



**Post Covid-19 Adaptations: Understanding Postgraduate Students' Perceptions
of the Effectiveness of Blended learning at the University of KwaZulu Natal**

(Pietermaritzburg Campus)

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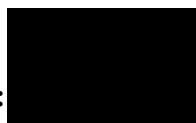
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Dedication

This dissertation is dedicated to God and my family. Your unwavering support and encouragement are greatly appreciated.

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Abstract

The global access to information, coupled with progressions in Information Communication Technologies (ICTs) have contributed greatly to the widespread growth of blended learning (BL) in universities, as such, this study hopes to explore the challenges, experiences, and perceived effectiveness of blended learning among registered postgraduate students at the University of KwaZulu-Natal (UKZN) Pietermaritzburg campus.

One-on-one semi-structured interviews were employed to collect data from participants. The advantages and shortcomings of blended learning were identified, and the impact of ICTs and pedagogical strategies on students' learning experiences and achievements were examined. Results obtained from this study add to the understanding of nuanced perceptions of postgraduate students towards using blended learning methods in teaching and learning. Insights from their reported perceptions provided the University with information that could assist in adjusting the blended learning approach. Lastly, recommendations have been presented to improve the efficacy of blended learning at the University of KwaZulu Natal and ensure that it meets the needs of postgraduate students post-COVID-19.

Keywords: Blended learning, Hybrid learning, Learning Management system, Perceptions, Student engagement, COVID-19, inquiry-based teaching, Community of Inquiry.

CHAPTER ONE

1.1 INTRODUCTION

The use of educational technology to enhance learning in institutions of higher education has increased drastically from its inception in the late 1990s. Educational technology, according to Januszewski and Molenda (2008) refers to the ethical procedure of enhancing learning and performance by utilizing appropriate technological resources and processes. eLearning has been the most popular application of educational technology however, the shortcomings of pure eLearning, such as isolation, have resulted in blended learning being a solution to solve the above-mentioned limitation.

Blended learning solves the shortcomings of pure eLearning as it connects learning beyond the classrooms. The popularity of BL in higher education institutions has inadvertently led to a cultural shift in teaching and learning; as such it is imperative to understand postgraduate students' perceptions of this mode of teaching and learning. The main focus of this study will be on examining postgraduate students' perceptions of the effectiveness of blended learning at the University of KwaZulu Natal (UKZN), Pietermaritzburg campus.

Blended learning (BL) is a term that is used interchangeably with hybrid learning. It is an approach that was developed three decades ago. It blends eLearning with traditional, face-to-face, classroom teaching approaches. It combines the benefits of online learning where technology for online engagement is utilised and the face-to-face interactions between the teacher and the learner (Graham, Woodfield & Harrison, 2013). While blended learning is widely accepted in developed nations as a way to manage student diversity and enable access to educational resources, this may not be the case for the majority of South African universities-

who house a sizable population of underprivileged students from rural communities (Muhuro & Kangethe, 2021).

Conversely, the complex landscape created by the COVID-19 pandemic necessitated the immediate adoption of teaching strategies that encourage social distancing to limit the transmission of the Covid-19 virus (Khoza, 2020). In the context of the UKZN, the outbreak of COVID-19 accelerated the implementation of an already existing teaching and learning method because Blended learning had previously been employed in incremental phases to enhance learning. Blended learning at the University of KwaZulu Natal had not been utilised in a fully isolated manner before the outbreak of COVID-19.

1.2 Background

The consequences of the coronavirus pandemic were devastating for the entire world. It compelled educationalists to re-evaluate the most effective teaching and learning pedagogies to use following the pandemic.

Blended learning was one of the approaches advocated by various educationalists which appeared to be an ideal alternative for higher education institutions in South Africa (Muhuro, & Kangethe, 2021). Therefore, this study aims to explore and examine postgraduate students' perceptions of blended learning's efficacy by analysing the challenges that can hamper the effective implementation of a BL system at the UKZN, as well as its strengths, since it has been argued to be the future of learning.

In 2011 the University of KwaZulu-Natal gradually introduced web-based resources through the LMS called Open Learning System (OLS) to supplement classroom learning (Khoza, 2021). The OLS was developed by former UKZN academic, Alan Amory who conducted a needs analysis to develop a practical LMS according to the specific needs of the UKZN. In the year 2016, the UKZN adopted and prescribed the Modular Object-Oriented

Dynamic Learning Environment (Moodle) as the official LMS. It was developed in Australia by Dougiam Martin in 1999, and gained international recognition. Lecturers at the UKZN would interact with students by posting journal articles, videos, module content and useful links on Moodle. The integration of technology into students' coursework was implemented gradually to foster adjustment however, the outbreak of COVID-19 accelerated the implementation of web-based learning and subsequently created adjustment difficulties for students that had little experience with learning online (Khoza,2021).

Another important factor observed in the use of BL courses at the UKZN is its inherent need for students who are self-reliant and self-directed. Students are given the opportunity to make choices regarding where, how, and what, they will study. Skibba, in addition, adds to this statement by proposing that BL can produce a learning environment that is adaptable, accommodating, and creative, because connecting traditional learning methods with online learning activities creates a constant learning loop that generates meaningful learning experience for students (2006).

1.3 Rationale of Study

BL is quickly obtaining popularity in higher education institutions and according to Anderson et al. (2001) is the "new normal" in course delivery. This is alarming given that 78% of UKZN students reside in rural underdeveloped areas without network or access to data. Moreover, this consequently makes it difficult for them to use online learning platforms such as zoom and Moodle effectively. Access to technology is one of the most important factors that can influence student satisfaction according to Saboowala, and Manghirmalani (2021), as such any teaching and learning approach must be implemented with the input of students, who are among the primary stakeholders in universities. Therefore, the objective of

this study is to ascertain how postgraduate students at the UKZN perceive the efficacy of BL in enhancing their learning experience.

1.4 Problem Statement

The discovery of Coronavirus (COVID-19) drastically altered the way teaching and learning was conducted (De Figueiredo et al.,2021). COVID-19 is a respiratory infectious disease produced by the SARS-CoV-2 virus. Individuals who contract the disease might exhibit minor respiratory symptoms but might recuperate without the need for specialised treatment if they do not have pre-existing health conditions such as Asthma or diabetes (World Health Organization,2023). As a result of its contagiousness, social distancing and the closure of schools were implemented to combat its spread.

The closure of universities during the COVID-19 pandemic created the perfect opportunity for universities to implement an online and subsequent blended learning approach to learning and teaching (Khoza & Mpungose, 2022). However, it is imperative to understand how postgraduate students at the UKZN (PMB campus) are responding to this instructional approach, taking into account the contextual challenges that influence the efficacy of BL. This understanding is important in enhancing the design and implementation of blended learning (BL).

To remain competitive within the higher education market, the UKZN must prioritise a high student retention rate. It is for this reason that it is imperative to examine whether the technological advancements applied during the pandemic, particularly the incorporation of blended learning, represent a viable strategy for continued application among postgraduate students. Specifically, considering that the BL adaptations expedited the transition to using BL methods in teaching and learning. Prior to the COVID-19 pandemic, as mentioned previously,

BL at the UKZN was implemented through the use of the learning management system, Moodle; however, some academics did not use Moodle in delivering their course content to students (Khoza,2020).

The UKZN had embraced a traditional approach to teaching and learning where students attended in person lectures and completed sit down examinations hence this shift to BL was profound. Moreover, blended learning helped in continuing with course delivery in the midst of a pandemic, as such understanding students' experiences with BL could help the institution in preparing for another pandemic or state of disaster.

1.5 Research Objectives

- To examine postgraduate students' comprehension of blended learning and its application as a teaching method at the University of KwaZulu-Natal (UKZN).
- To evaluate the effectiveness of specific pedagogical strategies (e.g., quizzes, polls, and Zoom breakout sessions) in enhancing learning experiences and fostering social presence during remote, online, and blended learning.
- To analyse the role of blended learning in promoting student engagement.
- To explore postgraduate students' perceptions of the effectiveness of blended learning at UKZN.

1.6 Research Questions

1. What level of understanding do postgraduate students have about blended learning and how it is used (as a teaching method) at the University of KwaZulu-Natal?
2. To what extent are quizzes, polls, and Zoom breakout sessions effective in maximising the learning experience and social presence of students in remote, online, and blended learning?
3. How does blended learning promote student engagement?

4. To what extent do postgraduate students at the University of KwaZulu-Natal find blended learning to be effective?

1.7 Research Approach and Design

The qualitative research approach was appropriate for this study, especially in regard to successfully exploring unquantifiable data expressions such as perceptions (Neuman, 2014). The research design according to Kothari, is a blueprint of the research process and an exploratory research design was used for this study to investigate a phenomena that is not well understood (2004). There is little to no prior knowledge that can address this study's objectives therefore, an explorative research design was used.

Qualitative research is interested in investigating how people perceive their experiences and what meaning their experiences can be attributed to, therefore as a result of the qualitative research design's ability to illustrate how people construct their world and create meaning, it was found to be appropriate for this study and was thus chosen (Pandey & Pandey, 2015). Moreover, a qualitative research design is multifaceted as a result it allowed the researcher to understand holistically the phenomena being studied.

Little is known about how postgraduate students at the UKZN Pietermaritzburg campus view the usefulness of blended learning in boosting student engagement in the aftermath of the covid-19 pandemic, therefore an exploratory qualitative design yielded, in-depth knowledge of how students perceived blended learning's effectiveness. This research design further aided in the investigation of the effectiveness of specific pedagogical scenarios such as online quizzes, polls, and Zoom breakout sessions in maximising the learning experience and social presence of postgraduate students.

1.7.1 Relevance and Significance

In the study conducted by Garrison and Vaughan in 2008, they urged higher education institutions (globally) to begin honoring their promise of offering learning experiences that attend to the needs of the 21st century society. Garrison and Vaughan contend that the traditional lecture technique of instruction and delivering course content is not efficient in engaging twenty-first century students to think critically and understand the influx of data confronting them.

The authors further state that understanding complex topics necessitates extra engagement that is not possible in a traditional seminar hall, as such BL might improve online and face-to-face methods, where each instructional approach is enhanced by the occurrence of the other. Therefore, by engaging with the stakeholders of blended learning at the UKZN and understanding their perceptions of the learning model, the University can begin to refine and optimise the blended learning framework.

Researcher Garrison in the year 2016 asserts that with the new and advanced communication tools changing the way people acquire information, the traditional lecture approach is interrogated. Furthermore, as university fees increase, students are calling for better learning experiences and are questioning whether attending scheduled classes is worth the daily travel to campus. Blended Learning could be the solution for both the institutions and students as they transition towards more convenience and flexibility. However, this suggested solution must be measured and reviewed. Additional studies focusing on the impact of BL on academic Achievements, knowledge retention, and learning outcomes are necessary thus, the goal of this research project includes contributing to the body of knowledge concerning the effectiveness of BL.

In her evaluation of literature, Vignare (2007) stated that additional research is needed to determine the efficacy of BL and students' perception of its efficacy. She further states that it is more challenging to locate studies that measure the dimensions of retention, completion, perceived learning, and changes in cognition present in BL.

1.8 Limitations of Study

According to Kothari (2004), using a qualitative research design has various limitations. In this study the size of data, made data analysis and data interpretation tedious. Furthermore, the presence of the researcher during data collection, might have influenced participants' replies as they would provide contradicting statements. The sample is not representative of the overall university population, which was the final limitation of this study.

Semi-structured interviews were arranged to collect data, and attempts were made to make the sample group representative of the student body, but the restricted number of students who were willing to participate affected this plan.

1.9 Definitions

Blended learning: Courses that mix online with face-to-face class activities. (Picciano, 2007, p. 9)

Retention: Refers to the ability of the institution to retain a student from admission through graduation (Berger & Lyon, 2005)

Learning experience: An amalgamation of factors such as course completion, satisfaction, motivation and school support experienced by students in obtaining their educational goals: (Costley, 2016).

1.9.1 Acronyms

BL: Blended learning

BLE: Blended learning environment

CoI: Community of Inquiry

HEI: Higher education institutions

F2F: Face-to-face

LMS: Learning Management System

1.10 Research Outline

The chapters are organised according to the order in which the research was conducted.

Chapter One: This study is divided into five chapters. The first chapter presents the study's background, rationale, problem statement, research objectives, and questions. The chapter concludes with an outline of the structure of the study.

Chapter Two: Presents a review of literature on Blended learning. Research on students' perceptions of blended learning, as well as the incorporation of technology into the educational system was also reviewed.

Chapter Three: provides the research methodology employed in this project. The research paradigm, research approach, population, and sampling process are discussed. Moreover, the techniques used to collect and analyse data are discussed. The methods used to ensure reliability, limit bias, and address ethical considerations are discussed. This chapter ends by highlighting the limitations that were encountered during the study.

Chapter 4: Presents the results of the analysed data as well as the interpretations.

Chapter 5: Provides a discussion of the findings of this study and ties the research to the goal. Each research objective is answered, and implications are combined with recommendations to present the perspectives of Postgraduate UKZN Students on the effectiveness of blended learning.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The role of technology in teaching has been a controversial topic amongst academics in recent decades. This topic was further intensified by the shutdown of universities due to the outbreak of COVID-19 and the subsequent national shutdown in the year 2020. This literature review draws from the Community of Inquiry theory and seeks to review what other scholars have discovered about students' perceptions of blended learning, including how cognitive, social, and teaching presence influence their engagement, learning experiences, and overall satisfaction. Furthermore, this present study examined how institutions of higher learning, such as the UKZN, have implemented a blended learning approach to improve learning.

2.2 Theoretical Framework

According to Shea (2007), a blended learning theoretical framework should address how learning typically occurs, particularly in online environments. Early researchers in online learning- Garrison, Anderson, and Archer (2000) created a theoretical framework to explain the educational environment and direct the research on online learning effectiveness in education. This conceptual framework is known as the *community of inquiry theory* and was used to explain and understand how students view the effectiveness of BL. The theoretical framework identifies two important participants (*teachers* and *students*) as being essential to a worthwhile educational experience (Zhou, Wu, & Cao, 2025).

The community of inquiry theory (CoI) is based on a set of philosophical, epistemological, and learning theories (Zhou, Wu, & Cao, 2025). It contends that 3 elements- *social presence*, *cognitive presence*, and *teaching presence* need to be present in order to give students a rich and fulfilling learning experience. In Figure 1, the basic structure of the CoI framework is visually shown. The figure demonstrates how the presences are interdependent, with each one sustaining the other. These components are essential requirements for a good higher educational experience, according to Zhou et al. (2025), who further state that the CoI framework offers researchers a means to assess students' perception of their online learning experiences (2025).

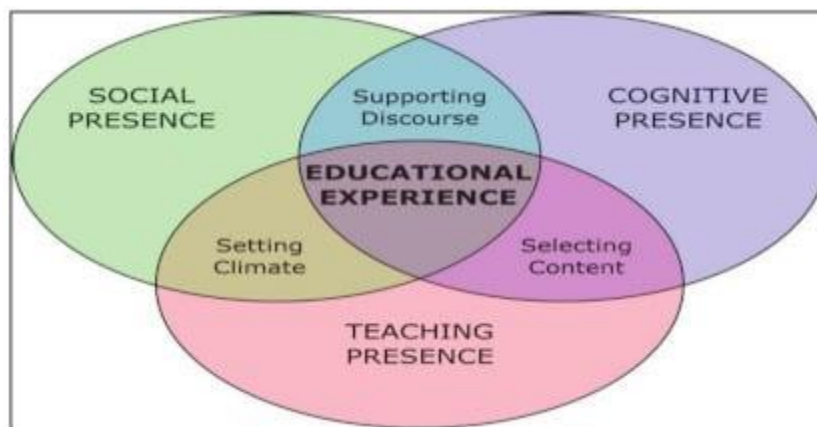


Figure 1. Elements of an Educational Experience

From Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105.

