them.” (Participant 4)

Guangul, Suhail, Khalit, and Khidhir (2020) investigated challenges that students from various facilities experienced with online assessments because of the COVID-19 pandemic and reported infrastructure as the primary challenge. Similarly, at the university where the present study was conducted. Guangul et al. (2020) report that efforts were made to enhance access to resources necessary for students to complete assessments.

Irrespective of such efforts, participants of this study expressed challenges with completing online assessments, with one participant stating that:

“And then also the internet; as much as school data was provided, the areas now internet connection, it was giving a lot of problems because sometimes when you have to log in, especially when you are writing test and a lot of people logging in at the same time, if you have the small network the system will kick you out. And they didn't extend the time and I couldn't finish most of my tests...” (Participant 1)

Furthermore, participants expressed the impact of computer proficiency on their ability to complete online assessments. One participant noted that:

“With online learning it took time because I am not good with a computer. It will take time... but with online tests I am panicking because I don’t know how to type fast and time is running out, I end up forgetting what I learned, and I don’t finish my test.”

(Participant 7)

Li and Lee (2016) emphasise that computer proficiency and knowledge are fundamental for online learning. Furthermore, it is critical to note that online assessments are facilitated on Learning Management Systems (LMSs) which also require a certain proficiency in computer literacy. Chipps et al. (2015) conducted a quantitative study of nursing and health science students and reported that perceived computer literacy relates to perceived easy use of LMSs. The participants of Chipps et al. (2015) were primarily nursing students, and therefore relevant to the current study. The difficulties expressed by the participants, further validates the importance of assessment planning and appropriateness to the specific learning outcomes of a course (Alfauzan, & Tarchouna, 2017).

4.3.2.3 Sub theme 3: Learning was negatively affected by the inability to access online learning material and platforms on demand.

Accessibility refers to the degree to which a person perceives opportunity and access to educational technology (Hermida, 2020). Lack of access to fast, affordable, and reliable internet connection hinders the process of online learning (Adnan & Anwar, 2020). Internet data are pivotal in ensuring access to webpages as it is the medium through which internet access is achieved (Demuyakor, 2020) and network connectivity maintains this access.

During the COVID-19 pandemic in South Africa, students were also faced with loadshedding. Loadshedding is a common phrase used to describe electricity/power cuts in communities

(Dewa, van der Merwe & Matope, 2020). In online learning as defined in this study, internet connectivity and electricity are essential to power electronic devices in order to stay connected.

4.3.2.3.1. Category 1: Affordability Data/WIFI and Poor internet connection

Bhaumik and Priyadarshini (2020) highlight the reality of developing countries' readiness to adopt online learning in relation to the necessary tools that will allow HEIs, students and educators to be engaged and not experience any academic loss. The present study was conducted in a developing country, South Africa, in which students expressed great challenges with access to the online platforms.

In South Africa, it was reported that the general population is unable to access the internet due to data costs (Gillwald, Mothobi, & Rademan, 2017). These high data costs were aligned with the students' experiences since they expressed that data were unaffordable and impacted negatively on their online learning experience.

One student expressed her view as follows:

“Yes, a big negative because my mom doesn't work, she can't buy me data. If she says she doesn't have money for data - that is it. At least if I went to campus, I would download or print my slides and come home to just read through them and study...”

(Participant 11)

The high data costs are a daily reality for many students in South Africa. Despite these challenges the university where the study was conducted endeavoured to close the gap that exists and provided students with data. However, even with the distribution of data, participants experienced delays with one participant saying:

“Because I got my data late from the school. I received my data late. So, you need to have data and we don't afford to buy data sometimes....” (Participant 3)

Participants further stated that network connectivity was also another barrier in accessing online learning and impacted adversely on their learning experience. One student said:

“As for me, online learning is not helping at all because studying at home is difficult, and you need to have access of network and sometimes we stay right whereby our network is poor and we don't have data sometimes.” (Participant 2)

Based on the experiences expressed, the researcher concluded that, students need affordable and efficient internet connectivity to allow for effective online learning to take place (Noor, Ali, & Husnine, 2020; Demuyakor, 2020).



4.3.2.3.2. Category 2: Load shedding

In South Africa, loadshedding doesn't occur simultaneously, across all areas, and as a result different people are impacted at different times. It is also important to note that when loadshedding occurs, network connectivity is impacted. In a cross-sectional descriptive study, 46% of nursing students identified loadshedding as a barrier to online learning (Rana, Garbuja, & Rai, 2021). Rana et al. (2021) conducted a study with majority of students who lived in urban areas, where ideally access wouldn't pose a barrier. This is important to note because loadshedding affects all communities unlike socio-economic differences that exist between urban and rural areas.

