Exploring How Students' Experience of Remote Learning in Historically Disadvantaged Universities of South Africa Shape Their Perception of Remote Learning

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By

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ABSTRACT

Remote learning, a means of delivering education online or in the absence of physical presence, emerged as an alternative to traditional teaching during the COVID-19 pandemic. Since then, its use has become widespread in most higher education institutions. However, in emerging economies and particularly in Africa, its implementation and use remain limited, especially in universities referred to as Historically Disadvantaged Universities (HDIs). These institutions are usually found in rural areas, have limited resources, and continue to service disadvantaged communities. Although remote learning has received attention by several scholars, few have examined remote learning from institutions that are characterised as historically disadvantaged. With this limitation, the contextual challenges experienced by students when engaging in remote learning in these institutions is unknown. The goal of this study is therefore to explore how students experience of remote learning in historically disadvantaged universities of South Africa shapes their social, cognitive, and learning presence in the remote learning environment.

Qualitative data using in-depth semi structured interviews was collected from 14 participants from four South African HDIs. The interviews were guided by key constructs from the Community of Inquiry framework and Ubuntu philosophical ideals. These interviews were analysed using thematic analysis after transcription. The findings show that factors that influenced remote learning in HDIs were (i) a perceived sense of community, (ii) the ready availability of institutional resources and academic staff support and presence for remote learning; (iii) and access to digital platforms. These findings have implications for practice, particularly educators and technology implementors in the education sector; as well as for policy development.

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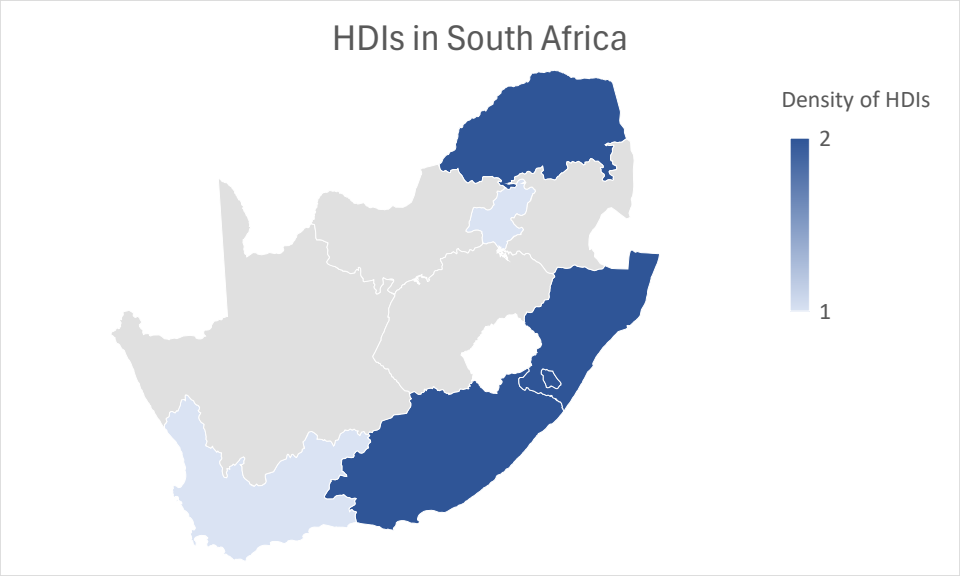
CHAPTER 1: INTRODUCTION

1.1. Background

In recent years, the world has been forced to shift to online ways of working due to the global COVID-19 pandemic (Wang et al., 2021). This has resulted in remote learning gaining more prominence. Its global, forced implementation resulted in people who had previously not been exposed to remote working having to transition to exclusively working remotely (Grant & Russell, 2020). During this time, Historically Disadvantaged Institutions of Higher Education (HDIs) struggled with adapting due to the digital demands presented to them (Iwu et al., 2022). South Africa has consistently had the highest levels of inequality in the world (van Ham et al., 2021), largely due to historical events such as apartheid that segregated all levels of society according to race. For this reason, the context of South Africa presents a research opportunity as its HDIs as they are fundamentally built on racial lines (Temoso & Myeki, 2022). Under the apartheid regime, these institutions were reserved for non-white people and due to this systemic segregation in the past, they still face challenges of resources, particularly financially. There are eight universities in South Africa that have been classified as HDIs since 2014 according to South African government criteria (The Minister of Higher Education, 2022). They are located in various provinces of the country, and their distribution is depicted in the figure below.

Figure 1: *HDI Distribution in South Africa*



HDIs encounter many challenges that limit their ability to work and provide functional remote learning opportunities. In these HDIs, many of the challenges are often driven by the lack of financial resources and access to quality and advanced infrastructure or technology (Marongwe & Garidzirai, 2021). In addition, there are issues of isolation and lack of support that manifest alongside remote learning that their facilitators and students face (Iwu et al., 2022; Kotzé, 2021). Although prior studies have examined how these challenges affect the operations of HDIs, there have been limited studies that have explored how students in these contexts are affected by these challenges (Lotz-Sisitka & Lupele, 2017; Ndlovu et al., 2023). While there have been studies on higher education in emerging economies, this is a relatively unique challenge in South Africa due to the entrenched imbalances and a rich history of racial segregation. This segregation is present in communities and places of education that resulted in the formation of HDIs. This exploration is of particular importance with the move to remote learning as students in HDIs continue to adopt new technologies.

The landscape of South Africa's education system is evidently shaped by its past Apartheid policies, and HDIs are the outcome of that. However, there are policies that were introduced to promote inclusivity and equitable education for the SA population and serve as redress for these inhumane former policies. The policies that are closely related to this research include the Sustainable Development Goal 4 (SDG 4), also referred to as Quality Education, which was adopted at an international level at the United Nations (UN) by all nations that form party of the group. This goal is one of seventeen goals that were introduced and adopted by the UN in 2015, in a commitment to providing peace for all people in the world (Saini et al., 2023). The key principle of this framework relates to the provision of quality education for all, with a focus in addressing gender disparities in access to education (Ferguson & Roofe, 2020).

This research aims to explore remote learning in HDIs, by studying the perceptions of students who have been exposed to remote learning in these HDIs during this time. It aims to do so by applying the Community of Inquiry (CoI) framework to assess students' experiences in relation to the key principles of the framework. CoI is a framework that understands that there is a complex relationship between cognitive, social and teaching presence that affects the overall learning experience for a student (Englander & Russell, 2022). It also notes that critical discourse and collaboration is important in the learning experience as a fundamental aspect of the cognitive presence (Nasir & Ngah, 2022). There is a focus on the ability of students to

effectively communicate and their perceived sense of connection and group cohesion. HDIs in South Africa (SA) serve students that come from disadvantaged backgrounds and often marginalised, under resourced communities. The philosophy of Ubuntu is practiced in these communities with the aim to uplift not just individuals but the communities too, by prioritising treating all people humanely. In education, Ubuntu can improve collaboration and promotes inclusive learning practises by fostering engagement and direct participation from students (Omodan & Diko, 2021). It therefore is closely aligned with CoI and has potential to improve how student experiences are understood and improved. Ubuntu emphasises interdependence and connectedness and promotes a sense of community amongst people (Assié-Lumumba, 2017). It shares many principles with CoI and its application in education to supplement learning should be explored. A wholistic approach is needed and Ubuntu comes up a principle that has shown positive influence in social settings (Vandeyar & Mohale, 2022) and can potentially be of benefit in these learning experiences (Ntseane, 2011). The study aims to explore how students in HDIs have perceived their experience of remote learning by referencing the CoI framework as a guide, as well as Ubuntu principles. The aim is to show how these experiences shape their social, cognitive and teaching presences.

1.2. Problem statement

While remote learning has seen its implementation in the past in various modes that include a blend of in person an online interaction, its practice was accelerated and advanced in 2020 in South Africa, in the wake of physical restrictions related to the pandemic (Pika, 2024). (Mhlanga & Moloi, 2020). With the implementations of lockdowns during the COVID-19 pandemic, schools and universities had to be physically shutdown as population movements were restricted. This resulted in teachers and higher education facilitators (HEFs) having to conduct their classes from home, using digital tools and technologies (De' et al., 2020). During the pandemic, a need for remote working and distanced learning resulted in an increased demand for new distance learning strategies by HEIs and their employees (Azionya & Nhedzi, 2021). Teachers adopted virtual practices using remote working tools such as Zoom that enabled them to work remotely (Mathrani et al., 2021; Sosa Díaz, 2021). The digitisation of work and teaching due to this emergency online teaching model resulted in an unprecedented practice of remote learning (Gu, 2021).