2.2.1 Social presence

The *social presence* supports the creation of the *cognitive presence*. The goal of the social presence is to foster an atmosphere where students are relaxed and comfortable in asking

challenging questions, contributing thoughts, developing personal and emotive relationships with one another, while showcasing their genuine individual personalities (Garrison,2016).

To illustrate, a study conducted by Boston et al. (2009) found that social interaction continues to be an important factor for retention. For example, allowing students to share stories and experiences with their peers could build community within the online environment.

Rovai and Jordan (2004) conducted an analysis of fully online, blended, and fully face-to-face programs. They reported that learners in the blended programs had the strongest sense of community. This was evidenced by higher connectedness and mean learning scores. Such studies indicate that improved learning outcomes are found in blended learning environments in comparison to purely online environments (Boston et al.,2009; Jordan et al., 2020; Pandey et al.,2021).

Environments that support safety, connection, and collaboration foster knowledge acquisition (Bransford et al., 2000, as cited in Shea, 2007). According to Garrison et al., in a text-based world, the ability to express emotions like closeness and warmth is diminished 2001. On the other hand, self-disclosure and humour can promote unity among students in online environments. Recently, the study completed by Derks and Bos in 2008 further observed that the display of emotion in computer-mediated communication has become universal due to the popularity of social media, blogs, support groups, and emoticons (emotional icons).

Communication in a CoI needs to be supportive, this may be achieved by praising and motivating others as well as by recognizing the efforts of each individual. Finally, group cohesiveness is the final measure of the social presence. According to theorist, Garrison et al. Group unity promotes learning and critical discourse because the members perceive each other as belonging to the unit and not as individuals.

Authors Garrison and Vaughan (2008), affirm that collaborative activities preserve group cohesion in a blended learning environment (BLE). They also argued that starting these activities in a physical contact lesson gives students more time to make sense of the material and check their understanding when the collaborative activities are transferred online.

2.2.2 Cognitive presence

The cognitive presence refers to the process, whereby students in a community of inquiry(Col) generate understanding through continuous communication. It is the most fundamental component of accomplishment in higher education, according to Garrison (2008). The academic material and mental engagement in the online environment are referred to as the cognitive presence element (Akyol & Garrison, 2008).

The cognitive component has its roots in the Piagetian cognitive framework. This component of blended learning has made it apparent that it is impossible to memorise all of human knowledge; instead, education and instruction should focus on applying knowledge to real-world situations and teaching students where to find trustworthy information. To ensure that the cognitive element is present, researcher Garrison (2008) proposes that lecturers ask their students to consider what they are learning right now and how they will use it in the future.

Discussions involving information exchange, idea connection, and application of new ideas are an important component of the *cognitive presence* in an online setting. While computer-mediated communication does not possess the same dynamics as would an in-person interaction, Garrison contends that it does have the benefit of allowing contemplation time (2000).

2.2.3 Teaching presence

The *teaching presence element*, according to Akyol and Garrison (2008), consists of effectively designing instruction to ensure content is delivered in the best way possible to

students. This entails organising the course structure, moderating discussion, guiding learning through cognitive phases, offering direct instruction and assistance with questions and understanding.

The teaching presence is difficult to create in an online environment however, lecturers could ask students to turn on their video cameras or webcams because by doing so, lecturers will know whether they are teaching an effective, engaging course. Needless to say, the teaching presence is indispensable in student satisfaction and overall learning perception.

Students and teachers can share the facilitation function according to the teaching presence. It is for this reason that authors Garrison et al (2000) use the term *teaching*, instead of *teacher*, to emphasise the need to share teaching responsibilities. The *Teaching presence* (TP) is demonstrated by 3 subdomains namely, instructional management, building understanding, and providing direct instruction. *Instructional management* consists of designing and planning learning guidelines, such as curriculum development, assessment design, and, deadline setting.

According to Garrison et al., the subdomain of the TP *Direct instruction* focuses on the course content, providing answers to questions, directing and summarising conversations (2000). In a BLE, the TP serves as the glue holding the social and cognitive presences together thus the isolation experienced by students during the COVID-19 lockdown, it affected the TP which in turn affected the SP and CP however with the introduction of blended learning students can now build and sustain a strong CoI beyond the online context.

2.3 Review of Literature

2.3.1 Conceptualisation of BL

BL is a term that originated in the late 1990s and is deemed pre-paradigmatic according to an analysis conducted by Kane and Alavi (2007). The term pre-paradigmatic indicates that

a scientific consensus has not been reached concerning the definition of BL. This is concerning because the rapid advancement of technology has compelled academics in institutions of higher education to modify their instructional methodologies by incorporating online methodologies despite the absence of a clear blueprint outlining how lecturers can effectively attend to students' diverse academic needs.

To understand the practice and impact of BL, clear and established definitions, models and conceptualisation are required. In this literature review, three influential definitions of blended learning have been provided to help conceptualise the phenomenon of BL.

The most frequently cited definition of BL is by Garison and Kanuka (2004), who propose that BL is the thoughtful integration of classroom face to face learning experiences with online learning experiences. This definition has been cited 7713 times (Google Scholar, September 01, 2024).

The second most popular definition of BL was coined by Garnham and Kaleta, who state that BL combines the elements of F2F and online learning with the addition of replaced seat time(2002). To showcase the dynamic essence of BL, Garnham and Kaleta characterise what is currently called blended in research by using the term hybrid.

The function of hybrid courses is to blend the best aspects of face-to-face and online learning while simultaneously encouraging autonomous learning and cutting down on seat time. Their definition was ingenious because earlier studies on BL did not make note of the presence or lack of reduced seat-time, instead they focused on the incorporation of technology enhanced learning activities that were supplementary to a traditional F2F classroom environment (Garnham & Kaleta, 2002).

There is no single commonly accepted definition of blended learning, and the absence of a universal definition for blended learning allows HEIs to contextualise the concept

according to their context. Therefore, this research utilised the definition of BL adopted by the UKZN which is “the mixture of traditional delivery including: lectures, group discussions, together with e-learning methods, which accommodate various learning needs of a diverse audience in a variety of subjects.”

(<https://ukznextendedlearning.com/2020/06/29/the-new-blended-learning-approach/>).

2.3.2 Students’ perceptions of Blended learning

Many South African students who are pursuing higher education come from underprivileged schools that have limited access to technological resources such as computers and community libraries. Furthermore, not all students are familiar with using technology. This results in varied perceptions and attitudes of blended learning’s effectiveness.

The results from the investigation conducted by Khan et al. (2023) concerning the attitudes towards BL of King Saud University students reveal that, despite 74% of students having access to the internet outside of the university campus, only 40% accessed the LMS Moodle on a daily basis. In addition, 38% of the participants reported encountering challenges with BL and expressed a preference for a traditional face-to-face method of learning, while 72 % reported positive attitudes towards the blended learning approach.

The 2015 study conducted by Abdulkarim and Albarrak investigated students’ level of satisfaction with blended learning. Students completed a questionnaire, and the findings revealed that team-based learning was a highly preferred teaching tool in BL. Within the CoI model, optimal knowledge and student satisfaction are dependent on the presence of the teaching, cognitive and social presence.

The interactions among students in team-based work made them understand the course material quickly as a result of engaging and evaluating different viewpoints from each other.

This preference for team-based learning affirms the CoI model, which asserts that when students get the opportunity to express themselves emotionally and socially the CP is fostered.

The above-mentioned study confirms the findings of Akyol et al. (2008), who investigated the changes in the TP, SP, and CP in both online and blended learning courses. The results revealed that, higher levels of affective expression were found in courses delivered online while group unity improves significantly in traditional contact classes. In the research conducted by Abdulkarim and Albararak there was a high affective expression reported as a result of team based online work along with an increase in group cohesion during face-to-face sessions.

In 2006, Akkoyunlu and Soylu conducted a study where they examined students' views regarding the BLE. The research was conducted on students registered in the Computer Education program at Hacettepe University, Turkey. The results were consistent with findings from previous research, as they revealed that students enjoyed taking part in the blended learning environment. A major factor that contributed to their positive perceptions of blended learning was the opportunity for in-person interaction within the blended learning environment. It was through these F2F interactions that students participated in reflective practices and discourse over their course content. This resulted in higher academic achievement levels.

Moreover, this finding from Akkoyunlu and Soylu's study confirms the assertion that for a community of inquiry to be established, authentic interactions among peers and instructors alongside a thoughtfully structured design of the BL environment are necessary for a successful blended learning environment.

The various studies conducted to examine students' perceptions of BL's efficacy reveal that a multitude of factors influence students' perceptions of BL. They have extensively demonstrated that programs with a strong teaching presence yield academic success among

students because the learning materials have been thoughtfully designed; learners are stimulated to take part in critical debates and receive feedback to correct misunderstandings, thus fostering a CoI.

An identified gap in existing literature is the lack of focus on understanding whether students comprehend the concept of blended learning and whether they are cognizant of the reasons behind its introduction into their coursework delivery. Studies designed to investigate students' views and attitudes concerning BL have predominantly focused on the perceived disadvantages and advantages experienced with this learning approach. This present study has effectively investigated whether students at the UKZN understand BL and whether they know the reasons behind its implementation in the dissemination of their course content.

2.3.3 Educational technology implemented in blended learning

The adoption of technological devices and tools within education has transformed the instructional strategies adopted by lecturers and the learning modalities adopted by students. In addition, educational technologies have been effective in facilitating individualised learning experiences, consequently replacing traditional teaching methods (Nalaka,2021).

Students of the twenty-first century are considered to be digital natives, engaging with technology in their everyday lives thus the use of technology in disseminating course content in BL equips students with digital literacy while simultaneously catering to their individual learning preferences (Nalaka,2021). The University of KwaZulu-Natal employs numerous technological tools to provide access to resources and information for its students. This study sought to examine the effectiveness of Zoom breakout rooms, online quizzes, and polls in promoting student engagement and enhancing the learning experiences of postgraduate students.

2.3.3.1 Zoom breakout rooms

David Read's study on *Supporting student collaboration in online breakout rooms* substantiates existing literature regarding the effectiveness of Zoom breakout sessions in enhancing social engagement. His study, conducted in 2022 illustrates that the majority enjoyed group discussions and tasks that were completed in Zoom breakout sessions. They further reported improved learning outcomes during their online sessions. His findings are further supported by the CoI framework because lecturers who employ Zoom breakout rooms promote both the cognitive presence (CP) and social presence (SP). The CP and SP are promoted through the establishment of connections amongst group members and through the reinforcement of the course content.

2.3.3.2 Online Assessments via Online Quizzes

Existing literature reveals that quizzing is an effective tool for identifying knowledge gaps however, less emphasis has been placed by academics on investigating the effectiveness of online quizzes in enhancing student engagement (Nalaka,2021; Read,2022; Zhang,2020). Hence, this study focuses on exploring whether quizzes are effective in enhancing student participation in blended learning.

The advantages of using online quizzes are numerous, but their primary appealing feature lies in their ability to be graded automatically, hence facilitating instant feedback to students. Reviewed literature on teaching and learning has proposed that the introduction of scheduled quizzes correlates with numerous student outcomes (Telili,2023; Abdulkarim & Albarrak,2015). These included higher academic achievement however, existing research examining the effectiveness of quizzes in promoting student engagement in BL is insufficient.

2.3.3.3 Polls

The teaching presence (TP) motivates educators to incorporate interactive tools into their lessons in order to cultivate a learning environment that is both dynamic and conducive for collaborative discussions. Zhang's comprehensive research on the integration of technological tools within BL advocates for the use of interactive Polls such as Mentimeter (2020). His findings revealed that interactive Polls were effective in stimulating student engagement and providing educators with the opportunity to collect immediate feedback from students.

Zhang further revealed that polls facilitated real time data analysis thus allowing lecturers the ability to track the academic progress of their students and to create instructional strategies that could address the diverse needs of students within BL(2020).Therefore, this literature confirms that certain pedagogical scenarios such as polls significantly enhance student participation in a BLE while simultaneously fostering a personalised educational experience for students.

2.3.4 Impact of COVID-19 in Institutions of Higher Learning?

The World Health Organization announced a pandemic following the outbreak of the COVID-19 disease, which was first identified in Wuhan City, China in the year 2019 (WHO,2020). The consequences of the pandemic included the forced closure of universities to curb the spread of the disease, and distance learning was implemented to ensure the continuity of course delivery and assessment.

This drastic transformation in education had dire repercussions for students who came from economically and socially disadvantaged contexts. Gianfredi et al. (2024) further assert that the adoption of distance learning policies in HEIs, coupled with the general social distance

measures, has impacted students' perceived level of stress. This in turn may have inadvertently affected their academic performance.

This argument is corroborated by Prakaschandra et al. (2023), who state that the challenges experienced by underprivileged students during the COVID-19 pandemic will become increasingly apparent in the near future when these students transition into independent practitioners. This assertion emphasises the importance of evaluating students' perceptions regarding the effectiveness of blended learning, especially since it has been endorsed as an alternative teaching method in the aftermath of the pandemic at the UKZN.

The foundational principle of the community of inquiry model asserts that it is through the collaboration and interaction of a group of students that mutual understanding and personal meaning are established (Akoyl & Garrison, 2011). From the above studies, the limited time available to facilitate discourse and direct instruction in online sessions (as a result of the abrupt changes in curriculum delivery) compromised the teaching presence.

The world has begun to see the positive results of the emergency measures taken to combat COVID-19, and academics from all over the world are considering what society has learned from the pandemic. One question brought forward was, will universities ever be the same again after the lockdown forced educators to use technology to provide their students continuity in the face of adversity? (Dube, 2020; Khoza, 2021). The University of KwaZulu-Natal is encouraging 70% of teaching to be done through contact teaching, with the remaining 30% to be conducted online (<https://ulop.ukzn.ac.za>). All things considered; most universities implemented online learning since March 2020 and have transitioned to blended learning indefinitely (Li, 2022).

Blended learning has become increasingly popular, but most researchers have concentrated on issues at the course level (Khoza, 2021). There is limited research on adoption

concerns, and students' perceptions of its success. To assist higher education institutions in strategically embracing blended learning on campuses, more institutional-level blended learning research is required.

2.3.5 Support for Blended Learning in South African Higher Education Institutions

Blended learning has emerged as a vital element in South African higher education. Existing literature shows that although blended learning provides flexibility and accessibility, its execution in resource-limited settings remains challenging (Cilliers & Funda, 2024). Khoza (2020) writes extensively about e-learning trends, emphasising that, relative to the global trends, Sub-Saharan Africa continues to experience low participation and success rates in higher education, highlighting the structural and infrastructural barriers that hinder the effective adoption of e-learning and blended learning approaches.

The Global Education Monitoring Report 2017/2018 from UNESCO demonstrates that the gross university enrolment percentage has increased from 17% to 46% globally since 2000, in nations with high middle-class incomes (UNESCO, 2017). Since 2010, South Africa's participation rate in higher education has consistently climbed to 18.6% (Department for Higher Education and Training, 2017), while the country's first-year dropout rate has fallen from 30% to 14% in 2015 (Green et al., 2016).

With the introduction of a blended learning system, the dropout rate is expected to decrease (Khoza, 2020). Thus, it can be proposed that the UKZN has an opportunity to contribute significantly to the South African National Development Plan 2030 goal of increasing university enrolment from 950,000 in 2010 to 1,62 million by 2030 (Khuluvhe et al, 2011).

The term *blended learning*, as previously stated, is a teaching strategy that blends in-person traditional classes and online learning experiences. Mndende (2021) highlights the

necessity of blended learning by pointing out that it gave learners the opportunity to continue with their learning during the national COVID-19 pandemic.