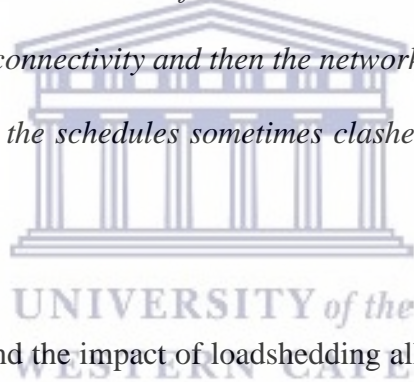
In the study, participants expressed that loadshedding impacted greatly on their ability to attend online classes and participate in online assessments. One participant stated that:

“When there is no electricity, the network also goes. So even if you have data, you cannot attend class or do your tests.” (Participant 10)

It is the opinion of the researcher that loadshedding emerged as a demotivating factor to participate in online learning and teaching (Noor, Ali, & Husnine, 2020).

A participant expressed the following:

“It’s a negative experience because as for us that have Tutorials, I could not write them because there was bad connectivity and then the network would go down, or like the loadshedding, and then the schedules sometimes clashed with the slots.” (Participant 4)



Lack of internet connectivity and the impact of loadshedding allow the researcher to question not only the institutional readiness for online learning but also the country’s readiness for online learning at a national level.

4.4. CONCLUSION

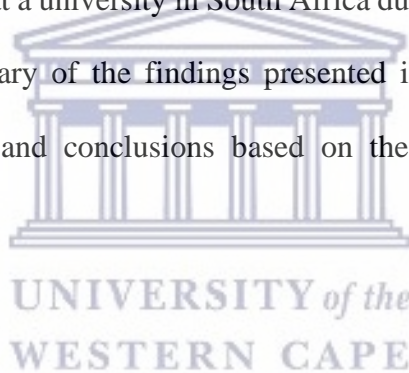
The chapter has represented and discussed the themes and categories that emerged from the collected data. Theme 1 illustrates how students generally expressed a decrease in interaction during online learning and theme two illustrates the barriers that the online learning environment introduced to learning and teaching/negative experience with online learning during the COVID-19 pandemic. A summary of the study findings, limitations, recommendations, and a conclusion of the study will be discussed in the chapter that follows.

CHAPTER FIVE

SUMMARY OF FINDINGS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The preceding chapter discussed the findings of the data analysis that resulted in two main themes. The aim of this study was to explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic. The chapter provides a summary of the findings presented in the preceding chapter. The recommendations, limitations and conclusions based on the study findings will also be discussed.



5.2 SUMMARY OF FINDINGS AND DISCUSSION

Two themes emerged from data analysis and the main findings of each theme will be summarised below.

5.2.1 Theme 1: Lack of physical interaction between students and nurse educators led to perceived academic disengagement. However, students demonstrated self-directed attributes that allowed them to be resilient.

The findings of this study that informed Theme 1 highlighted a decrease in interaction between participants and nurse educators during online learning and teaching. Furthermore, participants expressed a preference for a face-to-face learning environment as a means of curriculum delivery due to the perception that face-to-face learning presents opportunities for meaningful engagements among students as well as with nurse educators.

With the abrupt transition to online learning and minimum evidence of preparedness, participants expressed an unstructured online learning and teaching approach. Participants attributed this unstructured approach and facilitation as a contributing factor of academic disengagement. The participants expressed that online learning deprived them from asking questions for clarity, verification of ideas and consultations which ideally enhanced students' engagement and interaction with learning content.

Despite the challenges related to perceived academic disengagement, participants experienced a positive interaction with their peers. The findings of the study state that participants, maintained interaction and support amongst each other via social media platforms and student leadership. Social media proved to be beneficial to participants during online learning as it further allowed for easier transmission of information related to academia. This was particularly achieved through the use of WhatsApp as participants experienced this specific social media platform as being accessible, affordable and easy to use. As a result, WhatsApp can be regarded as a platform that can be incorporated into online learning and teaching.

5.2.2 Theme 2: The overall academic performance was adversely affected by online learning, online assessments, and an unfavourable home environment.

Findings of the study that relates to Theme 2 highlight the importance of ensuring and maintaining access to online learning platforms and the consequence of the inability to achieve and maintain accessibility. Participants experienced the home environment as not being conducive for online learning due to the disruptions and cultural dynamics that exist in households. However, experiences indicated that the disruptions and different cultural dynamics can be redressed through parental support.

Participants outlined the importance of consistent and concurrent access and availability of technology resources during online learning. These resources include internet data, network connectivity and electricity supply. The lack of these resources impacted negatively on participants' experiences of online learning. Participants expressed challenges with completing assessment and access to educational content on LMS due to issues related to connectivity. As a result of the inability to complete assessments, participants became uncertain of their academic progress and expressed an anticipation of failure in both clinical and theoretical assessments.

5.3 LIMITATIONS

The study was conducted at a specific university in South Africa, with a population that consisted of one pool of undergraduate participants from the mainstream programme. As a result, the findings of the study are limiting and cannot be generalised to other universities or

students enrolled in the extended Bachelor of Nursing curriculum programme. Also, the study was conducted by a student and participants may have not been transparent with their experiences. Furthermore, snowballing as a data collection methodology, may have influenced the experiences shared as participants could have pre-discussed their experiences.

5.4 RECOMMENDATIONS

The following recommendations are based on the study findings and relate to nursing education practice, School of Nursing (SoN) management, Department of Higher Education and Training (DHET) and for future research.