In South Africa, many students entering higher education institutions have limited prior technology experience or exposure (Dube, 2020). This is largely due to challenges in technological advancement in the country that are rooted in the inequality and wide socio-economic divide that exists in the country (Azionya & Nhedzi, 2021). These divides lead to certain communities having more privileged access to resources and connectivity while other communities struggle to catch up (Marongwe & Garidzirai, 2021). The latter often house universities that are intended to cater for these marginalised communities and offer education to their youth. However, they too often lack the required resources and preparedness to create seamless learning opportunities (Iwu et al., 2022). These HDIs are referred to as historically disadvantaged universities and will be the focus of this study as their challenges with remote learning may be more nuanced than traditional universities.

Literature shows that during the pandemic, rural schools and teachers struggled to meet the demand of rural students (Zhao et al., 2022). Due to the lack of resources by the HDIs, as well as the rurality of the students that attend them, the forced remote learning that was implemented in 2020 therefore meant some students were unable to participate digitally on a full-time basis, or at all (Marongwe & Garidzirai, 2021). As students in historically disadvantaged universities face challenges of inadequate digital skills, they struggle to adapt to remote learning (Niyigena et al., 2020). With the shift to remote learning, students faced a reduction in interpersonal interaction and often expressed feelings of isolation and lack of motivation to participate in class (Pika, 2024). HEF were also newly introduced to remote learning, and this presented challenges to them as well in the facilitation of classes. This affected not only the ability to use new platforms, but the ability to adapt to students' changing needs in a new learning environment. This too would have had a fundamental impact on the student learning experience, as it affects how the lecturers may come across to student in a remote learning environment (Iwu et al., 2022).

With remote learning being implemented as a teaching model for an extended period, concerns arise not only in relation to skills, but to a loss of community and human connection (Tapani et al., 2022). It is therefore important to have a deeper understanding of students' experiences during this time (Azionya & Nhedzi, 2021). The study aims to close the gap in literature related to HDIs by focusing on three key perspectives. These are social identity, critical thinking and collaboration, and instructor presence. The aim of this research is to

explore how remote learning was perceived by students in HDIs. It aims to do so by analysing key perspectives such as how students perceived their social identity during this time. Social identity is important in students feeling value in their presence in social settings and amongst their peers, and can therefore have an implication on their remote learning (Andreadis & Marshall, 2025). The study also aims to explore how students in HDIs perceived their ability to think critically, engage meaningfully and collaborate effectively during remote learning. Lastly, the study aims to close the gap in literature by exploring how students perceived their lecturers' presence during remote learning.

1.3. Research objectives and questions

The primary objective of this research is:

To explore how students' experience of remote learning in historically disadvantaged universities of South Africa shapes their social, cognitive, and learning presence in a remote learning environment.

This is guided by the following secondary objectives:

1. *To explore factors that influence students' perception on remote learning in HDIs.*
2. *To explore factors that influence students' engagement with course content during remote learning in HDIs.*
3. *To explore how students perceive their sense of belonging in HDIs during remote learning.*

The primary research question for this study is:

How do students' experience of remote learning in historically disadvantaged universities of South Africa shape their social, cognitive, and learning presence in the remote learning environment?

This main question will be supported by the following secondary research questions:

1. *What factors influence students' exception of remote learning in HDIs?*
2. *What factors influence students' engagement with course content during remote learning in HDIs?*
3. *How do students perceive their sense of belonging in HDIs during remote learning?*

CHAPTER 2: LITERATURE REVIEW

2.1. Remote learning

2.1.1. Remote learning pre internet

Remote learning, also known as e-learning, online learning, virtual learning refers to a mode of facilitating education without the student or teacher being in the same physical location (Chaves, 2022). The modern facilitation of remote learning is made possible using technology and digital platforms. It allows flexibility for students to engage in class without the limitation of a classroom. It is an innovation that has allowed educators to enhance their skills and provide improved collaborative opportunities and social interaction for students (Barikzai et al., 2024).

Distance learning is the earliest format of remote learning, and it initially emerged in the 19th century when postcards were used to advertise to and teach responders writing skills. In 1858, correspondence learning was formally introduced and adopted by a university for the first time at Oxford University (Thorkelson, 2021). Correspondence learning involved making use of the postal service to send and receive learning material and textbooks to students. This meant students would receive material and assessments in the mail, write them and return them to their instructors, with further feedback from instructors anticipated by post again (Siemens et al., 2015). While this was a lengthy process, it opened up opportunities for students all over the world to study at institutions without having to reside in the physical location of the institution during their time.

The introduction of mass media technologies in the 20th century brought with it opportunities to broadcast educational content. At this time, it was pioneered once again by universities, and broadcasters soon followed suit with their own educational content. The aim of universities was to supplement and reach their students through radio (Anderson, 2005). Radio programs could be scheduled more frequently and did not rely on the post which could take days to fulfil the complete process of learning and feedback. It was therefore a more efficient process at the time as it significantly shortened the time taken to administer teaching (Thorkelson, 2021).

When television was invented, it provided an additional means of facilitating classes, while also including a visual element. TV educational content was introduced by universities, however the TV stations and Broadcasting channels also created their own educational programs and ultimately set up channels dedicated to educational content (Thorkelson, 2021). Early versions of TV education simply featured a person reading the content, which resulted in viewers losing attention. Broadcasting stations subsequently set standards for educational content (Kentnor, 2015). While all these initiatives were targeted at students, it was not limited to a particular group of people as radio and TV were publicly broadcast.

Over time, distance learning evolved, particularly with the introduction of computers, this introduced remote learning that is much closer to the state of remote learning as we know it now. The aspect of technology was now a factor and enabler to remote learning.

2.2. Remote learning in the new millennium

The invention of computers resulted in further adaptation to remote learning however there was still hesitation by educators to adopt the new medium (Kentnor, 2015). It was only once the use of personal computers grew, and the introduction of the internet, that educators started seeing the increased opportunities for using the computer for education. At this time, universities started offering online coursed on their websites for those that were unable to attend traditional classes (Thorkelson, 2021). Universities started to embrace the online learning model albeit to a limited audience initially. As the content was being provided by formal institutions, early online learning implementation and courses were restricted to students that were already enrolled at the relevant institutions. This meant that members of the public were not able to access such content as university enrolment comes at exclusionary fees (Finkle & Masters, 2014). The solution for these practices came about in the form of Massive Open Online Courses (MOOCs).

MOOCs came about as a means to address challenges faced by individuals regarding the accessibility of education and cost thereof. They are scalable and built to handle large audiences at a time (Finkle & Masters, 2014). MOOCs also are open access, meaning they do not limit enrolment to a specific base and therefore aided in including people who were not able to access traditional universities. While not all MOOCs are free, their introduction

provided a cheaper alternative to consumers and made them accessible to the greater public, as their fees are considerably less than university courses (Thorkelson, 2021).

Early implementation or remote learning was largely asynchronous, where the facilitator would upload learning material or video for the students to view at their own time. This allowed the facilitator to prepare the material or pre-recordings ahead of time. The content would be in the form of a message board, PowerPoint slides or videos that were shared with students for them to download (Finkle & Masters, 2014). This added to the flexibility that was already provided by online learning, of students being able to fit the courses into their schedule. However, there were some negatives in that it limited live interaction between teacher and student. This resulted in teachers being unable to immediately note when a student if facing challenges with the content. They are thus, unable to timeously gauge whether the students are in fact learning (Boelens et al., 2017).

Asynchronous learning can also lead to feelings of demotivation from students to engage with the content (Chaudhury, 2023). During this time, learning management systems (LMS) were introduced. The earliest LMS was Blackboard which aimed to provide an integrated centralised repository for students, while tracking their progress through the course (Finkle & Masters, 2014). LMS are platforms that facilitate asynchronous learning by allowing facilitators to upload material and share with students throughout the duration of the course. They also integrate with university systems, thereby enabling more accurate data sharing and tracking of student achievement (Siemens et al., 2015). They may also include discussion boards or chat rooms for students and lecturers to interact synchronously or asynchronously. This provides an opportunity for students to pre-read and research before responding and provide informed answers when ready (Leslie, 2020).

Remote learning has advanced in recent years to not only make use of asynchronous learning, but to include a combination of synchronous lessons that involve the lecturer engaging with students in real time while providing the lesson (Ndebele & Legg-Jack, 2024). They enable students to ask questions that can be addressed at the same time. Examples of synchronous learning include live lectures held on platforms such as Microsoft Teams and Zoom that provide an opportunity to interact in real time. These platforms also provide two-way video and audio which improves the ability to engage in class and allows the students to see each other and the lecturer, simulating a live in-person lecture. Much of the synchronous remote

learning that exists was initiated during the COVID-19 pandemic as a response to physical restrictions (Kormos et al., 2023). While synchronous classes have the benefit of interaction and engagement, they do limit accessibility for those with strict schedules (Borup et al., 2012). Therefore, in the current landscape of remote learning, teaching models that combine asynchronous and synchronous learning need to be in practice.