Mndende (2021) further acknowledged that the change to online learning during the onset of Covid-19 came with numerous challenges such as the reduction in class attendance however with *blended learning*, these challenges can be mitigated by including face-to-face classes in teaching the module (2021).

Dube, who also writes extensively about education trends in South Africa asserts that BL is a feasible option for South African universities (2020). He justifies his stand by arguing that BL provides learners the opportunity to have traditional and online teaching. This implies that time lost when students are not in class can be recovered through recorded sessions, therefore, implementing a blended teaching and learning system is supported by numerous academics.

For the most part, numerous studies support the adoption of a blended learning system for institutions of higher learning as they highlight that blended learning contributes, to some degree to financial savings. To illustrate, students who use public transportation on a daily basis may save money by only attending scheduled in-person classes. However, previous research conducted before the COVID-19 pandemic has suggested that blended learning generally benefits the privileged (Tshabalala, Ndeya-Ndereya, & van der Merwe, 2014).

Fresen (2018) expands on the preceding point by claiming that because of the wealth disparity in South Africa (with 80 percent of the country's wealth belonging to the white minority population). Implementing a blended learning system will largely benefit the wealthy and exacerbate the economic divide since blended learning requires students to have access to data, technology, and a conducive learning environment. 78 % of UKZN students struggle to attain the above listed resources.

In contrast, Chimbunde (2021) argues that blended learning is a secure alternative to employ instead of adopting a purely online teaching strategy as an emergency solution. A purely online learning approach has the potential to exacerbate the existing inequalities by maintaining the privileges of the elite while disadvantaging students who are economically underprivileged and lack access to technological resources.

2.3.6 Strengths and weaknesses of BL

Several studies emphasise the benefits experienced in BLE (Pandey et al.,2021; Hossain, Tasnim &Sultana,2020). Its ability to be flexible is ground-breaking since students can choose to finish the online portion of their studies whenever it suits their individual schedule. However, Dube does warn that, for a BL approach to be effective, it relies heavily on having access to technology (2020). This is a concern as 78% of the student population at the UKZN resides in disadvantaged communities with limited resources therefore, a huge student population can be excluded from the curriculum.

Jackson and Helms (2008) conducted a thorough analysis of blended learning's advantages and disadvantages, coming to the conclusion that mixed courses combine the best aspects of both online and in-person learning environments. They applied the SWOT analysis method, which promotes open-ended conversation and assists in identifying important factors and concerns related to a choice or problem. They conducted surveys to explore students' Blended Learning experiences in a business course. The findings indicated that students listed nearly as many strengths as shortcomings, indicating that the BLE contains fair trade-offs.

Certain factors identified as strengths were listed as weaknesses at the same time. For instance, some students viewed the benefit of spending less time in class as a strength, while others viewed it as a weakness because they did not have as much opportunity to learn from the lecturer or other students.

Vaughan (2007) identified four major obstacles that new BL students must overcome in his review of literature: the belief that fewer in-person classes will equate to less work; poor time management abilities; a hard time taking ownership of one's own learning; and technological issues with the online component of the course. Even though the online activities might have required the same amount of time as an in-person class, students did not view listening to lectures as laborious; instead, they saw it as less work (Akoyl et al.,2009).

2.3.7 Adjustment Issues with Blended Learning

The incorporation of technology into the classroom supports the *Community of Inquiry theory's* Cognitive presence, which states that technology can provide a space for students to easily confirm the meaning of course material through reflection and discourse (Garrison, Anderson, & Archer, 2001). Blended learning necessitates that the instructor or lecturer be experts in technology; hence, the university's faculty's inadequate computer skills can lead to adjustment issues for students (Dube,2020). According to Dube (2020), this is a major factor that is causing adjustment issues in incorporating online learning in rural Universities. Digital technology is frequently only used by faculty members for research, academic writing, and communication. Few have extensive experience with using technology for teaching activities.

The transition to BL has been particularly difficult for some South African university students who use mobile phones as their main devices to access the internet. In addition, data connections are frequently slow and expensive, and family homes are congested. Minister Blade Nzimande revealed the results of a survey conducted on the 'social effects of the Covid-19 pandemic on post-school students' (Department of Higher Education and Training, 2021).

The survey polled 13,000 students from universities and TVET colleges throughout South Africa. The results were as follows: Only 38% of university students had access to online learning options; 50 % of students reported difficulties communicating with their institutions

during lockdown, with even more difficulty reported by TVET students; and almost a third of those who had access to online resources did not have a suitable place to study. These external factors have been cited by numerous scholars as impeding students' success in blended learning (Tshabalala et al.,2021).

2.3.8 Comparison between blended and traditional Learning on Academic performance

Online learning according to Muhuro and Kangethe(2021) lacks the benefits found in traditional classes. The largest shortcoming of blended learning is that it requires students to reside in environments that are conducive for learning to take place. This is problematic as a large majority of UKZN students reside in crowded homes. On the other hand, Khoza (2021) states that blended learning should still be critically studied as technological advancements do not promise absolute success in teaching and learning.

2.3.8.1 Gaps in Literature

A vast majority of existing literature and research regarding the investigation of postgraduate students' perceptions of blended learning have been geared towards undergraduate students (Cilliers & Funda,2024). Little to no attention has been given to postgraduate students within the southern African region. Westerlaken et al. (2019) contend that there are unique academic and personal challenges faced by postgraduate students that differ from those experienced by undergraduate students due to the unique context in which they typically find themselves. A unique contextual difference highlighted by authors Westerlaken et al. (2019) included the occurrence of postgraduate students balancing the responsibilities and duties of academic commitments, professional duties, alongside family responsibilities. Thus, postgraduate studies are largely research-intensive. And the need for intensive support from lecturers. These contextual differences are typically excluded in research focused on undergraduate blended learning.

The limited production of postgraduate-focused research on perceptions of blended learning effectiveness suggests that there are gaps in fully understanding how postgraduate students perceive the effectiveness of blended learning, specifically at the University of KwaZulu-Natal. This research study aims to fill a clear gap in the literature, especially within the understudied context of South African universities, by contributing nuanced information regarding postgraduate students' perceptions of blended learning

2.3.9 Conclusion

This literature review has thoroughly examined the existing body of literature concerning students' perceptions of the efficacy of BL. The findings from this project hold the potential to not only contribute evidence to the existing discourse on blended learning and technology adoption but could also offer a practical understanding of the factors influencing students' perceptions regarding the efficacy of BL within the space of higher education, particularly the University of KwaZulu Natal.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Chapter 3 presents the methodology used to understand and document Postgraduate students' perceptions regarding the effectiveness of BL at the UKZN, PMB campus in the aftermath of Covid-19. *Student perceptions* according to Coates (2005) are made up of the ideas, opinions, and beliefs that students have about people, things, and events. This chapter will focus on the following topics: Research site, Research design, data collection and conclude with a discussion on data analysis and ethical considerations.

3.2 Research Site

The UKZN was formed on January,1,2004 when the University of Durban-Westville and the University of Natal merged to form one institution. The University of Durban-Westville was formed in 1960 to accommodate Indian South African students during Apartheid (Olasina,2018). In 1988, the Tertiary Education Act repealed the 1953 Extension of University Act, which segregated South African universities by race. This act opened up the University of Durban-Westville to all ethnicities and races.

The UKZN has 5 campuses: Howard College, Edgewood, Medical School, Westville, and Pietermaritzburg. This investigation was carried out at the Pietermaritzburg (PMB) Campus, located in the province of KwaZulu Natal, Midlands. It offers numerous courses from four colleges. This study was conducted in the years 2023 to 2024 and included registered postgraduate students in the College of Humanities.

3.3 Ontology, epistemology and paradigm

When choosing an appropriate research design, one must take into consideration the fundamental philosophical foundation. Extensive Philosophical principles of social research have been discussed by numerous scholars and these foundations are often difficult to understand (Denscombe, 2010).

Understanding these philosophical principals is crucial, because they shaped the nature of the investigation and methods employed to gather evidence. Lastly philosophical principles influenced the inferences made from this study (Denscombe, 2010).

Ontology according to Denscombe, (2010), “refers to the perspectives that a researcher maintains concerning the nature of social reality”. At the end of the ontology spectrum are Interpretivists who conceptualise social reality as being subjective and socially constructed.

In addition, interpretivists believe that the only way to comprehend an individual’s reality is through their experience of that reality. Interpretive researchers depend on asking questions and making observations to produce a precise understanding of the phenomenon being investigated. This study adopted the interpretivist paradigm because it adequately explored how postgraduate students at the UKZN interpret and perceive the effectiveness of blended learning after experiencing it before and post-COVID-19.

Denscombe defines Epistemology as the mechanism people use to create knowledge about the social world (2010). Positivism advocates for the use of scientific methods to acquire knowledge and strives for objectivity, measurability, predictability, controllability and creation of laws on behaviour (Creswell, 1999). The positivist epistemology aligns with the realist ontology (Lincoln et al., 2011).

Contrarywise, interpretivism describes knowledge as a concept that relies on an individual's ability to make sense of a reality hence lacking order, structure, and inherent characteristics (Denscombe, 2010). Interpretivists aim to understand and interpret the world in terms of the participants, which the researcher aimed to do in this study (Creswell, 2012).

3.4 Research Objectives

- To examine postgraduate students' comprehension of blended learning and its application as a teaching method at the University of KwaZulu-Natal (UKZN).
- To evaluate the effectiveness of specific pedagogical strategies (e.g., quizzes, polls, and Zoom breakout sessions) in enhancing learning experiences and fostering social presence during remote, online, and blended learning.
- To analyse the role of blended learning in promoting student engagement.
- To explore postgraduate students' perceptions of the effectiveness of blended learning at UKZN.

3.5 Research Questions

1. What level of understanding do postgraduate students have about blended learning and how it is used (as a teaching method) at the University of KwaZulu-Natal?
2. To what extent are online quizzes, polls, and Zoom breakout sessions effective in maximizing the learning experience and social presence of students in remote, online, and blended learning?
3. How does blended learning promote student engagement?
4. To what extent do postgraduate students at the University of KwaZulu-Natal find blended learning to be effective?

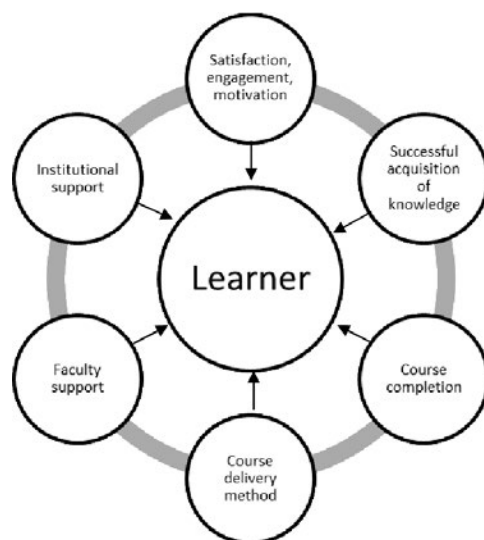
3.6 The Research Design

A *methodology*, according to Neuman (2014), refers to the procedures undertaken in a research investigation. These procedures involve data collection tools, sampling techniques and tools necessary to conduct the study and analyse the data. A study's methodology outlines the structure used to address a problem in a research project systematically. It takes into consideration assertions made, limitations discussed and the reduction of limitations.

A research design according to Terre Blanche et al. (2006), is a detailed plan outlining the research procedure. In this study a qualitative exploratory research design, which supports the interpretivist paradigm was employed. This design seeks to create novel insights into topics that are not investigated, and develop detailed hypotheses.

The core assumptions of qualitative research revolve around the interpretations of *causes* and *contexts* along with cultural aspects of the research topic (Terre Blanche et al., 2006). Hence, the use of qualitative exploratory research design was deemed appropriate for this research due to its success on investigating novice topics and describing the study's results.

Figure 3. The learning experience of university students by Bleffert Schmidt (2011)



3.7 Sample

The sample criteria for this study included UKZN postgraduate students who registered for their undergraduate qualification before the year 2020 and were registered postgraduate students in the PMB campus in the years 2023 to 2024. The candidate must have engaged in a course that used a blended approach to learning and teaching and participated in online polls, Zoom breakout rooms, and online assessments. The aim of this study was to recruit 6 to 8 participants. However, in the span of 4 months that the advert was published on the UKZN notice system, the researcher only had 6 qualifying and willing participants available.

An emphasis was made to recruit students who registered for their undergraduate qualification prior to the year 2020. This was done to document students experiences and perceptions of blended learning prior to the outbreak of COVID-19 and post the COVID-19 pandemic era.

Convenience sampling comprises of people who are available and relevant to the study (Neuman,2014). The sample for this study was chosen through convenient selection amongst UKZN students who responded to the research advert advertised on the UKZN Notice system. The UKZN Notice System is a web-based system that UKZN staff and students use to read current notices or place notices of their own. The researcher emailed the Notice system web administrator requesting to place an advert. After 24 hours, the web administrator responded, requesting proof of ethical clearance to conduct the study at the UKZN. Upon receiving the researcher's ethical clearance approval letter, the advert was published on the notice system on 5 separate occasions. Students who were interested in participating in the study contacted the researcher.

Purposive sampling, according to Durrheim and Painter (2006), includes identifying and selecting individuals who are knowledgeable about the topic of interest. This type of sampling procedure was suitable for this research since it effectively assisted the researcher in selecting candidates who possessed the specific qualities needed to document how postgraduate students perceive blended learning to be effective in their learning experiences.

Through purposive and convenience sampling, 6 participants were selected, and all had registered for their undergraduate qualifications before the year 2020 and were registered for a postgraduate degree in the PMB campus in the year 2023. Lastly, all 6 of the participants reported having engaged in a module that used a blended approach to learning and teaching and participated in online polls, Zoom breakout rooms, and online assessments.

The sample for this study, as mentioned, consisted of six postgraduate students from the University of KwaZulu-Natal (UKZN). Although the number of participants is relatively small, it was intentionally chosen to allow for greater depth rather than breadth in the research process. As a result of working with a smaller sample group, the researcher was able to build closer engagement with each participant, which created the opportunity to explore in detail the students' nuanced perceptions and experiences of blended learning. This close interaction further provided valuable insights into the complexities of their academic and personal experiences. However, it is important to note that the limited sample size limits the transferability of the findings. While the findings from this study provide perspectives on postgraduate blended learning at the UKZN, these insights cannot be assumed to represent the experiences of all postgraduate students.

3.8 Sampling procedure

A letter requesting to select participants from the University student population was emailed to the gatekeeper of the UKZN PMB campus, and permission was obtained (see

Appendix B). This was done to get permission from the registrar to conduct the study and to apply to the UKZN Human Social Science Research Committee for ethical clearance. The committee also reviewed and approved the application, and an approval letter was later sent to the researcher to commence with conducting the study.

The ethical clearance approval letter was submitted to the web administrator of the UKZN notice system to publish an advert requesting candidates to participate in the study. The application to place an advert was successful following the submission of the ethical clearance approval letter.

The advert was then posted (see Appendix E). Candidates contacted the researcher to state their interests, and preliminary questions were asked to confirm if they were registered for a postgraduate qualification at the UKZN. Candidates were also asked if they had engaged in blended learning courses and candidates who met the sampling criteria were selected and contacted to confirm their availability for the interviews and to make appointments regarding the time and date of the one-on-one interview. Lastly, face-to-face interviews were conducted at the UKZN PMB campus in the Frank Bush Building, Scottsville. In contrast, online interviews for participants who could not attend face-to-face interviews due to the cost of traveling to the office in Scottsville and scheduling conflicts were conducted on the Zoom App.