5.4.1 Nursing education practice

The below recommendations relate to methods in which nurse educators can contribute towards a favourable learning experience for undergraduate students during online learning:

- Nurse educators should explore additional activities to enhance and sustain student engagement with the learning material.
- Nurse educators should explore physically face-to-face consultations, while maintaining COVID-19 precautions measures, with individual students to enhance nurse educators-student interactions.
- Nurse educators to incorporate online discussion platforms for students to enhance interactions between student peers.

5.4.2. School of Nursing (SoN) management

The below recommendations relate to the measures that the SoN management should put in place in order to ensure a favourable online learning experience for undergraduate nursing students. With the shift from traditional classroom teaching to online teaching the management at SoN should:

- Advocate for the incorporation of computer skills courses at the meso curriculum level to address potential computer proficiency deficits and/or enhance existing computer skills
- Make resources available that allow for smaller groups of students in online learning classes to minimise the risk of overcrowded online learning platforms that discourages students from engaging and participating in learning activities.
- Provide the necessary training to all nurse educators to ensure quality of education is maintained.
- Liaise with university management to ensure internet data is timely distributed to students to minimise barriers of access to online learning platforms.
- Introduce a hybrid model that will allow for combination of online and face-to-face delivery of the curriculum.

5.4.3 Recommendations for DHET

The below recommendations relate to ways in which the DHET can contribute towards creating a favourable online learning experience for undergraduate nursing students. The DHET should:

- Advocate for the inclusion of computer skills subjects at secondary school level to ensure students can build on pre-existing knowledge and skills of digital technologies.
- Consider the inclusion of computer skills courses in undergraduate nursing programmes through the Council on Higher Education (CHE), South African Qualifications Authority (SAQA) and the SANC.
- Strengthen technological infrastructure of universities to ensure consistent access and support being available to students and educators.
- Advocate for stabilised electricity supply in communities to minimise interruptions in access to online learning platforms.
- Advocate and negotiate with network service providers to ensure LMS linked with HEIs are offered at zero data rates.
-

5.4.4 Recommendation for future research

The below recommendations relate to methods in which future research can enhance learning and teaching experience for undergraduate students during online learning through evidence-based practise.

- Future research should explore and describe the experiences of undergraduate nursing educators with online teaching during the COVID-19 pandemic, in attempt to improving and maintaining quality of educational processes.

- Future research should explore and describe the experiences of undergraduate nursing students at various universities to identify best practices and common difficulties that need to be redressed.

5.5 CONCLUSION

The study provided a qualitative illustration of the realities, difficulties, and experiences of undergraduate nursing students with regard to online learning during the COVID-19 pandemic. Furthermore, this study perpetuates the importance of institutional and national readiness, as well as quality assurance systems in the quest to incorporate digital technologies in nursing curriculums and facilitation approaches. The researcher hopes that the findings, arguments and recommendations of his study will be considered in academia.



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APPENDICES

Appendix 1: Data collection tool



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Title of Research Project: **The experiences of undergraduate nursing students at a university in the Western Cape regarding online learning during the COVID-19 pandemic.**

Introduction: Good day participants. I am Boitumelo Sebeela, a second-year Masters in Nursing Education student at the University of the Western Cape. I am currently doing an exploratory descriptive study on the experiences of undergraduate nursing students regarding online learning during the COVID-19 pandemic. I would like to take the time to show gratitude for your willingness to participate in this study. It is important to note that this interview process will be kept confidential and you are allowed to withdraw at any point in time without penalty. You may also refuse to answer a question if you do not wish to answer it. You will remain anonymous throughout the research process. This interview will take approximately 45 minutes. If there are no questions, let us begin...

Year Level:	Gender:
Question	Sub-questions
<p>1. Describe your online learning experiences during the COVID-19 pandemic</p> <p>Breakdown</p> <hr/> <p>a. Positive experiences</p> <p>b. Negative experiences</p>	<p>1.1. What contributed to your experience being positive and/or negative?</p>
	<p>1.2. How would you compare the traditional way of learning and online learning? Which one do you prefer and why?</p>
	<p>1.3. How would you describe your interactions with your lecturer and fellow students while using online learning?</p>
	<p>1.4. Are you able to learn by yourself through online learning?</p>
	<p>1.5. What are your experiences of the usefulness of online learning in nursing education?</p>

Possible probes that will be used will include:

- Please give me an example

- Can you elaborate more on that experience?
- Can you explain that further?
- Is there anything else?
- What do you mean by?
- How do you feel about that?



Appendix 2: Example of transcript

Interview with Participant 2

Researcher: Hi, how are you?

Participant 2: I'm good

Researcher: Are ready or must I give you five minutes?

Participant 2: Hello

Researcher: Hi. Are you ready or must I give you five minutes?

Participant 2: It's okay. It's fine

Researcher: Is it fine?

Participant 2: Yeah, don't give me the five minutes, it's fine.

Researcher: You are ready to go for it?

Participant 2: Alright, yes.

Researcher: Okay. So I just want to introduce myself and just to say thank you for taking the this time to participate in my study. My name is Boitumelo Sabeela and I'm currently doing my masters in Nursing Education. So today I just want to speak to you about your experience with online learning during the COVID 19 pandemic. Remember that the interview is confidential and you will remain anonymous. If there is a question you don't feel comfortable answering you can just inform me and we'll move to the next question. Is there any questions?