The term remote learning in this study, encompasses all forms of virtual learning, including the evolutions from the past. With the advance of technology, these earlier forms of distance and online learning have provided a foundation to what we refer to now as remote learning.

2.3. Remote learning in emerging economies and South Africa

2.3.1. Context and remote learning landscape

Remote learning has had some successful and promising implementations in the world in recent years (El Said, 2021). It is an innovative movement that has transformed the way in which information is delivered to students (Barikzai et al., 2024). In the context of developing countries, also known as emerging economies, there remains challenges that hinder its widespread adoption. An emerging economy is described as a country that is yet to reach its full potential in developing and is characterised by above average economic growth (Lee et al., 2023). These economies face barriers to entry that limit their adoption of new innovations. They are thus often late to transform and join global trends in innovation and constantly face the challenge of having to catch up with the rest of the world (Nyagadza et al., 2022). These countries also often have a level of inequality as the sharing of social resources and remains uneven. Inequality often perpetuates the segregation in socio-economic groups of a country (van Ham et al., 2021). South Africa has not only the highest inequality in emerging economies, but the highest inequality levels in the world according to the World Bank (van Ham et al., 2021).

Much of the implementation of remote learning in emerging economies was driven by the forced restrictions applied as a response to the COVID-19 pandemic (Saleem et al., 2022). For this reason, challenges such as the digital divide and lack of skills have been exacerbated as the advance of remote learning continues (Barikzai et al., 2024). The implementation of remote learning therefore resulted in more pronounced gaps in skills due to the digital divide – with students and educators having to catch up with remote learning (Rof et al., 2022; Sosa

Díaz, 2021). Remote learning is a key factor in equalizing quality educational opportunities by availing them to students in urban and rural areas (Barikzai et al., 2024). Thus, it is important for the inclusivity of education, that remote learning is appropriately implemented in emerging economies like South Africa.

2.3.2. Barriers to remote learning in emerging economies and south Africa

Studies have the shown that the main challenges that are faced by countries in relation to participating in remote learning are technological skills, affordability and lack of infrastructure (Azionya & Nhedzi, 2021). It is evident in literature that the limited access to resources such as technology, reliable connection and networks has an impact on a person's ability to seize opportunities and improve their prospects at life (Warschauer, 2003). There is an apparent technological gap between those that have and those that do not have relevant technologies. This is often as a result of socio-economic division and disparities that result in certain groups of people having less than desirable access than others. This phenomenon is referred to as the digital divide and is characterised by two main problems, the limited access to costly infrastructure, and the limited digital skills and aptitude to make use of technology in lower income communities (Chetty et al., 2018).

Previous studies have shown that lack of digital infrastructure, affordability and technological skills are the primary challenges related to the digital divide in emerging economies. The digital divide is observed globally but its presence is more evident in developing countries where the consequences are more pronounced (Ohemeng & Ofosu-Adarkwa, 2014). It is not only defined by access to physical technology, but also digital literacy, and access to enablers such as reliable internet connectivity (Warschauer, 2003), which all have an impact on students' ability to learn remotely. Such challenges are prevalent in emerging economies like SA and include other challenges such as lack of reliable electricity, all of which have a negative influence on remote learning (Saleem et al., 2022). For these reasons, blended learning is seen as more of a solution in emerging economies than completely remote learning.

Blended learning has existed in south Africa for some time since it was introduced with learning management systems. At the time it was a basic version of remote learning that included lecturers' uploading of learning material online and students accessing and downloading the material from digital platforms. Blended learning now refers to a mixed method of learning, combining face-to-face classes with online and remote learning. It is often

also a combination of asynchronous and synchronous learning, with the face-to-face classes being synchronous lectures or practicals.

Studies show that video conferencing can improve student satisfaction with remote learning. However, due to these critical challenges in emerging economies, video conference remains elusive to many portions of the developing world (Siemens et al., 2015). Video conferencing requires fast and reliable internet connections. These can be a challenge in HEIs in emerging economies as many are located in what could be described as rural areas. Rural areas are known to have limitations in accessing or providing advanced technological services to their communities. This is as a result of the lack of fundamental infrastructure required to connect these communities to the cyber world effectively (Nkohla, 2025). Such infrastructure includes but is not limited to: sufficient cellphone towers to provide mobile networks that support fast data exchanges, and optic fibre installations that enable uncapped Wi-Fi connections.

With its levels of inequality, SA presents itself with many discrepancies in various levels of society. Inequality is a leading factor to the digital inequality that plagues the South African people (Azionya & Nhedzi, 2021).

2.4. Remote Learning in Historically Disadvantaged Institutions

In South Africa, the HEIs that are classified as historically disadvantaged are those that had been exclusively allocated to black people historically, and they are almost always in predominantly black and marginalised communities (Temoso & Myeki, 2022). HDIs are often in communities where the digital divide is highly evident or serve students that come from these communities and are victims of this divide. Thus, making efforts such as remote learning all the more challenging to implement in HDIs. These institutions face major challenges when it comes to finances and they are often heavily reliant on government funding (Temoso & Myeki, 2022). With lack of financial resources, it is a challenge for HDIs to keep up without further public intervention (Marongwe & Garidzirai, 2021). In conjunction with lack of financial resources, the digital divide is one of the forces that leads to the lack of appropriate technology required to participate in remote learning (Ohemeng & Ofosu-Adarkwa, 2014). There is a deficiency in high-speed broadband internet provided by the HDIs sufficient to handle multiple users on video conferencing for the duration of the lectures. Further challenges arise from this scenario due to the marginalised status of the communities. As a

result, they may not have alternative means to facilitate remote learning and ultimately are excluded in the participation thereof (Dube, 2020). This further drives the division between resourced universities and HDIs, and puts them at a disadvantage when having to learn remotely (Marongwe & Garidzirai, 2021).

The challenges faced by HDIs in their ability to effectively facilitate remote learning are not only limited to resources, but also the ability of staff to transition optimally to remote learning. Often staff in these institutions have limited technological knowledge and experience, and therefore struggle adapting when digitisation is required (Nkohla, 2025). This was the case during the remote learning implementation in 2020 as institutions and staff struggled to meet the demands of the students. Due to financial limitations, lack of skilled personnel is not only limited to higher education facilitators, but extends to the dedicated IT teams and support that is key to facilitating remote work (Iwu et al., 2022).

In recent years SA has seen growth in the number of students that enrol in higher education that come from a disadvantaged background (Nana & Roos, 2021), many of which enrol in HDIs. However, students that arrive in HDIs are shown to have had limited prior exposure to technology (Naidoo & Raju, 2012), and even less so advanced technology required to learn remotely. This limited exposure limits their digital literacy and confidence, and impacts their ability to navigate digital platforms and technology (Barikzai et al., 2024). This provides an additional challenge to resolve and address during remote learning as the burden to teach extends beyond merely teaching academic material, but the technological navigation as well. To ensure that all students regardless of backgrounds are afforded equal learning opportunities and optimal experiences, it is important that institutions adopt inclusive practices that account for the challenges and the digital divide that exists in SA and in HDIs (Krönke, 2020).

2.5. Community of Inquiry

Community of Inquiry (CoI) has been identified as a guide for this study. This framework encourages and supports online collaboration and engagement through dialogue (Shea & Bidjerano, 2009). It is a model that details the key characteristics of creating a successful online learning experience and thus its application can enable stakeholders in HDIs to engage and create meaningful online learning experiences (Chaves, 2022). Through inclusivity, it finds

common ground between the mix of student, teacher and content needs and can support the HDI in improving a quality education (Nasir & Ngah, 2022). This framework is represented by three significant elements referred to as presences, namely cognitive, teaching, and social presence. They are referred to as presence because they do not refer to a tangible object but rather the ability for students and teachers to be actively present mentally, and socially in an online environment (Englander & Russell, 2022). In a CoI model, there is distribution of responsibilities amongst the educator and students to fully engage themselves and actively participate in the learning experience. As an example, teaching presence is not only limited to teachers, but students too may have a role where they need to be present in a teaching capacity (Shea et al., 2022).

According to CoI, any online learning experience can be described as the culmination of these three presences (Yildirim & Kilis, 2019). The relevance of this framework to this research is that, by categorising the students experiences according to these three presences, the research can explore the complex relationship between engaging with self, teacher and peers (Nasir & Ngah, 2022). CoI is therefore useful in providing a lens through which the experience of the students can be grouped and enhances applicability of the research findings to practice.