3.9 Participants

The participants comprised of black postgraduate students registered within the UKZN, PMB campus. All 6 participants were female and registered within the College of Humanities. The ages of the participants ranged from 23 years old to 32 years old. The

participants' level of study ranged from Postgraduate Diploma to first- and second-year master's level.

Table 3.1

Participant	Age	Gender	Race	Level of study	Residence
1	27	Female	Black	Masters	Home (Urban area)
2	32	Female	Black	Masters	Home (Rural area)
3	24	Female	Black	Post Graduate Diploma	Private accommodation
4	23	Female	Black	Masters	Private accommodation
5	27	Female	Black	Masters	University residence on campus
6	24	Female	Black	Masters	Home (Urban area)

3.10 Instruments

one-on-one semi-structured interviews were used.

3.10.1 Data Collection

The qualitative method of obtaining data included the use of one-on-one, semi-structured interviews. A Semi-structured interview comprises of a set of pre-determined open questions (Neuman,2014). One on one, semi-structured interviews give the participant an opportunity to provide elaborated answers in response to the question asked.

One on one semi-structured interviews were appropriate for this study because participants were able to successfully present their views regarding the use of Blended learning teaching methods at the UKZN and if they found it to be effective in their learning experience.

The semi-structured interview assessed participants' satisfaction with blended learning and teaching during the lockdown and currently, their perceived quality of instruction, the usefulness of quizzes, polls, breakout sessions, and their overall perception of the efficacy of blended learning. As depicted in the interview schedule provided in appendix D, the questions developed shed light on student's perceptions regarding the efficacy of blended learning in enhancing their learning experience.

The one on one, semi-structured interviews were conducted virtually (via the Zoom App) for participant 1;4 and 6 while in-person interviews were completed for participant 2;3 and 5, in the Pietermaritzburg campus at the UKZN. The campus is located in Scottsville, Midlands. Finally, an office was used in the Frank Bush building during the times personally preferred by participants. The use of one-on-one interviews was effective in this study because participants adequately provided insights of how they perceive blended learning to be effective at the UKZN. The interviews lasted for 30 minutes to 45 minutes and were conducted in English.

To ensure accurate data collection, the researcher wrote detailed notes of the participants responses in a notepad while simultaneously audio recording the interviews. Participants were informed that their participation was voluntary and signed informed consent forms.

3.10.2 Data management

The data obtained from the interviews was collected using a recorder and transcribed verbatim. The participant's demographic details were removed in the final transcripts and numbers were instead used. The data was kept safely in an electronic file with password access.

3.11 Data Analysis

According to Neuman (2014) *data analysis* is the process of inspecting, cleaning, and transforming data. For this research project, thematic analysis was employed as a primary method of analysis, following the six-step approach designed by researchers Braun and Clarke (2006). The coding process was done manually so as to allow for themes to emerge from the statements provided by the participants. The coding process was further informed by the CoI theory to identify elements associated with the cognitive, social, and teaching presence. Once the initial codes were developed, they were organised into groups where codes that were similar to each other were fused to make themes. Codes were compared to one another, and codes that were redundant were removed.

To prevent the researcher from departing from the participants' own words and to let meaningful patterns emerge naturally, coding was performed manually. This allowed themes to arise directly from what participants said, rather than fitting the data into pre-existing categories. To further guide the coding process, the study also used the Community of Inquiry (CoI) theory to help identify and interpret elements related to the cognitive presence, social presence, and teaching presence. The CoI theory assisted in showcasing how the cognitive, social, and teaching presence manifested in the data.

The first codes that were generated were organised into groups to form themes. Codes that expressed similar meanings related to participants' experiences were clustered together. This step created a clearer structure for creating broader thematic categories. Codes were regularly revisited and refined to avoid redundancy and to ensure that the final themes reflected the data that was collected and were meaningful.

3.11.1 The following steps were taken to collect and analyse the data:

1) *Familiarising oneself with the data:*

The researcher listened to the recorded interviews and transcribed them verbatim. Thereafter, the researcher read through all 6 transcripts several times and wrote notes to capture initial thoughts about and observations of the data.

2) Assignment of preliminary codes to the data in order to describe the content:

For this exploratory research study, the themes depended on what was said. The researcher adopted the open coding process, which was done by initially organising raw data to try and make sense of it. While reading through the transcripts, the researcher took note of similar and recurrent codes shared by different participants and categorised them into more abstract codes, a process called axial coding (Scott & Medaugh, 2017).

3) The search for themes in codes across the different interviews.

After categorising the codes formed from raw data to form abstract codes, the researcher looked at the list of codes and their associated excerpts, focused on the emerging patterns, and then collated the codes into broader, themes and sub-themes.

4) Reviewing of themes.

The researcher read through all the excerpts related to the codes to see if they supported the derived sub-themes, and also checked to see if the sub-themes overlapped as they were to give a coherent representation of the data accurately.

5) Defining and naming themes.

Four main themes emerged from the findings advantages and Disadvantages experienced in blended learning, Technological enhancements improving social engagement, Students' comprehension of BL and Students' perceptions of BL's efficacy.

6) Writing up the report.

The findings gathered from this study were written into a report.

3.11.2 Critical reflexivity

Critical reflexivity involves examining the impact of the researcher's assumptions and behaviour on the phenomena being studied (Coburn & Gormally, 2017). The researcher for this study is a registered student at the University of KwaZulu Natal and has participated in blended learning. To ensure that bias was averted the researcher reflected on her prejudices and biases throughout the research process. This was accomplished through journalling to make certain that the researcher's bias did not impact the findings of the study.

3.12 Reliability, Validity and Rigour:

Durrheim (2006) defines reliability as a state wherein the study produces consistent information when performed under comparable settings. There are multiple strategies for qualitative studies to ensure reliability which includes: stepwise replication, triangulation and audit trial (Creswell, 1998; Long & Johnson, 2000). Creswell (1999).

For this study *Triangulation* was adopted and refers to the application of multiple sources or methodologies when researching a phenomenon (Long & Johnson, 2000). The study made use of journal articles and various video sources. This was done to create a deeper understanding of students' perceptions of BL's efficacy.

Qualitative research studies aim to transfer their findings to a comparable group of people (people who have experienced the same effects of the variable being investigated) (Creswell, 1998; Morse et.al, 2002). There are various methods for qualitative research to ensure transferability, which include: thick descriptions, purposive sampling, and dependability (Creswell, 1998; Morse et.al, 2002). It was through purposive sampling as well

as through the creation of thick descriptions that the researcher attempted to make it possible to transfer the findings to other similar contexts (Creswell, 1998; Long & Johnson, 2000).

To enhance transferability, thick descriptions of the participants and the research context, which is the UKZN, were provided. This provided a clear and detailed picture of the study setting to the reader. This was further done to assist readers in assessing the extent to which the findings may be applicable in different contexts. The selection of research participants was purposeful, focusing on the UKZN, PMB Campus postgraduate student population who registered for their undergraduate studies before the year 2020 and are registered for a postgraduate qualification in the years 2023 to 2024, in addition to having engaged in a blended course.

To ensure the trustworthiness of the data analysis process, various approaches were used as mentioned. Credibility was strengthened through prolonged engagement with the data, which allowed the researcher to develop a deeper understanding of the participants' perspectives and experiences. Furthermore, verbatim quotations were used in the presentation of findings to assist with interpretations and provide transparency. This further allowed the reader to see the direct connection between the data and the conclusions provided.

Dependability was addressed by carefully documenting and keeping safe the themes as they were developed. This process provided a trail that reveals how the findings emerged from the coding process. In addition, the researcher engaged in continuous reflexivity through journaling, which assisted in identifying potential biases that could have influenced the interpretations.

Qualitative researchers aim to achieve credibility through various procedures such as self-description and reflective journal, observation, peer debriefing, and triangulation (Long & Johnson, 2000; Creswell, 1999; Cho & Trent, 2006). For this study, Self-description and

reflective journaling were procedures employed to ensure credibility. They required the researcher to be aware of her own assumptions, prejudices, and biases regarding the phenomenon under study, which is students' perceptions of blended learning's effectiveness, since the researcher is also a student at the aforementioned University.

The researcher had to ensure that her beliefs were considered and explicit through the use of a reflective journal (Long & Johnson, 2000; Morse et al., 2002). The researcher did this so as not to add prior ideologies into the interpretation (Creswell, 1999). Therefore, by incorporating these strategies: credibility, dependability, reflexivity, and transferability, the study made certain that the findings were grounded in a rigorous and trustworthy process.

3.13 Ethical Considerations

Brennen et al. (2017) emphasised the important role interviewers have in shaping the research project, introducing the topic and guiding the direction of the interview because there is always the potential of there being a power imbalance between the researcher and participant.

Brennen advises that researchers who use semi-structured interviews as a data collecting method should be conscious of ethical dilemmas that could emerge (2017). For this research study, it was ensured that the participants were protected from harm. To ensure the protection of participants, the researcher obtained ethical clearance from the UKZN HSSREC. Listed beneath are the ethical considerations.

Confidentiality

An ethical issue considered in this study involved the issue of Confidentiality and privacy. This ethical issue was addressed by keeping records secure, through the use of password-protected files, and locking the drawers storing my data.

Informed Consent

Obtaining informed consent is an important procedure in conducting research with human participants (Byrne,2001). This guaranteed that participants were protected and were participating voluntarily. The purpose of informed consent was to ensure that participants fully understood what they were being expected to do.

Participants had a 10-minute information session prior to starting the scheduled interview in which the researcher discussed the research method, objectives, aims, and right to withdraw,to guarantee voluntary participation, informed consent, and adherence to the ethical principles of autonomy and nonmaleficence. Finally, participants signed a consent form, the consent form is attached as Appendix A.

3.13.1The seven ethical principles devised by Emmanuel, Wendler, and Grady

Collaborative partnership

Collaborative partnership is the first ethical principle that guided the study. It required that relevant community representatives in the research setting, form part of the research process and share responsibilities and benefits, to ensure that the local context is respected (Emanuel et al.,2000). The University Registrar was consulted at the beginning of this study to ensure that the local context is respected.

Social and clinical value

Social and clinical value according to Emanuel et al., necessitates that the study is beneficial to the participants, community, society, and research community without any wastage of resources (2000). This study's results will benefit the UKZN student population because their perceptions and views on how they are being taught in a blended teaching and

learning system might be made known to the stakeholders responsible for developing the curriculum.

Scientific validity

The third ethical principle is Scientific validity, which necessitates that the proposed research uses reliable and valid research designs and methods of obtaining data. This has been done as the qualitative research design is relevant to the study's objectives.

Fair subject selection

The fourth ethical principle which helped guide this research is fair subject selection. The participants that were chosen were relevant to the research's aims and were recruited from the universities notice system accessible to all students at the UKZN.

Favourable risk-benefit ratio

This ethical principle involves identifying and mitigating all types of possible risks to participants (Emanuel et al.,2000). As such to mitigate any potential risks for participants, the option of using online platforms such as Zoom to conduct the semi-structured interviews was made available to participants who had scheduling issues and lacked funds to come to Campus on the agreed upon date.

Independent ethical review

The fifth principle is an independent ethical review which includes the Research Ethics Committee (REC). An Application to the UKZN HSSREC)was made for this study.

Respect for potential and enrolled subjects

The last ethical principle that this research was guided by is respect for potential and enrolled subjects, hence, to ensure ongoing respect for participants, the researcher maintained

confidentiality, allowing participants to withdraw without any legal consequences (Emanuel et al., 2000).

3.14 Conclusion

This chapter thoroughly discussed the research methodology utilised in this research study. The research paradigm adopted by the researcher along with the research design was outlined. Moreover, the sampling method, data collection process and data analysis process were discussed. Finally, the ethical principles and considerations adhered to were discussed. The following chapter presents the study's results.

CHAPTER FOUR

RESULTS

4.1 Introduction

The objective of Chapter 4 is to record ways in which BL is transforming the learning experiences of postgraduate students at the UKZN, PMB campus. Qualitative data collection methods were employed to explore postgraduate students' perceptions of the effectiveness of blended learning (BL). The interpretation of the results will be discussed, however, a discussion about the history of BL at the UKZN and its current state is necessary before discussing the results.

4.2 Blended learning at UKZN

The official learning and management system (LMS) used at the University of KwaZulu Natal (UKZN) is *MOODLE* (Modular Object-Orientated Dynamic Learning Environment). It provides students with library resources, lecture notes, and a plethora of educational resources as shown in Figure 4.1. It was phased in the year 2016 and has been the driving force in ushering in blended learning to the institution (Khoza,2021). It allows lecturers the ability to upload online quizzes, tests and to give assistance online. Registered undergraduate and postgraduate students are able to upload and view tutorials and assignments.

The implementation of blended learning (BL) to support higher education at the UKZN has been gradually evolving over the recent decades, however the outbreak of the COVID-19 virus led to a radical shift in the manner in which education was delivered (Tshishonga,2023). The introduction of online learning to teaching was unprecedented and

provided a unique opportunity for the delivery of education in the years to come (Tshishonga,2023).

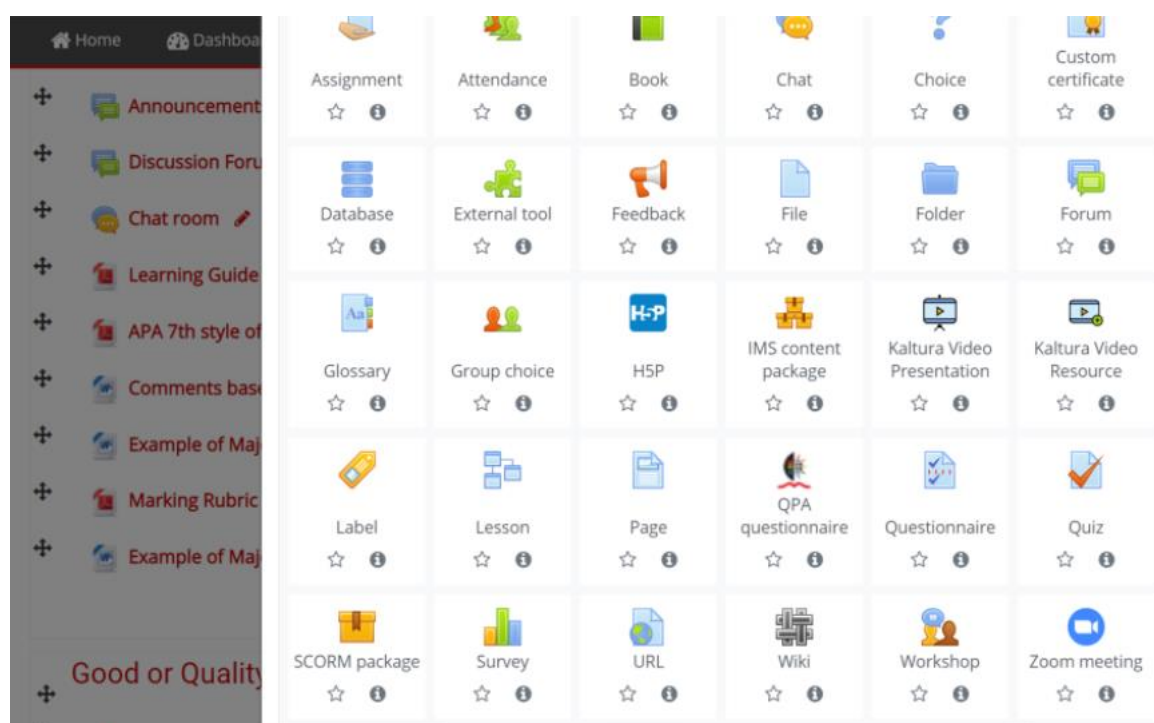
In the year 2020, the UKZN, according to Khoza (2021) adopted a competence and performance-based curriculum approach to help during the pandemic, in which Moodle and Zoom video conferencing technology (ZVCT) was used for teaching, learning, research, and meetings. A competence-based curriculum, according to Khoza is a teaching and learning environment characterised by the use of social media sites such as YouTube. Similarly, the performance-based curriculum, according to Khoza (2021) refers to a teaching and learning environment that employs LMSs such as Moodle or Blackboard. Lecturers with knowledge of the Digitalised Curriculum (DC) (Online learning) organised workshops to train their colleagues on the DC. The workshops hosted in 2020 included training on Moodle. It is noteworthy to mention that only the academic staff were trained to embrace a DC, as it was assumed that learners were acquainted with digital technologies (Khoza,2021).