Participant 2: No questions

Researcher: Okay. So my first question is...It's a broad question so take your time, think about it and answer as much as you want right. So my first question is can you please describe your online learning experience during the COVID 19 pandemic.

Participant 2: Okay. Okay let me think. And I'm with my friend.

Researcher: Yes?

Participant 2: She is doing nursing too.

Researcher: Okay so if she's also willing to participate you can just give me her number then I can call her also, afterwards.

Participant 2: Okay
Researcher: Okay. So let me...

Participant 2: As for me...Okay it's fine.

Researcher: Yes, no it's fine you can answer.

Participant 2: As for me, online learning is not helping at all because studying at home is difficult and you need to have access of network and sometimes we stay right whereby our network is poor and we don't have data sometimes. Our parents don't afford to buy us data and sometimes the disadvantage of studying...Sometimes you're not studying because you know that all the information that you need is with you and you're not studying at all. So that's the disadvantage of studying at home.

Researcher: Okay. So are you saying you are having a negative experience with online learning?

Participant 2: A negative experience?

Researcher: Yes. Are you saying that it's a negative experience that you are having? It's not a positive one?

Participant 2: Yes it's a negative.

Researcher: So, when you talk about network and access, tell me what issues you've had that have contributed to your experience being negative.

Participant 2: Because I got my data late from the school. I received my data late. So you need to have data and we don't afford to buy data sometimes. Our parents don't afford to buy and another thing...To have network. It is poor, loadshedding. You see so, a big disadvantage.

Researcher: A big disadvantage...So how has all of these disadvantages that you've mentioned, how have they contributed to your experience of online learning. Can you give me examples? Can you give me examples of how these factors that you've mentioned like the network, the data, the affordability. How has that impacted your online learning?

Participant 2: Sometimes you miss the test. Sometimes you cannot able to see your emails. They upload that tomorrow you have to write a test. Because the calendar and the timetable, the rubric was changed. So they have decided to create another one. So most of the tests were postponed. So you don't know tomorrow you are writing a test and you are not able to check your emails because of network and sometimes you don't have data at all, so you miss the test you see.

Researcher: I understand. And how has, like such things like missing tests and not being able to access your emails, how has that impacted your online experience? Like how has that impacted your online experience in terms of your studies?

Participant 2: My experience. It's because now I need to catch up. If you catch up at the last moment, tomorrow maybe you're writing a test and then you need to catch up. So you feel like there's more load now. You cannot study the whole night.

Researcher: And also, loadsheddig, how has that impacted your experience with online learning?

Participant 2: Loadshedding. I need to think on this question.

Researcher: No problem. Take your time. You can even give an example of maybe when something happened and loadshedding was involved and how it impacted your online learning experience.

Participant 2: Yeah, like, loadshedding can disrupt and like you stay at home and there's loadshedding that can disrupt online learning classes. Loadshedding can upset your online learning because every day you need to attend the classes.

Researcher: Are you still there?

Participant 2: Because when we are attending classes, this online...If there is loadshedding you cannot able to attend the class. And maybe sometimes, like some of the lecturers they don't understand. You cannot write there was loadshedding and have already attended the class and it looks like you were doing something else while there was loadshedding.

Researcher: And you know also with loadshedding it's different. If I am in this section and you are in the other section it's different. So do you think that also the fact that you are not affected with loadshedding at the same time right. Because we are all in different areas, do you think that also contributed, you know to the disruption also?

Participant 2: Yes.

Researcher: Okay. I understand. So you basically you've answered two questions in one. So let's just go through what contributed to this negative experience just for you to confirm with me. So you saying that it was network?

Participant 2: Yes.

Researcher: It was data and affordability and it was loadshedding?

Participant 2: Yes

Researcher: Is there anything else you would like to add?

Participant 2: The disruption. At home you don't have your own privacy, your own space to study. So there's a tavern and they always make lots of sound, lots of noise. Then while you are studying, it isn't easy to study at home compared study at the library.

Researcher: I get you. So you said you didn't have...

Participant 2: And...

Researcher: Are you still there?

Participant 2: Yes

Researcher: So I'm saying that you said that you didn't have...

Participant 2: (incoherent)

Researcher: I think the network is also a little bit unstable.

Participant 2: But I can hear you.

Researcher: Okay. So I'm saying that you said that at home you don't have your own space, your own privacy. How did that impact your online learning experience?

Participant 2: Some parents, they don't understand...(incoherent)... uneducated mum and then you say I have a class at twelve. I need to do, like...Hello?

Researcher: Yes, I'm listening. I think you were breaking up. You were saying that parents don't understand and then what did you say?

Participant 2: Class online. Because some of our mothers, they are not educated.

Researcher: Okay. So they don't understand.

Participant 2: We are attending a class online. So that is studying at home.

Researcher: So taking into consideration the experience that you have had with online learning during this COVID 19 period. Which do you prefer, do you prefer traditional or online learning and why do you say that?