2.5.1. Social Presence

The first presence is social presence and is referred to as the ability of students to have a sense of identity within the learning community (Kormos et al., 2023). It describes the level of the connectedness that exists amongst students, and it enables the student to be able to see themselves and their peers as real people. This can be a challenge in an online learning environment which is void of face-to-face presence and sometimes verbal communication amongst peers (Shea & Bidjerano, 2009). The ability to see themselves as part of the community creates a sense of trust that facilitates open communication and allows the student to be their authentic self. By doing this, interpersonal relationships are developed and this aides group cohesion and communication and improves the learning experience (Chaves, 2022). Social presence in higher education is often affected with remote learning due to the lack of physical interaction and familiarity with peers. This is further exacerbated by the fact there is limited familiarity with technology and digital platforms required to facilitate engagement with peers (Nasir & Ngah, 2022). In HDIs in emerging economies such as SA, the

digital literacy becomes a limiting factor to optimally achieving social presence in an online environment.

Studies show that during remote learning, satisfaction with social presence was the least compared to teaching and cognitive presence. This low score is attributed to the difficulty in making friends, finding your social bearing in an online environment, and the lack of quality interactions with their peers (Nasir & Ngah, 2022). Social presence is important in establishing group dynamics and fostering collaboration amongst students. This presence allows students to express themselves authentically and motivate them to engage in class dialogue (Leslie, 2020). This is all the more evident in remote learning where there is a lack of informal physical dialogue. In HDIs, many students may remain silent during remote learning and be demotivated due to lack of confidence to engage meaningfully online. The prioritisation of a social presence has the ability to empower students and improve engagement with the relevant courses (Nasir & Ngah, 2022). By prioritising social presence, a sense of social connection is established amongst students.

Social connection is a critical factor in ensuring satisfaction with remote learning for students, and can be used as a key determining factor of success for online programs (Englander & Russell, 2022). In the context of HDIs in SA, mobile social media was used as an alternative channel for students to collaborate and engage informally. This is due to the lack of reliable internet connection that often inhibited the use of institutional LMS (Ndebele & Legg-Jack, 2024). This has a positive impact on their ability to frame themselves socially in the greater communities to which they belong within their studies. Literature shows that students' use of popular mobile social media platforms such as WhatsApp proves to be helpful and convenient in remote learning (Petersen, 2023). This is because these platforms provide an opportunity for student to better engage with each other and forge social connections. This social connection amongst students encourages them to support each other (Themane & Mabasa, 2022). Social media therefore plays a fundamental role in communicating and coordinating that support in HDIs and thus improving collaboration and group learning.

2.5.2. Cognitive presence

Cognitive presence is regarded as the simplest presence in CoI. It is the measure of student's ability to think critically and reflect on material and therefore construct knowledge (Shea et al., 2022). It describes how a student is mentally engaging with content that is communicated

to them by their educators or peers. True learning from cognitive presence is made possible only through reflective practices that enable the student to interrogate ideas throughout engaging in dialogue (Chaves, 2022). Proper practise of cognitive presence enables the student to extract meaning from the learning content through critical inquiry with other students as well as the content itself (Shea & Bidjerano, 2009). This can be established through consistent communication between student and higher education facilitators, as well as amongst the students themselves. Such examples in remote learning include online conversation and collaboration tools such as Microsoft Teams and its chat function used for online lectures (Kormos et al., 2023).

In HDIs where resources are limited, it can be a challenge to maintain cognitive presence as students may not have the required technology to engage in online discussions. This shows the link between social and cognitive presences and how the inability to participate in said discussions can disengage students from critically assessing course material (Ndebele & Legg-Jack, 2024). Some students in HDIs are unable to attend live online classes due to these technological limitations and only access the material that is uploaded after the session. This would lead to them missing out on critical thinking exercises that may happen in those live classes and thus not fully activating their cognitive presence. Lack of prior exposure to new digital platform in HDIs leads to students who are unfamiliar with platforms and are unable to use them. This challenges students and may lead to reduced interaction with systems and course materials due to feelings of intimidation from the platforms.

Social presence plays a role in encouraging cognitive presence. There is evidence in literature that shows that group work and collaboration with peers can strengthen cognitive presence through effective discourse (Leslie, 2020). During remote learning, the additional resource challenges students face in HDIs led to issues of social isolation from peers (Pika, 2024). Some universities only provisioned their students with data after months of remote learning implementation. This resulted in a significant reduction in peer-to-peer interaction, as well as students being unable to attend all their classes. Even with the data provision, the persistent lack of reliable network conditions for students in remote areas also impacts the ability to be present in class and engage critically with the course in real time (Zhao et al., 2022).

2.5.3. Teaching presence

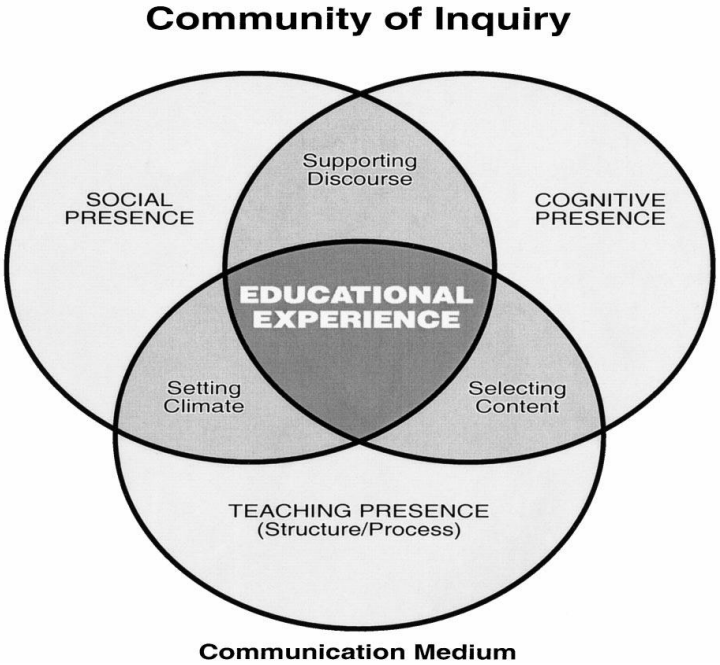
The third presence of CoI is teaching presence. “Teaching presence is the role of the teacher as perceived by the students in their educational experience” (Englander & Russell, 2022, p. 2). This represents the ability of an HEF to effectively organise and design courses in order to optimise the social and cognitive presence of students and produce the desired learning outcomes (Nasir & Ngah, 2022). It relates to the design and organisation of the course, direct instruction to students, and facilitation of content discussion. HEFs in HDIs can practice this presence by adapting methods of instruction, designing appropriate curriculums, inviting students to participate in class, as well as reinforcing student contributions (Yildirim & Kilis, 2019).

Teaching presence is a key enabling presence that heavily influences the success or failure of social and cognitive presence (Englander & Russell, 2022; Naghdipour & Manca, 2023). It is primarily the teacher’s responsibility as their teaching presence can impact how students engage with their cognitive and social presence. This is evident in literature where studies show that instructions have higher value for students when they come directly from the facilitator compared to fellow students (Su et al., 2024). While the primary responsibility for teaching presence lies with the HEFs, it is not strictly limited to them. Students also have opportunities to establish teaching presence. Examples of this are in peer-review circumstances where students use their knowledge to lead and provide feedback to other students on their assignments, or when students lead discussions in their groups (Shea et al., 2022).

In an HDI, teaching presence becomes an activator and motivator. By facilitators engaging their teaching presence, they are better able to motivate students to engage in the course, think critically in assignments and fully grasp content by being aware of how they provide instruction to the students. All this enables students to remain motivated and increases satisfaction with remote learning (Nasir & Ngah, 2022). CoI fosters critical thinking, communication and reflection, which are key to ensuring quality online learning experiences in HDIs. Thus, in order to succeed in building an engaged learning community, these three presences are present at all times in cohesion (Immenga, 2021).

The figure below shows the CoI framework as developed by (Garrison et al., 1999).

Figure 2*: CoI framework*



Note: Adapted from (Garrison et al., 1999)

HDIs in SA can benefit greatly from the guidance of CoI as it encourages sharing of knowledge and perspectives, which has a positive influence on the efficient use of limited resources (Immenga, 2021). CoI emphasises on a student driven learning which is very important in the context of HDIs where access to resources and socio-economic factors may affect the students and HEFs. It is an adaptable framework which enables HEFs to adapt content for different learning platforms and modes of instruction, as well as better manage their classes and feedback (Kormos et al., 2023). Through this, CoI can establish a more engaged community of students that ultimately results in higher rates of satisfaction and motivation, and therefore improved quality outputs (Chaves, 2022). One way in which CoI can prioritise community and social presence in HDIs, is through consideration of Ubuntu as a complementary principle.