4.2.1 Web lectures

Online web lectures also ushered in a significant change into the delivery of course content to students during the pandemic, in the year 2020. Web lectures were made available on a weekly basis, which allowed students access to lecture material and the opportunity to interact with the content at their individual schedule and preferred pace (Khoza,2021).

Online web lectures provided various interactive features such as *Live chats*. These live chats were real time chat forums facilitating interaction among students viewing the web lecture (Tshishonga,2023). This enabled students to ask questions to the lecturer during office hours for instant feedback. Moreover, selected videos, YouTube videos, images, and reference materials extended the course material beyond the classroom setting.

Figure 4.1 MOODLE resources and activities.



4.3 Themes and sub-themes

The table shown below displays a summary of the themes and subthemes. The categories addressed the study's research question. Six students participated in the study and the findings are organised into the following themes:

Themes	• Sub-themes
1. Advantages and Disadvantages experienced in blended learning.	Part one: Advantages of BL • Allows for Flexibility and convenience • Enhanced academic activities • Personal-development Part two: Disadvantages of BL • Inconducive home environment for blended learning • Connectivity difficulties • Technological incompetence • Adjustment to learning online-academic challenges • Mental health challenges as a result of the COVID-19 outbreak
2. Technological enhancements improving social engagement.	• Zoom • Polls • Online Quizzes

3. Students' comprehension of BL	• Understanding of how BL is implemented at the UKZN
4. Students' perceptions of BL's efficacy	• Poor retention of knowledge and skills • Role of the academic staff in students' learning experience. • Impact of academic misconduct on shaping their overall experience of blended learning. • Postgraduate perceptions regarding the effectiveness of Blended Learning at the UKZN

4.3.1 Main Theme One: Advantages and Disadvantages Experienced in Blended Learning

Theme one discusses the findings on the advantages and disadvantages experienced by the participants in blended learning at the UKZN, PMB Campus. This theme is split into two sections; part one discusses the advantages of BL and has three sub-themes, specifically, convenience and flexibility, enhanced academic activities, and Personal development. The second part has five subthemes: it discusses the disadvantages experienced as a result of BL. The five sub-themes are disadvantages as a result of an inconducive learning environment, internet connectivity, disadvantages due to inadequacy with using technology, followed by challenges to adjusting to BL, and lastly disadvantages of BL as a result of mental health challenges occurring concurrently with the implementation of BL at the UKZN following the outbreak of Covid-19.

Subtheme 1.1 : Flexibility and convenience

All 6 participants provided feedback on Blended learning being flexible, noting that they were able to watch recorded lectures online according to their own preferred time and pace. The participants further reported the convenience of blended learning by stating they

could now engage in multiple activities such as completing house chores, while working on their academic responsibilities. In addition, all 6 participants report having experienced the opportunity to engage in contact lectures therefore enabling them to benefit from both online and contact classes.

An added benefit to using the BL approach, still on the theme of flexibility and convenience is that BL provides students the privilege to create individual learning experiences. The 6 participants reported that they could individualise their learning experience by using learning styles that individually work for them.

The theme of convenience emerged in all participants' responses as they reported saving money and time when BL was implemented in their courses. They travelled daily to attend lectures before online learning, but with the implementation of BL, the participants saved on transportation costs.

"I was at home every day, during and after the COVID-19 lockdown, and in that year, I was completing my honours degree in criminology. My family was eventually supportive when they finally understood that I still had schoolwork to do, so they gave me space to do schoolwork, I had more time to study than ever before." (Participant 1)

"I stay in a PA (Private accommodation). When I have classes online, I can do other tasks and complete errands. I am registered for a postgraduate Diploma in Registered counselling. We typically have classes on Thursdays, so when the class is scheduled on Zoom or when we receive an email that the section will be self-study, I get happy because I have saved money that I would have had to spend on taxis." (Participant 3)

"I used to travel to and from campus to attend classes because I stayed at home but with some classes being held on zoom I was able to save money." (Participant 2).

“I came across Blended learning when I was doing my honours in psychology. I like that BL is flexible, I have the autonomy to study whenever I want to, I am able to organise my schedule how I see fit.” (Participant 4)

“I would say BL was flexible because even tests would be open for hours and you had the freedom to write when you could, in my master’s program in Educational Psychology when assignments need to be submitted our lecturers usually open the submission link till midnight so you can submit when you feel prepared and satisfied with your work. Before COVID-19 I once had to chase my management lecturer to submit my work because you would find that by 16:00 most lecturers would have left their offices.” (Participant 5)

Participants emphasised how, with the introduction of BL following the outbreak of COVID-19 they were forced to return home as some of the participants had been residing in University Residences (Res) and Private accommodation (PA). While at home they were able to partake in different roles from being a student to being a caretaker. Their responses further speak to the different responsibilities they were able to do as a result of the additional time allocated to them to learn online as opposed to attending only contact classes.

The theme of flexibility was evident in all participants responses concerning the shift to blended learning in the years 2021 to 2022 as the country had begun to lift the COVID-19 lockdown restrictions and participants were allowed to return to their PA’s and University Residences. Participants residing at home reported that they could join lectures while at home without the need to travel to campus. This theme is further supported by literature. Various scholars speak positively about the cost effectiveness and flexibility of blended learning (Mpungose, 2021; Khoza, 2021). They state that BL reduces the need for a traditional classroom space and materials which are costly while simultaneously reducing the university’s operational cost related to facility usage.

Subtheme 1.2: Enhanced Academic Activities

Ground-breaking instructional technologies were employed in disseminating information for the first time in the wake of the national shutdown in South Africa. A group of educationalists believed it would be the same as the introduction of teaching aids such as the overhead projectors. Additionally, scholars were anticipating that BL would close the widening educational gap between underprivileged students and students with technological and financial resources (Tshishonga, 2023). Equal access to quality education has been a goal the government of South Africa has tried to achieve; therefore, it was thought that BL would be a step to fulfilling the goal by increasing access to quality education through its introduction of new technology and software.

The findings from this study suggest that at the beginning of the pandemic and its consequential lockdown, students did not engage in contact lectures but had online classes. The introduction of the App called Zoom was revolutionary. The app had features allowing for engagement for both the lecturer and registered students. Recorded Zoom lectures would be uploaded onto MOODLE for learners who missed the live lecture due to various issues but mainly issues related to connectivity and family responsibilities.

“When Zoom was introduced, it was my first time engaging with an app like that. I could chat with the lecturer and the students at the same time.” (Participant 5)

Thus, with the introduction of new technology, it could be suggested that BL enhanced students' sense of community especially during a time when mandatory isolation was put in place by the government to control the increase of the COVID-19 infections (Tshishonga,2023).

The introduction of new technology and academic activities brought additional benefits for the participants who reported that exams, test and continuous assessment

deadlines were extended for 24 hours and in some instances to 48 hours. They make note that the added time reduced their test anxiety as with traditional classes deadlines would be fixed with no extensions however with BL one was in control of their writing space and could write when they did not have load shedding in their area.

“It was a benefit for me that tests would be open for the whole day on MOODLE, I was able to space out my schedule and pick out a time I knew was best for me to write my tests, usually in the morning , I focus better in the mornings, but you would find that students would help each other, those who wrote early would help those who wrote late.”

(Participant 4)

“You saw a lot of us who were doing our Honours in 2020, people graduated with Cum Lauda because of the extensions of deadlines and online quizzes being open for 24hrs we had more time to study for tests.”

(Participant 5)

Subtheme 1.3 : Personal Development

Blended learning (BL) inspired students to take responsibility of their own education. Students reported that the flexibility of BL also came with the responsibility of being self-directed and independent. Students had the freedom to explore multiple teaching resources online and self-pace their learning. This required that they have good time management skills and critical thinking skills as some sections of their courses were self-study.

The findings of this study indicate that with the implementation of BL students were forced to gain competency in technology. Half of the participants reported that they struggled to navigate the online portion of their courses due to being computer illiterate while the remaining half reported to having gained skills in working in an online environment.

They reported enhanced presentation skills and confidence in conducting meetings online. Therefore, it could be concluded that BL gave rise to digital literacy for students that had prior experience with using technological tool and were given the opportunity to collaborate with others in online spaces. This enhanced social engagement for students in online spaces thus transcending geographical barriers as students had online discussions and virtual group projects (Tshishonga, 2023). For students who relied heavily on lecturers, it was difficult for them to be self-directed. They struggled to adjust efficiently to the BL technological adaptations.

It has been confirmed that humans process, organise and learn information differently from each other. The learning model- VARK devised by researchers Fleming and Mills (1992) describes the different ways individuals learn. The first style is *Visual* meaning an individual can learn better by sight. *Auditory* learners learn better by speaking or hearing while some people learn by reading. *Kinaesthetic* individuals learn best when they incorporate physical activities and practice.

Blended Learning accommodates individuals with these learning styles. For example, Visual learners who prefer studying individually they benefit from the recorded videos/lectures while Social Kinaesthetic students benefited from the online tools used to promote social engagement such as Zoom breakout rooms.

“Our lecturer would group us into groups of 2 to practice or discuss what we had just learned and afterwards we would return to the big group to discuss all our points, this was a great way to make things practical for me.”

(Participant 4)

DISADVANTAGES OF BLENDED LEARNING

Subtheme 1.2.1: Inconducive home environment for learning

Blended learning requires students to participate in digital learning however participants reported to experiencing challenges to this namely, residing in homes that were not conducive for learning (Tshishonga,2023). Participants report that during online learning they resided in crowded homes and sometimes shared rooms with siblings this made it difficult to focus on online lectures and to participate in discussion as there would be noise in the background. Parents did not understand the nature of online learning during COVID-19. They would still assign tasks to students regardless of classes still being held online as such post Covid-19 the use of BL still carries this disadvantage as guardians still assigned household tasks to their children, making it difficult to complete and submit schoolwork on time.

Participants shared various reasons that made their engagement in BL poor during and after the pandemic-one being the disturbances at home. Research confirms that learning in an online environment becomes difficult if the environment is not psychologically and physically conducive(Garrison,2008). Participants shared the following:

“I stayed at home during COVID-19, and it was sometimes difficult for me to study and attend my online classes, I would be listening to my lectures and also be told to do chores but later on my parents understood that I was still learning and that I need time and space to do my schoolwork. Soon after they gave me space to do my work without distracting me, but I had to first talk to them.” (Participant 1)

In a similar manner another participant shared:

“My family members would think that since I’m at home and not attending I must have free time.” (Participant 2)

“My house is crowded, and I share my room with my niece sometimes, at time I would be uncomfortable to participate in the class because they might hear noise in the background. That was one of the things that I did not like about blended learning.” (participant 6)

Subtheme 1.2.2: Connectivity Difficulties

In spite of the mentioned advantages of blended learning there were challenges experienced by the participants, namely issues with connectivity. Connectivity issues with online learning platforms can hamper students’ participation and progress. For the context of this study the recurring theme was the occurrence of slow, unreliable internet connections. Tshishonga et al., assert that a lack of internet connectivity and data can negatively impact on learning and teaching (2023). This study’s participant reported that the University of KwaZulu Natal provided support in the form of supplying each registered student with a 20 GB monthly data bundle. The participant shared how the data package was insufficient for their full participation, one participant reported:

“The university provided us with data which was really helpful because data is expensive however you would find that by day 20 the data bundle has depleted. It was not enough as we would have to attend 2-hour lecturers on zoom, make submissions online and do research for assignments so by the end of the month you would have to make sacrifices to not attend zoom classes to make sure that you have enough data to make submissions.”

(Participant 4)

Subtheme 1.2.3: Technological Incompetence

The findings of this study confirm that student's incompetence in using technology has been a hindrance to their BL experience and was reported as a disadvantage experienced by the participants. Technological literacy is necessary in participating in BL according to Gqokonqana et al. Additionally, the ability to either use or access learning material online depends on the individual's competency to navigate the LMS, since learning materials are found in technology, which was a problem for some students (2022).

"I had issues at the beginning because we didn't use technology as much before, even submissions were made in person so now I have to remember to submit online and understand Moodle as it was still new to me, sometimes I would put work off if I couldn't find where work was posted and this affected me."

(Participant 2)

Another Participant detailed what they had experienced:

"During my undergrad my major was Drama, we did not use Moodle as much as now, so with the introduction of Blended learning it was difficult for me, sometimes during Quizzes and online submissions you would think you had submitted but I had multiple instances where my assessments were not submitted. I didn't know that I could see in my student emails the receipt that it was submitted little things like that were a challenge me. In the beginning."

(Participant 5)

Participants collectively share that in the beginning, it was challenging for them to grasp the technicalities of the LMS and apps used for the online learning aspect of Blended Learning since it was their first time engaging with such software.

Subtheme 1.2.4: Adjustment to learning online- academic challenges

The online component of Blended Learning usually occurs in individual settings as such participants report experiencing challenges with isolation. According to Tshabalala et al., (2021) lecturers and students have responsibilities to ensure success in blended learning. Students need self-regulation skills to manage their studies independently, and lecturers have the responsibility to refine their competence in technology to create and upload learning materials online. Furthermore, to ensure effective use of available technology, higher education institutions have the responsibility to provide ongoing training and technological support, however with the abrupt transition to Online and subsequent Blended learning during COVID-19, the UKZN did not offer courses to students regarding navigating the LMS. This inadvertently created issues as students struggled to adapt to the online learning system (Khoza,2021).

One participant shared:

‘When I first used Zoom it was this ground-breaking app for me, sometimes you would be in a class and people are still trying to get used to the app and their mics would be on, such disruptions would make it more difficult for me to focus.’

(Participant 5)

The above reflection by participant 5 illustrates how blended learning tools such as Zoom contributed to the continuity of the syllabus despite the interruptions caused by the national lockdown due to the COVID-19 pandemic. According to the social presence of the CoI, this reflection highlights how important time interactions between students and instructors fostered a feeling of being in community, being together with each other even in an online space (Zhou, Wu, & Cao, 2025). Participant 5’s reflection also highlights the

teaching presence, in that the facilitation of the Zoom class session allowed the students to experience the environment as a meaningful alternative to in-person sessions.