Participant 2: I prefer attending class face to face. Because you can ask some of the questions you don't understand. And another thing, you can able to go to library and find information from the books. It's simple. But if you are studying at home using online learning, then if there is something that you don't understand you just leave it like that because you won't find any information. It is very tiring and then you are not studying at all.

Researcher: I understand. So you said that like for example in your traditional classroom you are able to ask questions, but my thing is that you also mentioned that there was no access to emails, you know sometimes because of the network and not having data because of affordability and all of that stuff. So how did you ask questions during your online learning.

Participant 2: Sometimes you ask if that day you have data. But if you don't have data it means you will miss the class and sometimes you will miss a quiz, like a test or tutorial that they upload after each lesson.

Researcher: That's hectic. So you said that for you, you'd rather have the traditional because there's resources available for you?

Participant 2: Yes.

Researcher: So how...

Participant 2: And you can even sign the register. But signing online some off us, it was confusing because we didn't know how to sign online.

Researcher: I understand. So tell me, here you also mentioned that like you also missed a quiz, you missed a tutorial you know. So basically you missed assessments, so how did that impact your experience of online learning? How did that impact you? How did that impact your performance as a student through online learning?

Participant 2: It affected me badly because my marks were dropping and before writing the exam, the June exam, I was not even sure I was going to qualify to write the final exams for June because my marks were dropping. And I cannot even explain what was the impact of that, what affected me to get such low marks. Because they don't understand, some of the lecturers, they don't understand, they just want their work done and only that.

Researcher: So, I mean, even if let's say you couldn't do a quiz. Was there that interaction between you and your lecturers to say okay, I didn't have data, there was no network, there was loadshedding, therefore I couldn't do the quiz. Was there that interaction with your lecturers? How was your interaction with your lecturers during the COVID 19 in terms of online learning?

Participant 2: If it happens that you were writing a test and then there was loadshedding and no network, you need to screenshot and send the proof of that. So if you miss a test without logging in from that test then it means you need to apply for a sick test and when you apply the sick

test they only need the certificate. The reason. Maybe a death certificate of a family member if that was the reason that make you miss the test. Then you need to have the proof. But with the online, or maybe you don't have data, you cannot just apply for a sick test for that day. They don't take that as an excuse.

Researcher: I hear you. So I want us to just talk about the interaction that you had with your lecturers. How was that? How were you interacting with your lectures. So let's say you sent an email. Did your lecturers respond? Were they able to assist you during this time of you learning online.

Participant 2: Yes, some of the lecturers, they do understand. But only if you have the proof. If it was a network connectivity, then you need to screenshot while you are writing the test, you need to screenshot that I cannot from another question because of the network, then you need to screenshot that. Then you send it. Then if you have that, the lecturers will understand. But not just saying I missed the test because I was not having data. Then they don't take that because they will think of the students, they are lying because they were not ready. They were not prepared enough to write the test.

Researcher: I hear you. Let's say you send an email. Let's say I'm your lecturer and you sent an email to me. Did I respond fast or did I not respond or how was that communication, that interaction?

Participant 2: They respond fast.

Researcher: They respond fast. All the lecturers?

Participant 2: Yes.

Researcher: Okay. Which year level are you in? Sorry I forgot to ask.

Participant: Second year.

Researcher: You are in second year. Okay. That's good. And your classmates...You know nursing, it's built on group work. Did you have group work let me start there? Did you have group work?

Participant 2: Before online learning or...

Researcher: No during online learning.

Participant 2: No, I was studying at home.

Researcher: So you didn't have have group assignments?

Participant 2: Oh the group assignments yes.

Researcher: And how was that? How did you guys manage to do group work? You understand?

Participant 2: We created a Whatsapp group and then we were given each other topics, that I will be doing this one. It's either you save it as a pdf and you send it from the group.

Researcher: Okay. So that was fine. So was that experience positive for you?

Participant 2: Yes it was positive.

Researcher: It was positive. It was much better than the whole experience.

Participant 2: Yes it was bad.

Researcher: So looking at all of that, looking at how quickly...

Participant 2: Okay so I can say as for me it was positive I do have a smartphone but there are other students that don't have a smartphone. So as for them it will be bad because one of my friends was not having a smartphone so it was not easy to get contact with us so she had to email it.

Researcher. Yes in the group, for the group now.

Participant 2: Yes for the group.

Researcher: So it goes back to what you said earlier on that, you known, in online learning there is a need for resources right?

Participant 2: Yes.

Researcher: Okay. So what I want to ask you now is...

Researcher: Hi

Participant 2: Hello.

Researcher: You are back.

Participant 2: Yes I am back.

Researcher: This is part of the online learning experience.

Participant 2: Hello?

Researcher: Yes.

Participant 2: Okay.

Researcher: So I was saying to you that, you mentioned all of these things, you mentioned your interactions with your lecturers, you mentioned the interaction with you classmates, so like in group work and you mentioned you, things that contributed to your experience. So what I want us to talk about now is that when you look at that and you look at nursing itself, do you think that the online learning platform is the right platform for us to use?

Participant 2: No.

Researcher: Why do you say that?