2.6. Ubuntu

Ubuntu is an African philosophy that is derived from a Xhosa and Zulu word (Ncube, 2010). Its definition and practice can be translated to “a person is a person through other people”

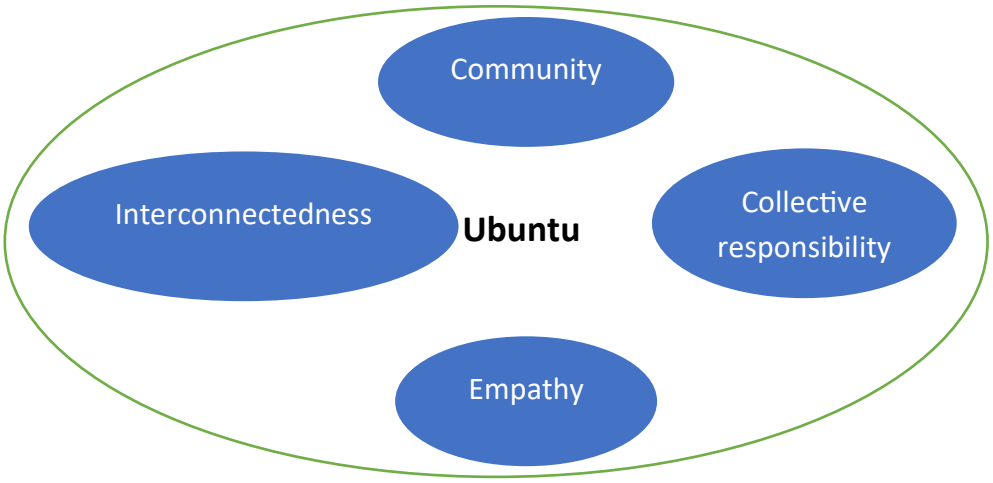
(Van der Westhuizen et al., 2015, p. 4). It emphasises the interconnectedness and the importance of reliance on each other within communities. It describes the belief that only through others can we succeed, and therefore the success of one's community, is one's success. It is founded on compassion and empathy for others and these key traits are the drivers to practising Ubuntu (Ncube, 2010). This sense of oneness is a way of living that is still practiced in rural and township communities in SA, where many day-to-day decisions are influenced by the application of Ubuntu.

On the heels of CoI, is a learning framework approach that is based on Ubuntu, called Ubuntu pedagogy. This approach draws on the principles of Ubuntu to facilitate inclusive practises within teaching (Ngubane & Makua, 2021). It posits that humans exist not in isolation, but in relation to others and emphasises a community identity rather than individual. This promotes the idea that people cannot live as isolated individuals but should rather prioritise interconnectedness and relationships within their various communities (Ntseane, 2011). Key principles include kindness and empathy, and this encourage the ability to be considerate and thoughtful of others. The principles of Ubuntu support the goals of inclusive education, as Ubuntu is characterised by a collective identity, that prioritises collective knowledge creation rather than individual (Ntseane, 2011).

In this study, Ubuntu will be used as a supplementary framework that will guide the research area and instrument. Ubuntu allows for a deeper interrogation of the experiences of students while assessing the data in a CoI lens. The application of CoI is beneficial as it provides a formal theoretical lens with which to categorise the student experiences (Englander & Russell, 2022). On the other hand, Ubuntu can enable a practical description of the student experiences based on behaviour. Further, the use of CoI as a theoretical lens enables this research to have global applicability in higher education. The addition of Ubuntu enables the research to highlight the nuanced challenges that affect students and lecturers in HDIs and how they handle them. Ubuntu is a widely practiced philosophy in South Africa, particularly in remote settings where persists a community-based village mentality (Chigangaidze et al., 2022). Previous studies have shown that while it is a way of life that is known to the community already, its application in education has come short in effectively addressing challenges that are prevalent in the education sector in South Africa (Mendy & Madiope, 2020).

By using Ubuntu as a supplement to CoI, the study is able to consider cultural factors that may influence how students in HDIs perceive their belonging and engage with fellow students (Bhurekeni, 2022). These are factors that may otherwise be overlooked as they do not necessary fall within the CoI framework. Thus, the additional Ubuntu lens serves to provide richer insights into the experiences of students in HDIs in relation to their remote learning. The following figure represents the key constructs of Ubuntu and how they relate to each other (Chigangaidze et al., 2022).

Figure 3*: Ubuntu composition*



Note: Adapted from (Chigangaidze et al., 2022)

2.6.1. Interdependence

Ubuntu emphasises interdependence and connectedness and promotes a sense of community amongst people (Assié-Lumumba, 2017). Interdependence refers to the belief that as people in a society are to an extent dependent on each other to navigate daily life. It relates to how one person's wellbeing is heavily linked to the next (Nortjé et al., 2019).

These principles have a potentially positive influence on remote learning in HDIs and can already be found within the CoI social presence. Some studies show that the adoption of an interdependent approach based off of Ubuntu has positive influences on learning (Vandeyar & Mohale, 2022). However, little research exists exploring how aspects of ubuntu may shape the remote learning experience in HDIs.

2.6.2. Community

In Ubuntu, community is the forefront of the philosophy. The belief is that no person should be above community and that without community one is not a person (Chigangaidze et al., 2022). This sense of community is important in this context as it provides people with sense of social value and belonging. The wellbeing of an individual is linked to the community and thus if an individual experiences hardship, the community feels it. Conversely if an individual reaches success, the entire community feels the pride of the celebration.

A sense of community is important in HDIs, especially during remote learning. This sense of community can enhance a student's social presence, encouraging them to express themselves in class (Su et al., 2024). A sense of community also provides a home for students to feel they fit into a part of society and add value (Nortjé et al., 2019). This also increases the students' confidence and their motivation to engage in discussions with their peers. A sense of community is shown to have positive impact on social identity in individuals (Rajah, 2019). This perspective will allow the research to better frame these influences in the contexts of HDIs.

2.6.3. Empathy

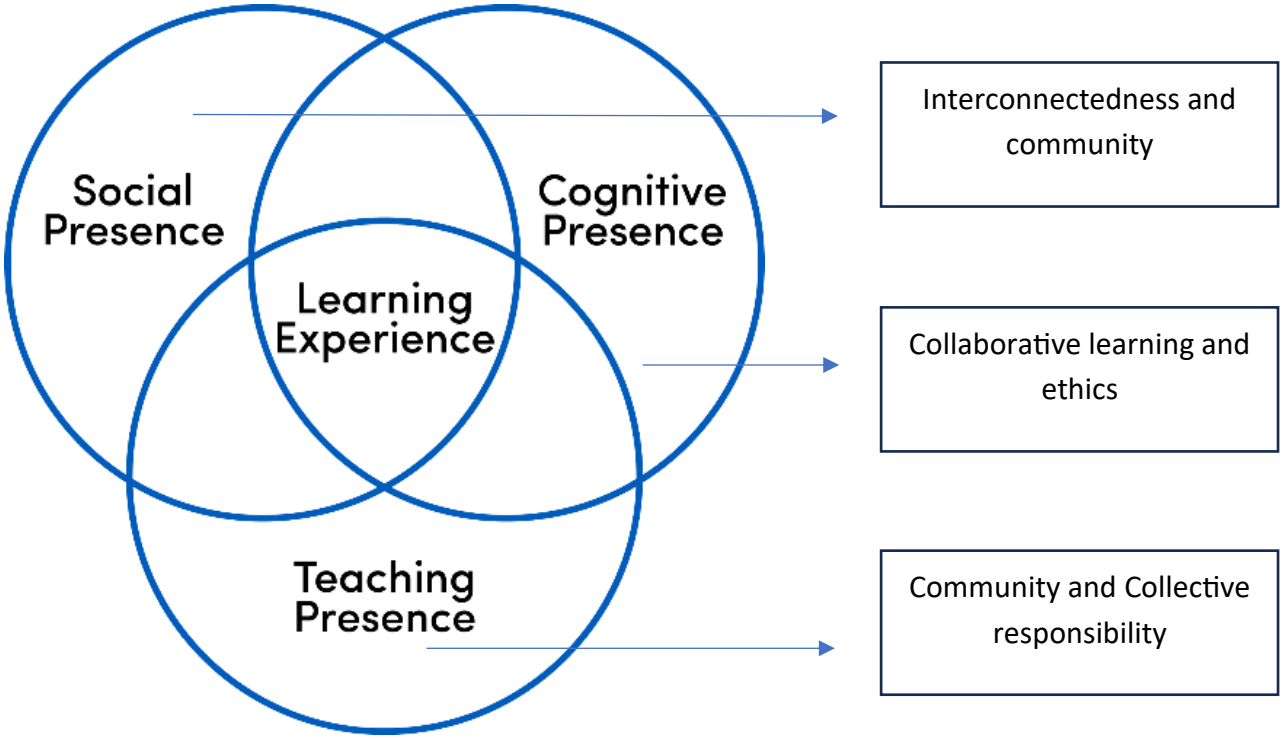
Empathy is the ability to place oneself in the position of another and being considerate towards them. Ubuntu promotes the practice of empathy as it fosters connection between people (Omodan et al., 2021). It has the role of showing people that they are seen, which can improve one's social identity. Empathy requires daily practice and active participation in it. It includes acts of kindness to others and treating people with humanity at all times. It is not only about showing empathy to one person, but about how that empathy resonates in the community (Bhurekeni, 2022). By showing empathy, you meet people where they are, and that shows others that they are the same, no better, no worse than each other. Empathy is required in HDIs as lack of funds may result in students being unable to effectively partake in remote learning as they cannot afford the data. This is especially evident in HDIs where institutional subsidies may lack (Pika, 2024). The perspective of empathy in this study is critical as the emotional and mental wellbeing of students was undoubtedly affected by remote learning during COVID-19 pandemic (Andreadis & Marshall, 2025). Thus, it is important to factor it into the investigation to see if and how it currently manifests as a factor in remote learning in HDIs.