Furthermore, by stating that the Zoom app was groundbreaking, participant 5's reflection could be understood through the cognitive presence lens in that Zoom allowed students to engage in critical discourse and knowledge creation with one another (De Bruijn-Smolders & Prinsen, 2024)

Subtheme 1.2.5: Mental Health Challenges as a result of the COVID-19 Outbreak

Research has confirmed that the transition to Blended Learning can present mental health challenges for students as a result of various social conditions (Siripongdee, Pimdee, & Tuntiwongwanich, 2020). The alienation and declining motivation experienced by the participants during BL can be linked to the lack of engagement in online discussions. Some shared they were uncomfortable with turning on their videos or mics, while others had mental health conditions posing as significant challenges in their BL experience. The participants shared their challenging experiences with adjustment and mental health difficulties as a result of the challenges in blended learning. They reported the following:

“My parents are essential workers-they were required to continue working during the onset of the COVID-19 pandemic their health and safety was another stressor that I had on top of having to complete my studies.” (Participant 1)

“I have a child so I was scared about getting infected with the Covid-19 virus and I was highly anxious during that time, it was difficult to stay focus.” (Participant 2)

Another participant shared:

“I would say that I did struggle with adjusting to blended learning in the beginning because learning in person is all I have been exposed to, so now adding online learning sometimes would leave me confused and frustrated as network would be bad because where I’m from its not always stable. The combination of these factors made it mentally frustrating for me.” (Participant 4)

4.3.2 Main Theme Two: Technological Enhancements Improving Social Engagement.

Blended learning, according to Siripongdee, Pimdee, and Tuntiwongwanich, forces people to consider the characteristics of digital technology, specifically information communication technologies (2020). Digital information communication technologies (ICT) have the ability to process information on their own, without the need of human intervention. Educational researcher Khoza (2021) asserts that blended learning promotes active student participation by using interactive online activities available on various platforms. As a result, BL encourages critical thinking and social engagement through creative methods. This theme presents findings under three sub-themes namely: Zoom, Polls and Online Quizzes.

Subtheme 2.1 Zoom

The interactive software Zoom allows for live teaching, this is especially important in enhancing social engagement in an online setting as Lecturers can see their students and interact with them in real time (Gqokonqana et al.,2022). This feature has been reported by participants as having played an important role in promoting the social aspect sometimes thought of as lacking in BL.

Participants reported the following:

“Zoom was ground breaking in a way that as much as we weren’t in the classroom physically it still felt as if we were, we could have our camera’s on and see the lecturer teach,

once we started to get used to how Zoom operates, the app helped, it sometimes still felt like I was in class.”

(Participant 5)

Another participant shared the following:

“Zoom is a good App that I now really like, I got introduced to it via online learning, I now work, and we use it all the time in meetings I think getting that earlier experience to using the app helped me be ready for the digital workforce.”

(Participant 6)

Subtheme 2.2 Polls

Balfour et al. (2015) highlight the importance of student engagement in the learning process. Balfour et al. state that students' learning is amplified when they are given the opportunity to be proactive and actively involved in their learning (2015). Thus, meaningful learning will not occur if students are not active in their learning but are passive recipients of the information. The introduction of Polls in the blended approach aided in encouraging learners to be more active and engaged in their learning. The aim of polls is to increase collaboration between students, improve communication skills as well as to create a sense of community, where students feel connected to their lecturers and peers.

“My only interactions with polls took place on WhatsApp, I had a WhatsApp group for all my modules, and we regularly created polls to decide on submission dates, group work meetings because we all resided in different areas so polls helped in giving us a platform where people could vote for options that best suited their situation.”

(participant 3)

I enjoyed polls in that they were an easy way for me to participate in discussions and decision making. They would create them in our WhatsApp group which I'm already familiar with, I did not have to learn a new tool all over again. It helped in creating a sense of community amongst my classmates. (Participant 5)

Subtheme 2.3 Online Quizzes

To identify, monitor and highlight operations required to improve students' academic achievements the University of KwaZulu Natal used online Moodle quizzes. Online quizzes provided lecturers and students with feedback concerning improvements in their learning and teaching (Khoza,2021). This model of assessment consisted of multiple choice and true-false questions to assess students' knowledge of course content. The findings from the study revealed that quizzes helped students move forward with their learning however students made note of its limitations. Online Moodle quizzes were restrictive as they only allowed one attempt. One participant shared the following:

"I did not enjoy the quizzes we did online on Moodle, you would find people helping each other write the quiz, and if you had issues with the network, the quiz would shut down, and you wouldn't get a chance to complete the quiz. That made the experience of BL negative for me."

(Participant 2)

"Online quizzes were also groundbreaking, in that for the first time I had 24hours to complete the quiz. I had extra time to study before attempting the quiz, so I would say online quizzes improved my academic performance. I passed my modules better in comparison to previous years."

(Participant 5)

“I think as much as it was different to shift assessment to an online space, it compromised the Academic integrity. People question the legitimacy of the marks that people had achieved. What I saw happen is people would share test questions on WhatsApp groups and assist each other with answering questions as the quiz was taken at the comfort of your home, many people ended up achieving extremely high marks.”

(Participant 4)

Overall, the formative assessments (via online quizzes) and summative assessments were reported to have been insufficient in providing practical experience for the participants one sharing the following:

“Blended learning did come with some advantages such as extended submission times but for me I think it was not a good fit for my degree I am currently finishing my internship for my postgraduate diploma in registered counselling. My courses rely a lot on face-to-face teaching, but some classes would be self-study, and it was difficult for me to grasp those sections as we would not have time to discuss what we learned when classes resumed.”

(Participant 3)

4.3.3 Main Theme Three: Students’ comprehension of Blended Learning

Subtheme 3.1 Understanding of how Blended Learning is implemented at the UKZN

The results highlighted the superficial comprehension of BL amongst the participants. The participants’ report to only becoming aware of what BL is, during the outbreak of the coronavirus disease in the 2020.

The term *blended learning* has progressively gained popularity in both academia and corporate spaces. The findings from this study revealed that participants understand BL to be as follows:

“Blended learning according to my understanding is teaching that occurs online as well as face to face. With how it has been implemented at UKZN umm it has been implemented through Moodle and zoom.”

(Participant 1)

“Blended learning is the use of technology and is the new way of teaching while sometimes making use of physical interactions. At UKZN we go on to Zoom -where a meeting ID is shared to students, and we get to interact with our videos. We also interacted on apps such as WhatsApp”

(Participant 3)

“I simply understand Blended learning as a method of learning where classes are physical, so you attend lecturers in a venue and also online by using app such as Zoom. At UKZN blended learning was used a lot in 2021 and 2022 when they were phasing out remote learning so that is where my experience with BL came about.”

(Participant 4)

“I don’t know a lot about blended learning, but I know that it refers to when we study online as well as in person. At UKZN we have the Learn portal where lecturers upload learning materials and we get access to them.”

(Participant 5)

“I was a student during Covid -19 so I got to experience both online learning and blended learning as well as face to face learning so if I can define it, BL is both contact and remote learning where interaction is mostly online it was implemented when tutorials were moved online as well as exams.”

(Participant 6)

Blended learning goes beyond selecting and combining elements of in person F2F teaching and online teaching. It entails training instructors or lecturers, because as previously mentioned, BL's success depends on the lecturer's capacity to use technology to meaningfully design a student-centred learning experience (Cobo&Rivas,2023). Moreover, BL consists of formative and summative assessments to monitor the progress of students. This is important as lecturers are able to ascertain students' instructional level and provide feedback for corrections. Overall, the comprehension, implementation, and significance of BL are collectively not comprehended by the study's participants.

4.3.4 Main Theme Four: Students' Perceptions of Blended Learning's Efficacy

The results on students' perceptions of blended learning's efficacy in their learning are presented in this theme under the following subheadings: Lack of retention of skills and knowledge; Academic misconduct and Responsibilities of the academic staff in knowledge acquisition.

Subtheme 4.1 Lack of Retention of Skills and Knowledge

As previously mentioned, the UKZN, PMB campus assesses students' knowledge and retention of knowledge through examinations and assessments. During the pandemic, sit-down examinations were cancelled and all courses were assessed online through the LMS (Moodle) in the form of formative and summative assessments. The participants shared their experiences of being discouraged by the reduced practical experience in BL. They reported the following concerns:

"I did not absorb as much information as before in blended learning, my tutors for criminology were distant and presentations were not done quite well and a lot of plagiarism was happening while it was controlled in contact classes and dedication from students was seen more in contact classes."

(Participant 1)

When interpreting the statement provided by participant 1 regarding the lack of retention of skills and knowledge. The statement highlights the challenges experienced with the teaching presence. As mentioned previously, within the CoI, the teaching presence consists of the design, facilitation, and direction of learning experiences (Zhou, Wu, & Cao, 2025). The instructor's responsiveness, combined with timely feedback on work submitted, shapes students' perception of the quality of the support and guidance provided. Participant 1's perception of lecturers as distant indicates that a lack of timely response and lack of teaching presence weakens the facilitation normally expected in blended learning.

The absence of prompt responses from lecturers impacts the social presence, because the inaccessibility to lectures reduces the chances for cultivating open communication and trust between students and lecturers. This, as indicated by the social presence element, could hinder students from participating and fully engaging in the blended learning environment (Huang & Lee, 2022).

The statements made by participant 1 suggest that they had a negative learning experience as a result of the absence of lecturers. This could be interpreted as contributing to a weakened cognitive presence according to Nguyen and Van Dat Tran, because without timely feedback and responsive academic guidance, it could disrupt opportunities for knowledge creation and sustained reflection (2025).

“When classes were all in-person, my term marks were higher in comparison to when they started teaching us in a blended format. It required discipline, and I was not disciplined with teaching myself because some of the learning material was self-study. The lack of pressure from lecturers, I believe, made it difficult for me to remember what was taught to me. Some of the classes were rushed.”

(Participant 2)

Participant 3 shared the following on her thoughts regarding testing and assessments done during blended learning. This reveals that some participants experienced challenges in retaining the skills learned through BL. This participant shared the following:

“I do not really remember what I was taught in my course in blended learning, the goal was to submit on time and pass.”

(Participant 3)

“With blended learning, it was easy to fake participation online by simply logging in and muting your mic. It was easy to continue on with other tasks as your lecturer would not see what was happening behind the camera. Also, people were afraid to ask questions because they feared that their peers would be angry for extending the class, while in contact classes, you don’t take notice of the time. You were engaged in what the lecturer was saying, so blended learning worked in 2021, but now it is not working. I am finishing my master’s degree in counselling psychology. The face-to-face classes forced me to participate in real time, and I have retained the knowledge taught to us till this day in comparison to online classes- I sometimes struggle to stay focused throughout.”

(Participant 6)

Subtheme 4.2: Impact of academic misconduct in shaping their overall experience of blended learning.

Studies report that blended learning can contribute to enhanced learning achievements compared to traditional teaching approaches. In the context of this study, the participants have made note of the prevalence of Academic Misconduct occurring within blended learning. A study conducted by McCabe et al. (2012) determined that 68% of undergraduates

and 43% of postgraduate students admitted to engaging in cheating behaviours on their online tests.

This highlights the pervasiveness of Academic Misconduct and the disregard for academic rules. Factors such as easy access to learning materials, extended time to write as well as to submit assessments, and the decreased motivation to learn were highlighted to have contributed to academic misconduct (AM) among students.

The impact of AM is observed in the participants reported poor retention of knowledge and poor acquisition of skills, as they had copied from each other and shared test questions without understanding the content being assessed. The participants further shared the following:

“Learning in blended learning was different, the lecturers were lenient in their marking and the curriculum was not as strict anymore and a lot of skills were lost especially as some tutorials were cancelled.” (participant 1)

“For the first time people were passing with flying colours, and it might have been due to the move to online assessments.” (Participant 3)

Another participant concurred the above statement stating the following:

“I did not like how everyone was cheating, people would write assessments at separate times so as to share test questions to people who would write later. I saw a huge number of people graduating with high averages.” (Participant 4).

Academic Misconduct is an important concern as mentioned by researchers, Holden et al. (2021) who contend that AM is expected to increase as a result of the move to the virtual environment. The author further highlights that the move towards take home examinations creates opportunities for AM through cheating and plagiarism.

Participant 4 further shared the following:

“I even heard that people who graduated in the year 2020 were finding it hard to be employed as employers viewed their degrees as fake (Laughs) I have seen people say they do not trust that they learned the necessary skills required from that degree because they had been learning online and a small portion of their courses occurred in person, so people are still hesitant to take seriously qualifications obtained during the COVID-19 pandemic.” (Participant 4)

This theme demonstrated the impact of Academic Misconduct (AM) as it questions the credibility of students' abilities in being competent to practice in their fields of study.

Subtheme 4.3 : Role of the academic staff in students' learning experience.

Blended Learning (BL) changed the role of the academic staff to that of being mentors (Khan,2021). Within the sphere of BL, the responsibilities of lecturers changed and became more student-driven, bottom-up, as well as customised. This differs from the role they have in a traditional classroom setting, where teaching is largely teacher-directed, top-down, and one-size-fits-all. The participants shared their understanding of the role their lecturers have in their learning experience in BL. They reported the following:

“Lecturers were distant in blended learning, they would not respond to emails timely, and this made my learning experience in blended learning bad. They were not as accessible as they would be in physical contact classes.”

(Participant 1)

“Sometimes lecturers would forget to record lectures and if you had missed that class there was no way for you to watch back the recording. Some were struggling with adjusting to the use of technology in their courses as I had a lecturer who would forget to post learning

materials on Moodle, and if they posted notes and presentation slides, they would be brief. Lecturers could have been more supportive and understanding that we as students were still adjusting to the way things were changing.”

(Participant 5)

According to Mhlanga (2021) lecturers have the role to be experts of the content they disseminate to students and be facilitators. They organise students' learning process by offering them content, guiding and monitoring their learning process therefore, the technology used in blended learning should not replace the lecturer. Students reported the following regarding the role of their lecturers in fulfilling the above-mentioned responsibilities:

“Lectures and tutors in an online environment got lazy, I mean upload man, give us detailed video recording make it interesting, that was not done for my honours year in 2021.”

(Participant 5)

The above reflections by participant 5 reveal that lecturers are expected to be present in the learning process of students to ensure knowledge acquisition. Lecturers have the responsibility to provide feedback to students on the work submitted (Mhlanga,2021). Thus, even though BL is student-centred and self-regulated, lecturers still have the important task of ensuring students gain competency in the skills required by the program they are registered for.

4.3.4: Main theme four: Postgraduate perceptions regarding the effectiveness of Blended Learning at the UKZN

Participants, in their reflections, answered that despite the advantages experienced during blended learning, the challenges of utilising a blended approach to learning and teaching outweighed them. The participants shared the following:

“The school should re-introduce complete face to face classes because it is part of the university experience. With face-to-face classes we were able to experience a true university experience, we were able to make friends and form genuine teacher -student relationships with our lecturers. We will need them as referees in the future and people are missing out on it.”

(Participant 1)

“I am learning new things every day. Complete online learning disadvantages many students but with BL there is still contact classes, so you can consult with lecturers and ask questions. Even though I was still not used to using technology to learn my marks improved in comparison to my marks before Covid-19, but the quality of teaching was not the same, it is difficult to understand and remain focused while someone is teaching through the screen.”

(Participant 2)

“The age we are in is a digital age so blended learning offers convivence and we have a lot of strikes at UKZN. BL offers a solution to continue with the syllabus in cases of protests so there is still room for improvement, but it was not put into place effectively, there were to many inconsistencies with the academic staff. Making some of our learning material self-study was not a good idea we lost an opportunity to fill gaps in our learning.”

(Participant 3)

“BL at UKZN is not yet effective but it could be effective if they make it 50-50 because as students, we learn differently some better in the comfort of their own space while others in a group so it caters for us all.”

(Participant 4)

“I’d say the university should continue with complete Face to Face learning, but should there be a need for BL, lecturers need to start uploading detailed slides and make

learning more interesting and engaging. What I propose also is, the university could introduce tutorials in our master's program. Tutorials helped me during undergrad in Dramatic Arts, but the university does not provide tutorials for postgraduate students."

(Participant 5)

"For me it has been effective, like I mentioned my marks increased in blended learning in comparison to my marks before the lockdown. It did have disadvantages here and there but its flexibility I believe can make it a successful teaching approach for us postgraduate students. We juggle multiple responsibilities and being in one place every day to attend classes is not realistic for us."