Participant 2: Because nursing includes lots of practical's. Because some of us...Okay not some of us, like nursing is it's a lot of practical's. Even when we are studying human biology we need to do practical's. We studying NRNS and then skills lab, we need to attend skills lab every week. So it is not helping at all. Maybe from other professions but nursing was not helping at all.

Researcher: How was it not helping? Can you give me examples, like a practical example.

Participant 2: Because we...Like human biology. We need to study a matter like there is structures where you study structures of the heart. So during the class we are studying the lectures then after studying the lecture slides then the, we need to attend practicals were we get

to see each and observe what is happening. We need to see the structure. So it is not helping. So we studied about kidneys, heart, everything during the...Okay before writing the exam we were studying about those lectures so we needed to observe and see the structure, because at the end, as a nurse you need to understand the structures, because you will be working with patients. You need to observe and see, not just learning the information, you need to do it practically.

Researcher: Yes, definitely. And how has this lack off practically, like lack of skills lab, lack off pracs, how has that impacted your experience with learning? You know, learning nursing at a second year level.

Participant 2: Because next year I need to attend practical's at hospitals. So getting there without having a clue it's difficult. So you need to start again and I'll be doing third year, so I'm left behind with the practical's for second year. So, if you are working there at the hospital, the sisters they want you to do things were supposed to do from the second-year program. Then now you don't even have a clue, so you see it's seems like you don't know at all what you are doing. So we'll be left behind.

Researcher: So you are saying you do not prefer nursing to be continued on an online basis, is that what you are saying?

Participant 2: Yes, I don't prefer it.

Researcher: Okay you don't prefer it. So is there anything that you would like to add in closing, just as we wrap this interview up, is there anything you would like to add, anything maybe you think you have forgotten that speaks on your experience during this online learning, during this COVID 19 pandemic.

Participant 2: Yes I would like to add that...Okay as I've said that online learning is not working at all. Then I would prefer to...If we catch up this year. Maybe catch up doing the practical's, maybe doing practicals at the skills lab, that we are supposed to do each June. At least maybe

we will be having a clue from this year as a whole, that we are supposed to know this and this and this. Doing practical's, not just reading it online but practical also.

Researcher: So are you saying that you are also a bit worried about moving from second year without the practicality and then going into third year and you know you come to me as a sister and I have these expectation of you that I need you to know this skill and you don't this skill.

Participant 2: Yes

Researcher: Are you saying that?

Participant 2: Yes

Researcher: Okay, I understand. I totally understand. Is there anything else that you'd like to add?

Participant 2: No I'm fine.

Researcher: You are fine. Okay. Well then if you are fine then I would just like to take this moment to say thank you so much for willing to participate in my study. Once I am done analysing and I'm about to report I am going to send you back a copy of what you discussed today so that you can verify and can say that yes indeed I did say these things as a participant. Just to make sure I am reporting on what is true and I'm not making up my own things.

Participant 2: Okay.

Researcher: So thank you very much and if you please, don't forget to send me your friend's number so I can be in contact with her as well.

Participant 2: Okay

Researcher: Thank you so much.

Participant 2: Okay, thank you.

Researcher: Thank you for your time. Good luck with exams.

Participant 2: Okay thank you.

Researcher: Thank you, bye.

Appendix 3: Ethics approval letter



UNIVERSITY of the
WESTERN CAPE



17 August 2020

Mrs B Sebeela
School of Nursing
Faculty of Community and Health Sciences

Ethics Reference Number: HS20/6/17

Project Title: Undergraduate nursing students' experience of online learning at a university in South Africa during the COVID-19 pandemic.

Approval Period: 14 August 2020 – 14 August 2023

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

The permission to conduct the study must be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

NHREC Registration Number: HSSREC-130416-049

Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Appendix 4: Requesting Permission from Registrar



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592819, Fax: 27 21-9593515

18 August 2020

Dear Dr Lawton-Misra

I hope that this communicate finds you well. I am currently a second-year student studying towards my Masters in Nursing Education degree and currently in the process of completing my Mini Thesis. This hereby serves as my formal letter in requesting for permission to conduct my qualitative study at the University of the Western Cape from the office of the Registrar.

Please find all documents that substantiate my request for your consideration, attached in the email. The summary of the study is as follows:

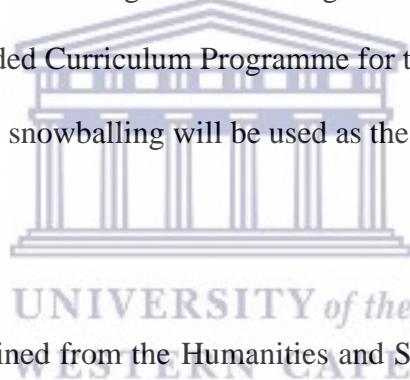
Title: Undergraduate nursing students' experience of online learning at a university in South Africa during the COVID-19 pandemic

Aim: The aim of the study is to explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic.

Data collection instrument: A self-developed interview guide with open ended questions will be used to collect data from participants through one-on-one, semi-structured, telephonic interviewing method. Pretesting will be taking place prior to official data collection.

Study location: The proposed study will be conducted at the School of Nursing at the University of the Western Cape.