2.6.4. Collective responsibility

Ubuntu highlights that each individual has a role to play in order for the community to succeed (Ntseane, 2011). This is referred to as collective responsibility. This can also form part of social presence as it aligns with the students' acknowledgement of their role in group work. Through collective responsibility, Ubuntu posits that every person's wellbeing and the wellbeing of the community, is the responsibility of every person in that community. It also values collective responsibility because it promotes a community identity (Timmis & Muhuro, 2019). This is important to note because in HDIs where students may feel isolated during remote learning, collective responsibility becomes the reminder to check up on peers. Collective responsibility also means that when engaged in group work, peer reviews or discussions, that the student should provide their best as the success of the group lies in their hands. This application of collective responsibility in this study will be helpful in understanding how students perceived collaboration during remote learning.

By using constructs of Ubuntu to shape the research into remote learning in HDIs, this study can provide input into better ways of remote learning and CoI to address challenges faced by HDIs and thereby improving remote working for HEFs and learning experiences for students in these HDIs. The constructs of Ubuntu could benefit the existing CoI framework in the context of HDIs. The figure below shows the CoI theoretical framework complemented by the Ubuntu principles, with community being a common construct.

Figure 4: *CoI and Ubuntu overlap*



2.7. Summary of factors influencing remote learning in HDIs emerging in literature

This literature review presented key concepts of the CoI framework. Further, the Ubuntu philosophical ideals were presented. It is important to note that constructs from the Ubuntu philosophy have been particularised into the CoI framework to produce a more comprehensive factors influencing remote learning in HDIs as shown in Table 1 below.

Table 1: *Factors Influencing Remote Learning In HDI*

Construct	Definition	Proposition	Reference
Social Presence	The ability of a student to express themselves and their social identity in a learning setting.	Social presence improves remote learning in HDIs	(Englander & Russell, 2022)
Teaching Presence	The ability of an instructor to effectively facilitate class.	Teaching presence has a positive influence on remote learning in HDIs	(Nasir & Ngah, 2022)
Cognitive Presence	The ability of a student to engage with course content and reflect on it critically.	Cognitive presence is important to facilitating remote learning	(Chaves, 2022; Englander & Russell, 2022)
Community	The people with whom one shares common trait with and who can provide support.	A sense of community is important in effectively learning remotely	(Englander & Russell, 2022; Leslie, 2020)
Collective responsibility	The ability to work in a team and being accountable for	A sense of collective responsibility can improve collaboration in remote learning.	(Timmis & Muhuro, 2019)
Empathy	The ability to empathise with students	Empathy is important in increasing remote learning satisfaction	(Barikzai et al., 2024)
Interconnectedness	The intertwining of people and their experiences and their connection to each other.	Interconnectedness is beneficial to a sense of belonging in remote learning.	(Ngubane & Makua, 2021)
Digital divide	The gap between those that have access to digital technology and skills and those who do not	The digital divide is a constraint to remote learning.	(Maluleke, 2024)

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1. Research philosophy

The adopted epistemology for this study was interpretivism as the study aimed to explore lived experiences and perceptions of the students. Interpretivism appropriately acknowledges that humans have unique perceptions and experiences of reality (Crossan, 2003) and was therefore appropriate for this study. The study focused on students that experienced remote learning in HDIs and there are specific cultural and behavioural norms that exist in this specific context. There also exist unique challenges such as access to technology, skills and limited resources that are present in HDIs due to historical factors and the location of the communities that they are in and serve. It was therefore important that the stance taken by the study can accommodate these nuances and the flexible nature of the research questions. Interpretivism gave the researcher freedom to identify subjective responses and anticipate a wider range of possible answers as there was an understanding that no two experiences would be identical. It enabled the identification of important factors at an individual level without generalising experiences and their meaning (Goldkuhl, 2012).

Interpretivism emphasises the interpretation of a social phenomenon and enables the research to uncover and understand unique human experiences from their individual perspectives (Bhattacherjee, 2012), and this allowed the researcher to adapt questioning and probe where necessary for further meaning to emerge. Interpretivism supports and is reliant on subjectivity from the researcher in order to derive the most useful content and uncover valuable insights from the respondents (Walsham, 1995). Therefore, this stance adequately catered for the ability of the researcher to pivot subjectively according to the participant's responses. Given the complexity of the research problem, it was important that the philosophy that is chosen considers the multiple perspectives that may arise from students of different backgrounds and learning styles reflecting on the same question. As the researcher was responsible for the interpretation of the data into valuable insights, a level of the subjectivity was required. This ensured the line of questioning was appropriate to the individual experiences and perceptions as they unfolded (Bhattacherjee, 2012).

This translation of findings and uncovering of meanings was based on the researchers ability to identify and link themes that presented themselves in the data (Kothari, 2004).

Interpretivism recognises that social and cultural contexts can shape individual experiences (Walsham, 1995), and in HDIs, there are constraints unique to them that may influence the perceptions of students experiencing remote learning. The use of this philosophy provided a framework that supported not just the identification of factors that affect students' perception of their experience but also understand the emotions that arose amongst students during this time.

3.2. Research purpose

The intent of this study was to explore how students in HDIs perceive their experience of remote learning, and how these experiences shape their social, cognitive and learning experience during remote learning. The research purpose of this study was exploratory as remote learning in SA is still a relatively new field of research, particularly in HDIs. South Africa is in a unique position in the world as the country with the highest societal inequality. Furthermore, HDIs in SA were founded explicitly to provide education along racial lines (Higgs & Nyahodza, 2017), and not just to provide affordable education for the less fortunate who happen to be non-white. HDIs are also often located in remote/rural parts of provinces, and their location adds cultural dynamics that are unique to those areas and affect learning experiences (Pika, 2024). All these factors add complexity to the research question and thus it was necessary to first explore what exists in this context and lay a foundation for further explanatory research in future. This was the most appropriate research purpose for this study as this is a social phenomenon that had not been thoroughly researched previously, and there are still insights yet to be discovered. Therefore, a need remained to explore how students have perceived remote learning in these institutions focusing on the perspective of their social, cognitive and teaching presences. This study provided initial findings that can be used to motivate future research on remote learning HDIs and improve educational technology and platforms for HDIs.

The aim of this study was to have an understanding of students' experiences in HDIs by discovering new insights on the topic. Exploratory research aims to gain new ideas and insights on a field (Kothari, 2004). This aligned with the flexibility of this study's approach, in order not to limit perspectives and in uncovering of new data amongst the students. In this study, the aim is to gain a deeper understanding of the perceptions of students and their

experiences with remote learning in HDIs with guidance from the CoI presences. Exploratory research promotes the formulation of hypotheses that in future can be tested in other research (Bhattacherjee, 2012). The study is qualitative in nature, and it was key that the research purpose be able to fully support that. Exploratory research enabled the researcher to evolve the area of questioning accordingly as new insights were being discovered with each participant. It is important to remember that as these experiences and the perceptions thereof were unique to each student, there was a need to be open to multiple aspects of the problem and exploratory research caters for that (Kothari, 2004). Future research can further elaborate on these uncovered insights and identify relationships that may exist in the factors that affect the remote learning experience of students in HDIs.