(Participant 6)

4.4 Conclusion

Chapter four discussed the results of this study. A discussion of the themes and sub-themes obtained from the collected data was presented. The themes generated from the findings, namely, Advantages and disadvantages experienced in BL; Technological enhancements improving social engagement; Student's comprehension of BL and Students' perceptions of BL's efficacy were discussed.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Introduction

Chapter 5 begins with a summary of findings followed by section one, which discusses the achievements of the study's objectives. Section two provides recommendations for future research on students' perceptions of Blended learning. The aim of this research study was to examine how postgraduate students at the UKZN, PMB campus perceive blended Learning to be effective in their learning experience. This aim was achieved through these objectives:

- To investigate postgraduate students' comprehension of blended learning and how it has been applied (as a teaching method) at the University of KwaZulu Natal.
- To understand the effectiveness of certain pedagogical scenarios (i.e., quizzes, polls and Zoom breakout sessions) in maximizing the learning experience and social presence of students during remote, online, and blended learning.
- To analyse how student engagement can be promoted by the use of blended learning.
- To explore UKZN postgraduate students' perception of the effectiveness of blended learning

The perceptions regarding the effectiveness of BL among students at the University of KwaZulu-Natal (UKZN) Pietermaritzburg campus are multi-layered and include themes such as advantages and disadvantages encountered in blended learning, Technological enhancements improving social engagement, Students' comprehension of BL.

5.2 Summary of Findings

The results suggest that postgraduate students at the UKZN, PMB campus, find blended learning ineffective in enhancing their learning experience. This was partly due to connectivity difficulties, students' technological incompetence, and the insufficient support from the University and the academic staff. Participants noted that the occasional unavailability of lecturers in blended learning had a negative influence on their experiences of blended learning. Moreover, the decision to alter several sections of the curriculum into self-study resulted in students struggling to understand and retain knowledge of their course content.

Despite the overarching report of blended learning being ineffective, the participants made note of the benefits presented by blended learning, which included *convenience* and *flexibility*. In the context of existing literature on blended learning, this benefit of BL is revealed in numerous studies, such as the qualitative study undertaken by Garcia et al. (2014). Garcia's study revealed that blended learning allowed for greater flexibility in comparison to traditional instruction for master's students at South Texas University (2014). Contrarywise problems also emerged from using the blended learning method. These challenges included, connectivity issues, insufficient instructional planning (course organisation) and academic misconduct.

The challenges experienced in blended learning by the participants affirm the challenges listed by several authors who have found low satisfaction levels among university students due to problems with technology, course organisation, and time management (Graham,2008; Staker,2011; Mahlanga,2020; Khoza,2021; Prakaschandra et al.,2023).

The results suggest that the rapid implementation of blended learning at the UKZN gave rise to numerous challenges, which informed students' perceptions of blended learning

being an ineffective learning approach. In the context of the UKZN, this perceived ineffectiveness could also be due to the inadequate training provided to students. This was evident in the participants' excerpts, explaining their difficulties navigating the LMS. Reviewed literature reveals that Universities worldwide have progressively embraced the use of online resources to disseminate course materials (Akkoyunlu & Soylu, 2006; Zhang, 2020; Nalaka & Ekanayake, 2021). This then further highlights the need to support students' eLearning process.

Another interpretation of the poor eLearning support presented in the findings could speak to the poorly integrated use of the LMS with other online learning tools such as Zoom, interactive polls, and social media. Reviewed literature confirms this by indicating that Numerous Universities have used the LMS (Moodle or Blackboard) as a depository-purely storing learning materials. Anderson and Elloumi (2003) propose that the LMS should be complementary by offering asynchronous online learning. The findings further indicate that the use of social media platforms such as WhatsApp was effective in promoting social engagement and the social presence of postgraduate students. This implies that the University could innovatively incorporate social media platforms into the LMS to present online lectures, disseminate course material as well as to supplement learning. Moreover, incorporating social media could address the reported difficulty of navigating the LMS by using platforms students are competent in.

Authors Hermanto and Srimulyani(2021) explicate that the success of blended learning relies on these interconnected factors: students, academics, learning materials, and technology. The findings from this study suggest that there was a disconnect between these factors. This could partly be due to academics transferring the traditional lecture style directly into the online environment with little to no enhancements.

Class activities and assignments normally designed for in-person classes were transferred to the online environment during the pandemic without modifications to fit the online learning space. Therefore, it could be alluded that the participant's reported perceptions of blended learning being an ineffective learning approach is a consequence of the lack of coordination between the online learning design, technology, and support. In addition, it is for this reason that authors Hermanto and Srimulyani(2021) argue that to ensure blended learning is successful, the pedagogical approach should be considered in the online learning environment.

This study sought to understand the effectiveness of quizzes, polls, and Zoom breakout sessions in maximizing the learning experience and social presence of students during blended learning. The finding revealed that online quizzes were ineffective in maximising learning as a result of academic dishonesty. Students witnessed and participated in publishing test questions amongst themselves during assessments. They achieved improved academic outcomes as a result but failed to develop and retain knowledge of their course content.

In the context of existing literature, this finding goes against the popular notion that quizzes are effective and innovative testing tools in blended learning (Zhang,2020; Nalaka,2021). Numerous authors have affirmed this notion by emphasising that quizzes produce desirable academic outcomes such as improved performance in examinations. Literature further states that the immediate feedback, which in most cases is a mark, identifies students' challenges and learning gaps. However, for this study, the reported improved examination marks resulted from academic misconduct.

5.3 CONCLUSIONS THAT ARE ALIGNED WITH THE STUDY'S AIM AND OBJECTIVES

5.3.1 Objective one: To examine postgraduate students' comprehension of blended learning and its application as a teaching method at the University of KwaZulu-Natal (UKZN).

This study had the objective of understanding the extent to which postgraduate students at the UKZN PMB campus understand the concept of blended learning, and why it was introduced as a teaching method at the University. The results revealed that most of the participants believed BL was implemented at the UKZN because of its flexible nature (its unique ability to save time and reduce cost). The consensus among participants is that Blended Learning (BL) was implemented in the year 2020 to rescue the academic year disrupted by the outbreak of COVID-19. Participants acknowledge that BL allowed them to continue with their studies at their preferred pace and space. These results affirm the findings available in the literature, which confirm that students worldwide value the reduction of cost and time offered by blended learning (Lakhal & Bélisle, 2020).

Participants were unaware of the initial LMS (OLS) employed in 2011 by the UKZN, as their exposure to using online web resources for learning and teaching was limited, prior to the 2020 national lockdown. As previously mentioned, a number of Academics at the UKZN did not use the LMS to disseminate course content to students but instead relied on the traditional lecture method to teach (Khoza, 2021). This accounts for the views held by the participants who understand BL as an approach that only emerged during the COVID-19 pandemic at the UKZN.

The consensus in the literature further states that students who are younger have a better understanding of what blended learning is in comparison to individuals who are older.

Singh and Reed (2001) define blended learning as “a learning program where more than one delivery mode is used to optimize the learning outcome and cost of program delivery,” and the definitions provided by the participants suggest that BL can blend the advantages of both traditional face-to-face learning and online learning while reducing the disadvantages of the two teaching approaches.

The responses provided by the participants regarding their comprehension of how BL was integrated into their courses are insufficient. While they could provide the basic definition of BL, they found it challenging to provide the rationale behind incorporating blended approaches to their academic programs post COVID-19. The age range among the participants was 23 to 32 years old, there was no significant variance in their comprehension of BL as such it was difficult to determine whether the younger participants understood BL as a teaching method more effectively at the UKZN in comparison to the older participants.

To organise the process of learning in a blended learning environment, researchers Garrison, Anderson, and Archer created a theoretical framework called the Community of Inquiry (CoI). This framework explains the three elements needed to provide a meaningful educational experience for students: cognitive, teaching, and social presence (2008). The CoI framework further supports Inquiry-based teaching, a teaching method that encourages students to ask questions and investigate real-world problems. Inquiry-based learning has been proven to enhance critical thinking skills, problem-solving skills, and creativity as a result of being hands-on and allowing learners the opportunity to link what they learn in class to the outside world (Garrison, 2016).

The CoI would therefore rationalise that the insufficient comprehension of blended learning being incorporated into their courses post COVID-19, among the study's participants, is due to their passive stance as students. This consequently results in a lack of

full engagement in inquiry-based learning. For this reason, lecturers could prioritise providing opportunities for meaningful interaction in Inquiry-based teaching to explain the reasoning behind using the blended approach to deliver course content.

5.3.2 Objective two: To evaluate the effectiveness of specific pedagogical strategies (e.g., quizzes, polls, and Zoom breakout sessions) in enhancing learning experiences and fostering social presence during remote, online, and blended learning.

According to Dynan et al., maximising students' learning experience relies heavily on *Engagement*. Contrarily, it is difficult to engage students in an online learning environment; this is concerning because engagement has been positively associated with several educational outcomes (2008). Literature confirms that educators, fellow students, and the course content influence students' learning experiences. Useful strategies that help enhance students' learning experience include providing opportunities for educators and students to interact regularly where they also engage in informal conversations. Pedagogical instruments such as Zoom breakout sessions and polls have been identified by participants as useful strategies adopted at the UKZN PMB campus to maximise the learning experience and social presence of students during remote, online and, blended learning.

Engagement is the energy and effort students commit to learning (Bedenlier et al., 2020). Engagement is a commonly studied phenomenon in traditional education and has been linked with positive learning outcomes such as persistence, satisfaction, and good academic performance (Fredricks et al., 2004; Meyer, 2014). As mentioned previously, engagement in an online learning environment is often a challenge, and course completion rates are lower in comparison to course completion rates in traditional face- to- face learning environments (Fredricks et al., 2004; Meyer, 2014).

Heilporn et al., (2021) state that lecturers who only use body language to engage and maximise the learning experience and social presence of students in remote, online and blended learning would most likely find their method to be ineffective. This is because of the small window size (of the streaming video) on a computer screen. Students cannot view the lecturer's entire body. Therefore, pedagogical strategies such as Zoom breakout rooms, Polls, and Quizzes are more appropriate.

For the above reason, research further encourages lecturers to use their verbal skills. Joining online meeting calls early to greet everyone, raising their voice to ensure they are audible (Conklin, 2014), and creating a comfortable atmosphere through the use of humour to maximise engagement and consequently improve the learning experience of students.

Technology is a mediating tool in BL, and according to Cloonan and Hayden, it can enable or disable learning for students (2018). It allows students the opportunity to receive course content and interact with their peers. For example, Zoom breakout rooms provide lecturers and students the platform to discuss and interact with the course material taught.

Polls, Zoom breakout rooms, and online quizzes become limiting factors in maximising the learning and social presence of remote, online, and blended learning students when the internet fails to function as expected (Mazzucato et al., 2021). Poor connectivity has a negative impact on students learning experiences (Mazzucato et al., 2021). Polls, Zoom breakout rooms, and online quizzes rely on technological tools to support interactions among all users. These instruments have features that connect the lecturer to students, and connect students to students, therefore enhancing students' social presence. The social presence is further enhanced when all users are encouraged to keep their cameras on. This allows students to visually reveal their participation and attendance in class (Wang & Huang, 2018).

For this study, participants made note of how the lack of consistent encouragement to keep cameras switched on affected their social presence in blended learning. They reported that their lecturers did not check or require students to keep their cameras on; as a result, students would log in, switch off their microphones and video cameras, and resume with other tasks and activities that were not related to their course. However, participants credited their improved participation to the Zoom breakout rooms. Zoom breakout rooms, according to Angelone et al. (2020), are virtual rooms on the Zoom App, where users conduct group discussions as they would in a traditional group discussion done in a classroom. Participants found them useful with activities such as group discussions (Angelone et al., 2020).

With regard to the three presences of the CoI framework, BL, according to the CoI framework, provides learners with opportunities for self-reflection and peer-teaching. The regular assistance from lecturers is important to enhance the social and learning experience of students. The *teaching presence* promotes peer-teaching among students, thus enhancing the learning experience and social presence of students in BL (Chakraborty & Nafukho, 2015)

5.3.2.1 Environmental factors influencing students' social engagement and presence in blended learning.

Researchers Cloonan and Hayden assert that there are three types of environments in blended learning (BL): the students, the lecturer's, and the peers' environments (2018). The student's environment could be a room in their home, an office, or a car; however, research proposes that the student's environment requires connected devices, cameras, microphones, and quietness to allow for a conducive learning environment. Headsets with microphones are encouraged to help minimise distractions from noisy surrounding areas.

To ensure enhanced social engagement in blended learning, lecturers can establish guidelines such as requesting students to check connectivity in advance and to resolve issues

before class commences if students encounter technological difficulties. This ensures that students are able to participate and be socially present in the online class (Bower et al., 2015).

For this study, participants were taught online through the Zoom platform as previously mentioned. Lecturers at the UKZN PMB campus commonly use verbal communication to improve social engagement and the social presence of students in an online environment. Participants report in some instances that lecturers would rush to finish class. This was especially disastrous in improving the social presence of students in an online environment since participants reported not feeling comfortable to participate in class.

Participants made note that online quizzes were ineffective in maximising their learning experience and engagement within their courses. This was due to students sharing test questions. Polls were reported as advantageous and effective in increasing participation. They were exciting for students as they could participate without showing their faces and unmuting their mics. There was a layer of anonymity and ease that breakout rooms did not provide.

As previously mentioned, breakout rooms were used to put students into assigned groups for group discussions. Lecturers briefed the students about what was expected from them in the breakout rooms. Lecturers would visit each group to monitor progress. Students who were too shy to participate in large classrooms found it easier to participate in smaller discussion groups; they reported that the breakout rooms helped strengthen peer relationships in class, students bonded with their groupmates as students would use the breakout rooms to ask for advice concerning their personal lives.

5.3.3 Objective three: To analyse the role of blended learning in promoting student engagement.

The general consensus from the literature confirms that BL demands greater self-reliance and self-directedness than traditional face-to-face learning (Dyner et al., 2008; Shea & Bidjerano, 2012). Moreover, this approach has been found to be inadequate in involving students in their learning experiences unless the student is self-motivated and proactive and demonstrates strong time management as well as strong organizational skills in their learning habits (Banerjee, 2011).

The Community of Inquiry framework recognises the important dimension of social interaction in education. This means that for knowledge construction and enhanced student engagement-interaction, conversations and collaboration among students and lecturers are imperative. It is mainly through personal responsibility and taking initiative that students can generate meaning and be proactively engaged (Garrison et al., 2000). The technological adaptations introduced in blended learning, such as Zoom Breakout rooms, significantly enhance student engagement while ensuring advanced learning by providing a platform for critical discussion and reflection to take place.

The findings from this study illustrate that the blended environment was ineffective in promoting and enhancing knowledge acquisition among postgraduate students at the UKZN. Students failed to adequately engage in and understand their course content delivered through the blended approach. Research affirms that student's engagement is largely informed by the contexts, challenges, and benefits they experience during blended learning (Dinh et al., 2022; Keeney et al., 2023). This was confirmed by the findings of this study, which revealed that connectivity issues, poor time management, academic dishonesty, and reduced motivation

made students less motivated to proactively engage in learning. For this reason, students did not retain the information taught to them.

The blended learning approach offered various tools for assessments. The UKZN mainly made use of online quizzes, which were in the form of a multiple-choice questionnaire. The findings revealed that this blended learning tool did not promote student engagement. Students did not critically apply themselves when completing the assessments and experienced difficulties navigating the LMS. In addition, the limited attempts to complete the assessment further inconvenienced students who reported struggling with internet connectivity.