Study population: Inclusive of all undergraduate nursing students enrolled and registered for either the mainstream or Extended Curriculum Programme for the undergraduate degree. Exponential non-discriminative snowballing will be used as the sampling strategy of this study.



Ethical approval has been obtained from the Humanities and Social Science Research Ethics Committee of the University of the Western Cape

Awaiting your positive response.

Kind Regards

Boitumelo Sebeela

3453302

A handwritten signature in black ink, appearing to be "Boitumelo Sebeela", written over a horizontal line.

Appendix 5: Permission from Registrar

The University of the Western Cape is a Public Higher Education institution established and regulated by the Higher Education Act, No. 101 of 1997 (Republic of South Africa), with the language of instruction being English. The University is duly accredited by the Council on Higher Education and its degrees and diplomas are registered on the National Qualifications Framework in terms of the South African Qualifications Authority Act, No. 58 of 1995.



REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE

This serves as acknowledgement that you have obtained and presented the necessary ethical clearance and your institutional permission required to proceed with the project referenced below:

Name of Researcher
BOITUMELO SEBEELA

Research topic
Undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic

Period permission is valid for
18 August 2020 – 14 August 2023
(or as determined by the validity of your ethics approval)

Reference code
UWCRP180820BS

You are required to engage this office in advance if there is a need to continue with research outside of the stipulated period. The manner in which you conduct your research must be guided by the conditions set out in the annexed agreement: *Conditions to guide research conducted at the University of the Western Cape*.

Please be at liberty to contact this office should you require any assistance to conduct your research or require access to either staff or student contact information.

Yours sincerely

DR AHMED SHAIKJEE
DEPUTY REGISTRAR
UNIVERSITY OF THE WESTERN CAPE



UNIVERSITY OF THE WESTERN CAPE
ACADEMIC ADMINISTRATION
18 AUGUST 2020

This document contains a qualified electronic signature and date stamp. To
swify this document contact the University of the Western Cape at
researchperm@uwc.ac.za

UWCRP180820BS

Page 1 of 3

Appendix 6: Requesting Permission from Director of School of Nursing



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592819, Fax: 27 21-9593515

18 August 2020

Dear Prof Chipps

I hope that this communicate finds you well. I am currently a second-year student studying towards my Masters in Nursing Education degree and currently in the process of completing my Mini Thesis. This hereby serves as my formal letter in requesting for permission to conduct my qualitative study at the School of Nursing of the University of the Western Cape.

Please find all documents that substantiate my request for your consideration, attached in the email. The summary of the study is as follows:

Title: Undergraduate nursing students' experience of online learning at a university in South Africa during the COVID-19 pandemic

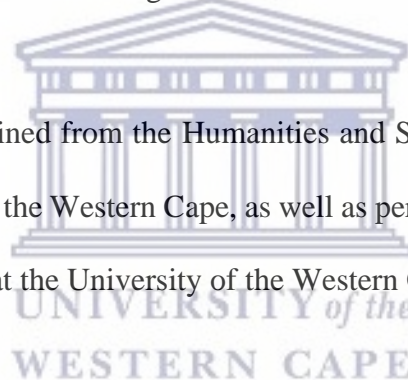
Aim: The aim of the study is to explore and describe undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic.

Data collection instrument: A self-developed interview guide with open ended questions will be used to collect data from participants through one-on-one, semi-structured, telephonic interviewing method. Pretesting will be taking place prior to official data collection.

Study location: The proposed study will be conducted at the School of Nursing at the University of the Western Cape.

Study population: Inclusive of all undergraduate nursing students enrolled and registered for either the mainstream or Extended Curriculum Programme for the undergraduate degree. Exponential non-discriminative snowballing will be used as the sampling strategy of this study.

Ethical approval has been obtained from the Humanities and Social Science Research Ethics Committee of the University of the Western Cape, as well as permission from the Office of the Registrar to conduct the study at the University of the Western Cape.



Awaiting your positive response.

Kind Regards

Boitumelo Sebeela

3453302

A handwritten signature in black ink, appearing to be 'Boitumelo Sebeela', written over a horizontal line.

Appendix 7: Permission from Director of School of Nursing



20 August 2020

Dear Ms Boitumelo Sebeela

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE SCHOOL OF NURSING, UNIVERSITY of the WESTERN CAPE

Name and Student Number of Researcher: Ms Boitumelo Sebeela, 3453302
Research Topic: *Undergraduate nursing students' experiences of online learning at a university in South Africa during the COVID-19 pandemic.*
Ethics Clearance Reference No.: HS20/6/17
UWC Permission Reference Code: UWC RP 180720BS
Validity Period: 18 August 2020 to 14 August 2023

As per your request and evidence provided, we acknowledge that you have obtained the necessary permission and ethics clearance. Permission is therefore granted for you to conduct your research as outlined in your proposal.

Please note that while permission is granted to conduct your research (i.e. interviews and surveys) staff and students at the School of Nursing are not compelled to participate and may decline to participate or withdraw should they wish to.

Should you wish to make use of or reference the School's name, spaces, identity, etc. in any publication/s, you must first furnish the School with a copy of the proposed publication/s so that the School can verify and grant permission for such publication/s to be made publicly available.