3.3. Research approach to theory

This study followed a deductive approach guided by an existing framework, with the intent of understanding student experiences through the lens of key principles of CoI. This study combined the CoI framework as well as Ubuntu framework to guide the research. A deductive approach enabled the researcher to use the insights uncovered in the interviews held with students to deduce the effects of the factors and any relationship that may exist between them (Bhattacherjee, 2012). The combination of these two theoretical frameworks provided a richer lens through which to investigate and interrogate the data. It allowed the researcher to view the complexities of the data from different perspectives and thus provide more qualitative meaning from the findings (Anfara & Mertz, 2015). This approach also encouraged the researcher to explore and engage with the broad set of insights and perspectives that arose from the students, and narrow them down to key findings that can be consumed by academia and practitioners (Woiceshyn & Daellenbach, 2018). This study was guided by CoI, which posits that all three presences of the framework need to be activated to ensure meaningful learning experiences for students. Therefore, although this specific context was new area of study, a deductive approach proved useful in assessing how these presences were shaped during remote learning and their influence on student experiences in HDIs (Casula et al., 2021).

3.4. Data sampling

Purposive sampling was used to select participants that can provide insight into this phenomenon. Current and former students at HDIs were targeted to ensure the authenticity of the data collected. Purposive sampling involves identifying specific people that fit a certain criterion to gain valuable data (Sandelowski, 2000). In this study, participants were selected from historically disadvantaged universities across SA. These are HDIs that are limited in resources and are often in rural or outskirt areas of the cities. These students were identified through contact with the institutions relevant departments identified in these schools who were able to expose the nature of the study to their student base. To reach saturation, the snowballing effect was also used, particularly to get varied representation from the participating institutions. The researcher also used their network to reach qualifying potential participants to take part in the study using social media. The criteria of participants were to have experienced remote learning at any point since its widespread implementation in 2020. The type of purposive sampling was homogenous as the participants had similar backgrounds to ensure that that it remains unique to students in certain HDIs (Guest et al., 2006). The participants did vary in gender, race and area of study.

For a qualitative study, some research shows that a minimum sample of 12 is required to reach saturation (Mason, 2010). However, further studies show that if a research population is niche and homogenous enough, saturation and material themes can be identified at a sample size of 11 (Hennink & Kaiser, 2022). In this study, a total of 14 participants were interviewed to reach desired saturation levels and they were from 4 distinct institutions.

3.5. Data collection

This study was qualitative in nature to allow in-depth engagement with the participants and to deeply explore their perceptions and insights on remote learning (Bradley et al., 2007). A multiple case study was deemed appropriate for in-depth data collection and contextual understanding. A multiple case study design is an important aspect of qualitative research because it allows researchers to gather in-depth data from multiple sources about the phenomena under study. All data was collected through semi structured individual interviews after obtaining ethical approval from the researching university's ethics committee. Prior to data collection, identified institutions were contacted and invited to participate in the study.

They were contacted via email to the relevant persons responsible for research related queries in the institutions. The ideal amount of participating HDIs was 3, to allow for diversity in experiences and perspective, the study was able to include 4 HDIs which is beneficial to variety of experiences. Once permission was received from these institutions, participants were sought and contacted to take part in the study. These participants were identified through the HDIs directly sending the research invitation to their database of students. It was supplemented by sharing of the research invitation by the researcher on social media such as Instagram. The researcher used social media as a means to reach a wider audience as only 2 HDIs distributed to their student and alumni base. This also helped to reach participants who were no longer active students but fit the target criteria for this study. Interested potential participants then reached out to the researcher either by filling in a form, sending an email, or sending a WhatsApp communication to show interest as indicated by the researcher. These were vetted and qualifying participants were subsequently invited to an interview.

The interviews were all held on Microsoft Teams as many participants were not in the same location as the researcher. They were then recorded and transcribed to allow for further analysis. To enable observation of the participant, the interviews made use of video technology where possible, thereby allowing the researcher to observe body language and verbal cues which further gives context and understanding to the responses (Kothari, 2004). Video, however, was not always possible or ideal due to limitations of bandwidth and network from the participant's side. The observation also allowed for contextualisation of these experiences for each individual and capture the complexities of how each participant perceived their learning experiences beyond what they stated (Bhattacherjee, 2012). The flexible nature of qualitative research enabled the adaptation of the research tool over time by refining the research questions to probe deeper into specific areas based on trends observed within an interview as well as a trend over multiple sessions.

Qualitative methods emphasise on the importance of understanding "how" and "why" questions (Kothari, 2004). In this study, it motivated the exploration of the possible effect that students' experiences of remote learning had on their respective presence during remote learning in HDIs. It provided a guideline that further encouraged uncovering underlying meanings and reasons behind the perceptions that arose. By understanding these reasonings

and motivation, the researcher was able to identify the details and the intricacies of how the key principles of CoI relate to the participants' remote learning experiences if at all.

The research instrument consisted of questions relating to the various themes that were identified in literature, specifically those that relate to CoI and Ubuntu. They are shown in the emerging factors in Table 1. An interview guide was prepared by the researcher to guide the areas of questioning. However, it allowed for variation in questioning where required as it was semi structured in nature (Appendix C). This also led to probing for further details that may not explicitly be in the guide but were still related to the themes. It included seven sections from A-G that are split according to the identified constructs in literature.

3.6. Data analysis

3.6.1. Introduction

In this study, a total of fourteen participants were interviewed, with interviews ranging from 35 – 55 minutes. These interviews were held online using Microsoft Teams and recorded. The recordings were then transcribed using Microsoft Word online and the data was cleaned to remove any unnecessary repetition of words, or inaudible data. These were saved as word documents and uploaded onto NVIVO, a qualitative data analysis software for which UCT has a license, for coding and thematic analysis. NVIVO was selected as the main data analysis tool as it has proven performance in automating qualitative analysis, through its ability to process large volumes of text data (Bhattacherjee, 2012). Its ability to organise and code unstructured data is fundamental to providing depth and meaning in qualitative studies (Dhakal, 2022). This type of qualitative analysis involved the analysis of the responses and coding into meaningful themes that were prevalent in the data, to uncover underlying meanings. This process allowed the researcher to have a rich understanding of the data which was key in exploring the complexities of the research topic (Braun & Clarke, 2016).

This was an iterative process which required the researcher to revisit the data and re-evaluate it to cement the conclusions. It was important to perform this cyclical process as it allowed the researcher to have full view of the context of the data before officially concluding on findings (Nowell et al., 2017). This is a crucial step in interrogating the data as it avoids biases from the researcher and promotes multiple perspectives and meanings to be considered while identifying consistent overarching themes (Azungah, 2018).

3.6.2. Familiarisation of data

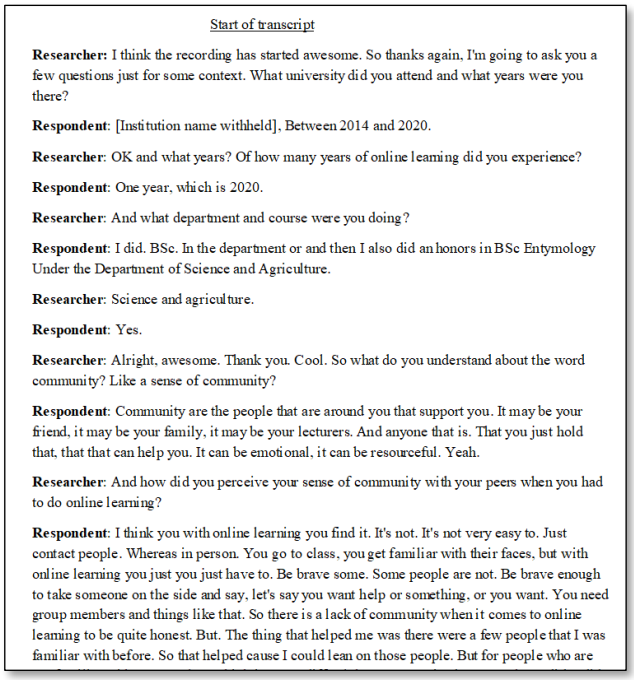
The researcher had an existing familiarity with the data prior to analysis due to the fact that the study made use of on-on-one interviews with the participants. In these sessions the researcher had already observed and directly heard responses that would guide in terms of understanding the entire context of the data. This assisted the process of familiarisation with the data which is formally the first step in qualitative data analysis.

The interviews were qualitative in nature and therefore the researcher had flexibility to probe where necessary by asking relevant questions that may vary with each participant. There was therefore no rigid structure in the interview and no predefined audio was expected. The process of transcribing the data assisted with the creating of consistency across all the interview data, which was later useful in comparing and analysing the data. The transcription and cleaning of the audio into text format, involved initial listening to the data, transcription, reading of the transcribed text and a repeat of this process to ensure accurate transcription of the audio into a legible transcript. This process was time consuming however it aided in cleaning the data to remove any inaccuracies and further immersed the researcher into the data (Bradley et al., 2007). This immersion activated the interpretive skills required by the researcher to achieve the objective of this study.