The home environment for some participants was reported to be inconducive for learning to take place. Students reported having limited space and multiple roles within the family, leading to additional responsibilities. All of these factors were challenges that impacted participants' engagement in blended learning. These findings were in accordance with the study of Simanovic et al. (2021). His findings indicated that students struggled in their school performance because, in the context of being a student and staying at home, students were also "children, carers, and employees". Moreover, the fast adoption of BL required students to adjust to a new learning environment, with little to no experience with this method of learning. Reviewed literature confirmed that this shift presented psychological difficulties, such as anxiety, which threatened students' overall well-being. All things considered, in the context of the UKZN, PMB campus, the inconducive learning environments hampered student engagement in blended learning.

According to Appleton et al. (2008), motivation is an antecedent to engagement; students participate easily when their need for autonomy and competence is fulfilled (Ryan & Deci, 2000). Literature on BL, combined with the responses from the participants (who

reported having found Zoom breakout rooms effective in improving their engagement), confirms that including students in the lesson design enhances engagement and autonomy. This is due to students feeling responsible for their own learning (Ryan & Deci, 2000). Moreover, allowing students to take leadership roles, for example, being a facilitator of a group discussion, inspired them and enhanced their involvement.

The CoI framework explains that peers play an important role in engaging others in a learning community. When students receive support from one another, this has a reciprocal effect on engagement. Strategies such as praise, increased group work are effective and are promoted by the CoI (Garrison et al., 2001). Technological advancement, which came about as a result of BL's adaptation, encouraged positive peer support. Participants reported increased community amongst each other as a result of interacting in Zoom breakout rooms and polls.

Attitude plays an important role in determining students' engagement with their learning. Attitude, according to Fredricks et al. (2004), is linked to emotional engagement; as such, students' attitudes towards their lecturer, course material, and blended learning influence their engagement. This association was further confirmed by participants who had reported being unsatisfied with their courses and the blended learning approach; they subsequently placed less effort in learning, consequently being less engaged in their learning.

5.3.4 Objective four: To explore postgraduate students' perceptions of the effectiveness of blended learning at UKZN.

The literature has confirmed that students' perceptions and satisfaction are important for determining the quality of blended learning (Naaj & Nachouki, 2023). Studies conducted to investigate students' views regarding a blended learning environment, one being the 2023 study by Khan et al., found that students hold positive attitudes toward the blended learning

environment. This was mainly due to factors such as experience, confidence and whether learners had technological skills.

Other research studies have reported negative perceptions of the blended learning experience and environment. For instance, the findings of the study by Vaughan (2007) revealed that factors such as delayed feedback from educators and poor internet connectivity were perceived as major challenges of the BL environment. For this study, most participants reported similar difficulties with delayed feedback and poor connectivity. They constituted these difficulties as greatly impacting their perceptions of BL being an ineffective approach to their learning experience post the pandemic.

Aycock et al., (2002) found that the use of the computer as a mode of instruction, coupled with the lack of reciprocity between traditional and online mediums, was one of the key reasons students withdrew from their blended courses. This result suggests that students' negative perceptions toward the BLE can stem from the inadequate design (Sagarra & Zapata, 2008). In the year 2020, the UKZN had designed a Blended learning and teaching project plan where BL was proposed as an alternative means of teaching in the wake of an emergency national lockdown. However, the project plan did not go beyond planning for when the COVID-19 restrictions would be removed. Therefore, it could be suggested that the inadequate design of BL negatively impacted students' perceptions of BL's effectiveness, post the COVID-19 era.

Fiock asserts that the common goal for researchers and educationists is to form a CoI in both online and blended learning environments (2020). This is where students are expected to express their opinions and are inspired to devote their energy to gaining knowledge. The results of this research suggest that the introduction of Information Communication Technology (ICT) tools such as Zoom, Moodle, and Polls have produced positive results in

enhancing students social engagement in online settings. In the context of the CoI, for Blended learning to be effective the existence of the *teaching, cognitive and social presence* are crucial in determining its efficacy.

For this study the findings also suggest that postgraduate students had more positive perceptions regarding the social presence in comparison to the cognitive and teaching presence. The use of Zoom breakout rooms was reported to have strengthened the social unity among students, but the limited accessibility to lecturers weakened the teaching presence. The reported incidences of academic misconduct in online assessments further compromised the cognitive presence as students were not challenged to think critically. This consequently led to a lack of retention of the materials covered in their courses.

The teaching presence (TP) according to Akyol et al., provides guidelines for educators to design, facilitate and direct the social and cognitive presence, for the purpose of meaningful learning outcomes (2009). Specifically, the TP consists of the facilitation responsibility where lecturers assist students in gaining an understanding of the course materials and topics discussed in class.

The facilitation responsibility further clarifies any misunderstandings students might have concerning their course content. It is concerned with providing timely feedback to students within the classroom setting or through using the Learning Management System (Moodle, in the case of the University of KwaZulu Natal). This role was reported by participants as having been weak. Therefore, the goal of the teaching presence, which entails producing actively involved and engaged students was not achieved.

Akyol and Garrison assert that the Cognitive presence (CP) consists of questions and course activities intended to ignite students' interest, curiosity, or drive. For an effective BL experience and environment, the CP should equip students to apply their knowledge and

implement solutions to real-life situations. The widespread academic misconduct reported by this study's participants compromised the CP. Students failed to engage in practical inquiry. They did not retain the skills and knowledge taught to them due to participating in academic misconduct.

Overall, the findings suggest that a positive teaching presence greatly enhances students' self-efficacy and motivation to learn. A negative teaching presence produces adverse results, diminishing students' motivation to learn, subsequently impacting their overall perception of Blended Learning's effectiveness (Shea & Bidjerano, 2012). For this study, participants shared their experiences detailing how the lack of availability from lecturers, the cancellation of in-person tutorials, and increased self-study sessions further affected their motivation and confidence in applying content taught to them in the real world. This consequently influenced their perceptions of BL not being effective in enhancing their learning environment at the UKZN PMB campus.

5.4 RECOMMENDATIONS.

The recommendations presented below were obtained from the results discussed in Chapter 4.

5.4.1 Recommendations for Blended Learning at the University of KwaZulu Natal (PMB) campus.

The conclusions and results of this study indicate that the adoption of BL platforms such as the App, Zoom and polls were hastily introduced to assist in continuing with course delivery amid the COVID-19 pandemic. These tools improved social engagement during a period when students experienced isolation from their peers. The research undertaken to examine the efficacy of online learning platforms (outlined above) in enhancing the social

engagement of students demonstrated the significance of community in producing positive learning outcomes. Therefore, it is recommended that the university capitalises and continues its use of the above-mentioned platforms to engage students post- COVID-19.

In light of the challenges and disadvantages reported by the participants, their experiences suggest that the blended learning approach was not adequately designed to meet the needs of postgraduate students following the removal of COVID-19 restrictions. The BL approach assisted in the continuation of the syllabus during the lockdown, but with the removal of the restrictions, its shortcomings have negatively impacted their learning experience, therefore, it is recommended that an updated BL program be designed to fit the nuanced experiences of postgraduate students, post the COVID-19 era.

Improving the technological literacy and competence of students is recommended. The rapid adaptation of BL highlighted the digital divide between students who were privileged and students who were underprivileged. Therefore, it is recommended that time be allocated to provide students with training on the utilisation of blended learning platforms and assessment tools. Furthermore, the university should refrain from presuming that students are already competent in using technology, as research has indicated that students experienced challenges due to being technologically incompetent.

Lecturers are recommended to continue receiving ongoing training on new blended learning platforms in order to hone their skills. This is important because lecturers must demonstrate proficiency in using technological tools and promptly address any technical issues that could occur in an online class (Saad & Sankaran, 2023).

It is recommended that the teaching staff at the UKZN start their online lessons 5 to 10 minutes earlier. They could use this time to greet students and converse with them to establish a good rapport. Some students are introverted and sometimes passive, but should

this practice become successful, students might become comfortable participating. Moreover, lecturers are encouraged to learn their students' names if possible. These strategies could assist in changing the unfavourable attitudes towards the academic staff, some participants have reported.

5.4.2 Limitations

The limitations identified in this study were related to the level of participation, only 6 participants were recruited for this study; as such, the small sample number limited the generalisation of the findings to the greater student population at the University of KwaZulu Natal(UKZN). Moreover, this study explored the perceptions and experiences of students, which are subjective. This makes it difficult to generalise the results to the larger student population. Thus, a longitudinal study with a bigger sample size is recommended to investigate students' perceptions of blended learning's effectiveness.

5.4.3 Recommendations for Future Research

It is recommended that future research explore how to foster social connectedness between learners and lecturers. As mentioned previously, the teaching presence in blended learning at the UKZN PMB campus was observed to be weak, by participants who reported the occasional unavailability of their lecturers during BL.

The conclusions from this study illustrated that the BL approach is vulnerable to academic misconduct. Therefore, to combat the spread of academic misconduct in blended learning, further research is recommended to investigate how academic integrity could be encouraged in assessments and tasks completed in BL.

5.5 Conclusion

The goal of this study was to investigate postgraduate students' perceptions of blended learning's effectiveness in their learning experience. This objective was achieved as the findings indicated that the disadvantages and shortcomings of BL shaped students' perceptions of BL being ineffective in enhancing their learning experience due to various reasons such as connectivity issues (electricity and internet connectivity), course organisation problems, academic misconduct, and technological incompetence.

The educational transformation brought about by the COVID-19 pandemic in institutions of higher learning was discussed extensively in this study. The pandemic especially transformed the learning experiences of disadvantaged postgraduate students residing in rural areas who had to leave their student accommodation and return to poorly resourced areas following the implementation of the national COVID-19 restrictions. The challenges experienced made it difficult for the participants to engage effectively in blended learning, consequently highlighting structural inequalities that the BL approach might exacerbate.

The findings from this research study further highlighted that the abrupt adoption of the BL approach at the University of KwaZulu-Natal inadvertently resulted in postgraduate students feeling rushed and unprepared to apply practical content that was taught to them in the real world. Therefore, this suggests that an important element of blended learning's effectiveness lies in its detailed design and preparedness of all stakeholders involved. Students and educators must be prepared to engage with learning content through blended means.

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Appendices: Appendix A: Consent Form

Social Sciences, College of Humanities,
University of KwaZulu-Natal,
Pietermaritzburg Campus

Dear Participant

INFORMED CONSENT LETTER

My name is Vuyiswa Khanyile; I am a Psychology Masters Student candidate studying at the University of KwaZulu-Natal, Pietermaritzburg campus, South Africa. Covid-19 saw a surge in online education throughout the world, with South Africa being no exception. It allowed students to keep up with their studies while under lockdown. However, research has shown that online learning in South Africa has its challenges, like low attendance rates. This is where blended learning can come in and close the gap. To gather the information, around students' perception of the efficacy of blended learning I am interested in asking you some questions.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person but reported only as a population member opinion.
- The interview may last for about 30-40 minutes
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research.

You will not be penalized for taking such an action.

- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- If you are willing to be interviewed, please indicate (by ticking as applicable) whether or not you are willing to allow the interview to be recorded by the following equipment:

	willing	Not willing
Audio equipment		
Photographic equipment		
Video equipment		

I can be contacted at:

Email: Khanyilevicky@gmail.com

██████████.

My supervisor is Ms. Zamalotshwa Mncube who is located at the School of Applied Human Sciences, Pietermaritzburg campus of the University of KwaZulu-Natal.

Appendix B: Gate Keeper's Permission



11 April 2023

Ms Vuyiswa Khanyile (SN 218001148)
School of Applied Human Sciences
College of Humanities
Pietermaritzburg Campus UKZN
Email: 218001148@stu.ukzn.ac.za

khanyilevicky@gmail.com

Dear Ms Khanyile

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate degree, provided Ethical clearance has been obtained. We note the title of your research project is:

"Past Covid-19 Adaptions: Understanding students' perceptions on the effectiveness of blended learning at UKZN."

It is noted that you will be constituting your sample as follows:

- With a request for responses on the website. The questionnaire must be placed on the notice system <http://notices.ukzn.ac.za>. A copy of this letter (Gatekeeper's approval) must be simultaneously sent to govenderlog@ukzn.ac.za or camkiesoonh@ukzn.ac.za.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using the 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

Dr KE CLELAND: REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 7971 Email: registrar@ukzn.ac.za Website: www.ukzn.ac.za

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS

Appendix C: Ethical Clearance



04 October 2023

Vuyiswa Vicky Khanyile (218001148)
School of Applied Human Sc
Pietermaritzburg Campus

Dear VV Khanyile,

Protocol reference number: HSSREC/00006107/2023

Project title: Post coronavirus adaptations: Understanding postgraduate students' perceptions on the effectiveness of blended learning at the University of KwaZulu-Natal.

Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 08 September 2023 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 04 October 2024.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hialele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

Postal Address: Private Bag 154001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://www.ukzn.ac.za/research-ethics>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

Appendix D: Interview Schedule

Demographic Details:

1. Full Name :
2. Age:
3. Level of education

Introduction

My name is Vuyiswa Khanyile, and I am so glad you are taking part in this research. Just to be clear once again, your identity will be kept absolutely confidential and there won't be any recordings of the interview with your name on them.

I also want to thank you for allowing me to audio record our conversation since it will help me get accurate data, such as your viewpoints and reactions, from you. The interview should take about 30 minutes. If there's nothing else you would like to ask me, let's get started with the interview!

Questions:

1. What made you want to participate in this study?
2. What is your understanding of blended learning?
3. How, in your opinion, is blended learning implemented as a teaching approach in the UKZN?
4. How did you experience the course when it was taught completely online vs when it was taught in a blended approach?
5. Please describe your home environment during the first lockdown in 2020?
6. Do you believe your family setting influenced how you studied during the lockdown? If so, how ?
7. Did the blended learning approach make a difference to your academic performance?
8. What part of doing your coursework during the COVID-19 environment had been the most challenging?
9. What were the most engaging activities that occurred in your online classes?

10. Did polls , breakout rooms make a difference in promoting engagement with the course content during the Covid-19 lockdown?

11. How satisfied are you with the way learning is structured at the UKZN (PMB Campus) right now?

12. Would you recommend the university to continue teaching in a blended approach or to reintroduce complete face to face classes? If so, why?

Closing

- (Summarize) I will summarize the participants responses.
- (Maintain Rapport) I appreciate the time you took for this interview. Is there anything else you think would be helpful for me to know, so that I can successfully understand how students perceive the effectiveness of blended learning?
- (Action to be taken) I should have all the information I need. Would it be all right to email you if I have any more questions?

Thanks again for availing yourself for this interview.

Appendix E: Research Advert



VOLUNTEERS NEEDED FOR RESEARCH STUDY ON BLENDED LEARNING



ABOUT THE STUDY

The global pandemic has transformed the landscape of higher education. In response to the challenges posed by COVID-19, universities worldwide have implemented blended learning models, combining in-person and online instruction. Now, we aim to understand the perceptions and experiences of postgraduate students at UKZN regarding these adaptations.

WHY PARTICIPATE?



By joining this study, you will have the opportunity to:

- **Share Your Insights:** Contribute to the improvement of the higher education experience for yourself and future students.



PARTICIPATION REQUIREMENTS:



- Be a current postgraduate student at UKZN.
- Have experienced blended learning courses during or after the COVID-19 pandemic.
- Commit approximately 30 minutes to complete an interview.

HOW TO PARTICIPATE:

Getting involved is simple! Respond to the advert by contacting Khanyilevicky@gmail.com

For any questions or concerns, please contact me at KhanyileVicky@gmail.com

Thank you for being a part of this transformative research journey. Your input is invaluable!

#UKZNBlendedLearningStudy
#HigherEducation
#PostgraduateResearch
#ShapeTheFuture

! Share the Word:

We encourage you to share this study with your fellow postgraduate students at UKZN. Together, we can gain valuable insights into the effectiveness of blended learning and pave the way for a brighter future in higher education.