As per your letter of permission to conduct research at the UWC from Dr Ahmed Shaikjee, Deputy Registrar, assistance to access student contact information, must be done through the office of the Deputy Registrar.

We wish you success with your research.

Yours sincerely

Prof Jennifer Chipps
Director: School of Nursing
Faculty of Community and Health Sciences
UNIVERSITY of the WESTERN CAPE
T: [+27 21 959 3024](tel:+27219593024) E: jchippis@uwc.ac.za

Appendix 8: Informed consent form



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592819, Fax: 27 21-9593515

Title of Research Project: *The experience of undergraduate nursing students at a university in the Western Cape regarding online learning during the COVID-19 pandemic*

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name

Participant's signature.....

Date.....

Appendix 9: Information sheet



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592819, Fax: 27 21-9593515

Project Title: **The experience of undergraduate nursing students at a university in the Western Cape regarding online learning during the COVID-19 pandemic.**

What is this study about?

This is a research project being conducted by Boitumelo Sebeela at the University of the Western Cape. We are inviting you to participate in this research project because you are an undergraduate nursing student that used online learning during the COVID-19 pandemic and the experiences during that time is essential to the study. The purpose of this research project is to explore the experiences that undergraduate nursing students had with online learning, during the COVID-19 pandemic, that are enrolled at a university in the Western Cape.

What will I be asked to do if I agree to participate?

You will be asked to participate in a one-on-one in-depth interview where you'll share the experiences you as an undergraduate nursing student with online learning during the COVID-19 pandemic. The interview will be recorded and will take approximately 45 minutes. After I have completed reporting on the interview, a follow-up session will occur for you to confirm that I have reported what you said in the interview.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, you will be de-identified during the interview and how the data you provide will be stored will ensure you are anonymous with only the researcher having access to it. To ensure your confidentiality, interview recordings will be stored in a private use laptop that has a password and the researcher will store the recordings in password-protected folders. If we write a report or article about this research project, your identity will be protected. In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will inform you that we have to bridge confidentiality to fulfil our legal responsibility to report to the designated authorities.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about the experiences of undergraduate nursing students with online learning during the COVID-19 pandemic. We hope that, in the future, other people might benefit from this study through an improved understanding of **students'** experiences with online learning beyond the effects of pandemics.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. Participation in the research is not a course requirement nor does it affect your progress.

What if I have questions?

This research is being conducted by Boitumelo Sebeela in the Department of the School of Nursing at the University of the Western Cape. If you have any questions about the research study itself, please contact Boitumelo Sebeela at: 066 276534 or email 3453302@myuwc.ac.za.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof. J. Chipps

Head of Department: School of Nursing

University of the Western Cape

Private Bag X17

Bellville 7535

jchipps@uwc.ac.za

Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

HSSREC

Research Office

New Arts Building

C-Block, Top Floor, Room 28

University of the Western Cape

Private Bag x17

Bellville, 7535

This research has been approved by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee

REFERENCE NUMBER: **HS20/6/17**



Appendix 10: Editing Certificate



TO WHOM IT MAY CONCERN

This letter confirms that the mini-dissertation with the title “**Understanding Nursing Students’ Experiences of Online Learning at a University in South Africa during the Covid-19 Pandemic**” by Boitumelo Sebeelo at the University of the Western Cape for the partial fulfilment of the requirements for the Master in Nursing (Education) degree has been edited for grammatical and structural concerns by the undersigned language professional. Neither the research content nor the author’s intentions were altered in any way during the editing process. The responsibility lies with the author to effect changes and to attend to any anomalies indicated during the editing process. The editor’s professional profile can be viewed on LinkedIn. (<https://za.linkedin.com/in/gava-kassiem-a7569b39>).

Gava Kassiem

Independent Language Specialist/Academic Editor

MA (Linguistics and Language Practice)


Member of Professional Editors’ Guild

Member of Pro Lingua

26 November 2021

Appendix 11: Turnitin Similarity index

Reported similarity: 24%



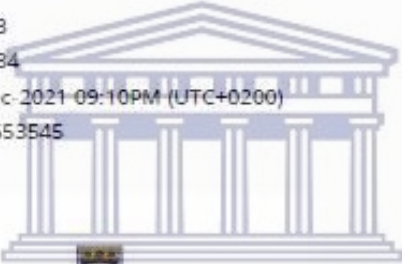
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**UNIVERSITY of the
WESTERN CAPE**
Faculty of Community and Health Sciences

**UNDERSTANDING NURSING STUDENTS' EXPERIENCES OF
ONLINE LEARNING AT A UNIVERSITY IN SOUTH AFRICA
DURING THE COVID-19 PANDEMIC**

A research thesis submitted in partial fulfillment of the requirements for the Degree
of Master in Nursing Education in the School of Nursing, Faculty of
Community and Health Sciences, University of the Western Cape

By
BOITUMELO SEBEELA
(Student number: 3453302)

Supervisor: DAVID M. M. M. M. M.
Co-supervisor: Dr. A. M. M. M.

Made 02 December 2021

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