The familiarisation of data step is fundamental in qualitative research as it encourages the later formulation of initial codes from patterns identified in the data. These then develop into themes across the data (Nowell et al., 2017).

In the interviews, participants shared private and identifiable information such as their names and surname, and the names of the HDIs they represent. To maintain their and the institution's confidentiality, each participant received a unique alpha numeric pseudonym that was comprised of a code for the institution and the participant. This was in accordance with the ethical agreement while enabling the researcher to be able to group participants by institution. Accordingly, reference to the HDI or participant name in the transcript was redacted. An example of a transcript can be seen below.

Figure 5: *Examples of transcripts*



Start of transcript

Researcher: I think the recording has started awesome. So thanks again, I'm going to ask you a few questions just for some context. What university did you attend and what years were you there?

Respondent: [Institution name withheld], Between 2014 and 2020.

Researcher: OK and what years? Of how many years of online learning did you experience?

Respondent: One year, which is 2020.

Researcher: And what department and course were you doing?

Respondent: I did. BSc. In the department or and then I also did an honors in BSc Entymology Under the Department of Science and Agriculture.

Researcher: Science and agriculture.

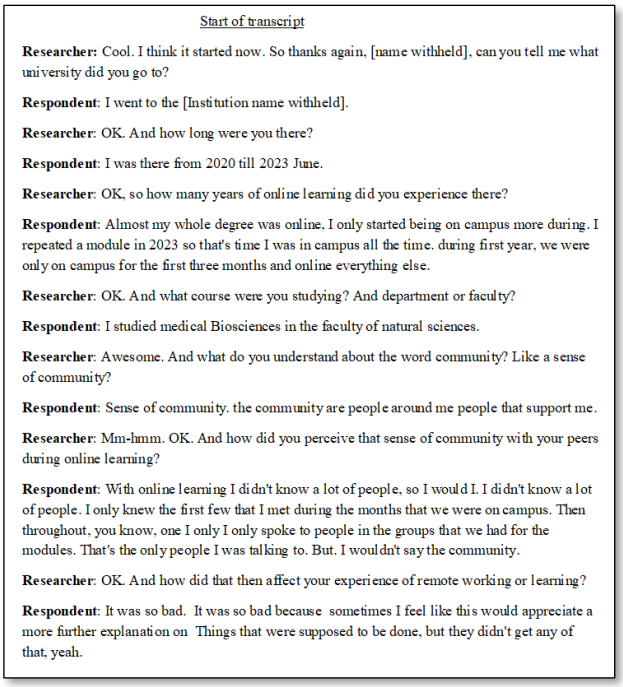
Respondent: Yes.

Researcher: Alright, awesome. Thank you. Cool. So what do you understand about the word community? Like a sense of community?

Respondent: Community are the people that are around you that support you. It may be your friend, it may be your family, it may be your lecturers. And anyone that is. That you just hold that, that that can help you. It can be emotional, it can be resourceful. Yeah.

Researcher: And how did you perceive your sense of community with your peers when you had to do online learning?

Respondent: I think you with online learning you find it. It's not. It's not very easy to. Just contact people. Whereas in person. You go to class, you get familiar with their faces, but with online learning you just you just have to. Be brave some. Some people are not. Be brave enough to take someone on the side and say, let's say you want help or something, or you want. You need group members and things like that. So there is a lack of community when it comes to online learning to be quite honest. But. The thing that helped me was there were a few people that I was familiar with before. So that helped cause I could lean on those people. But for people who are



Start of transcript

Researcher: Cool. I think it started now. So thanks again, [name withheld], can you tell me what university did you go to?

Respondent: I went to the [Institution name withheld].

Researcher: OK. And how long were you there?

Respondent: I was there from 2020 till 2023 June.

Researcher: OK, so how many years of online learning did you experience there?

Respondent: Almost my whole degree was online, I only started being on campus more during. I repeated a module in 2023 so that's time I was in campus all the time. during first year, we were only on campus for the first three months and online everything else.

Researcher: OK. And what course were you studying? And department or faculty?

Respondent: I studied medical Biosciences in the faculty of natural sciences.

Researcher: Awesome. And what do you understand about the word community? Like a sense of community?

Respondent: Sense of community. the community are people around me people that support me.

Researcher: Mm-hmm. OK. And how did you perceive that sense of community with your peers during online learning?

Respondent: With online learning I didn't know a lot of people, so I would I. I didn't know a lot of people. I only knew the first few that I met during the months that we were on campus. Then throughout, you know, one I only I only spoke to people in the groups that we had for the modules. That's the only people I was talking to. But. I wouldn't say the community.

Researcher: OK. And how did that then affect your experience of remote working or learning?

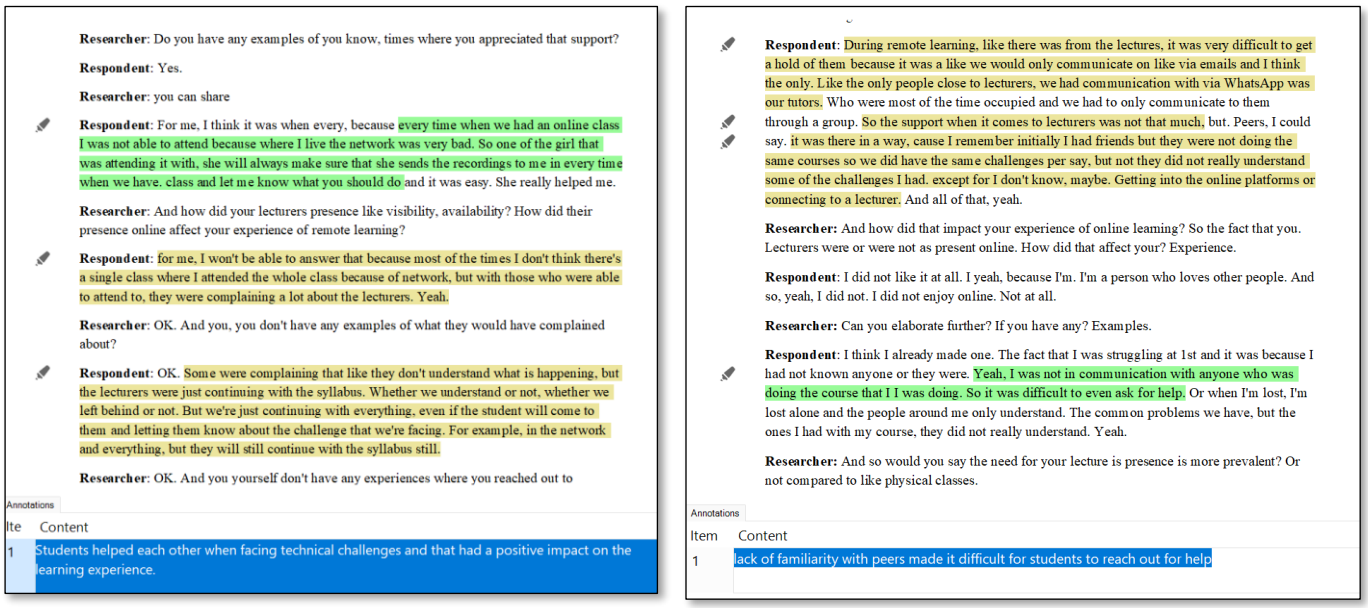
Respondent: It was so bad. It was so bad because sometimes I feel like this would appreciate a more further explanation on Things that were supposed to be done, but they didn't get any of that, yeah.

blue

3.6.3. Coding

Initial codes were generated through the reading of the transcriptions in NVivo. It involved thorough attention to detail as well as contextual understanding of the data, as codes are the lowest level of data extracted from the transcripts. Coding enables the formalisation of structure and organises the data for deeper analysis and consumption by the researcher (Bradley et al., 2007). As these codes were developed, the researcher was able to identify connections and links between codes that further matured into prevailing themes.

Figure 6: *Initial code generation in transcripts*



Researcher: Do you have any examples of you know, times where you appreciated that support?

Respondent: Yes.

Researcher: you can share

Respondent: For me, I think it was when every, because every time when we had an online class I was not able to attend because where I live the network was very bad. So one of the girl that was attending it with, she will always make sure that she sends the recordings to me in every time when we have. class and let me know what you should do and it was easy. She really helped me.

Researcher: And how did your lecturers presence like visibility, availability? How did their presence online affect your experience of remote learning?

Respondent: for me, I won't be able to answer that because most of the times I don't think there's a single class where I attended the whole class because of network, but with those who were able to attend to, they were complaining a lot about the lecturers. Yeah.

Researcher: OK. And you, you don't have any examples of what they would have complained about?

Respondent: OK. Some were complaining that like they don't understand what is happening, but the lecturers were just continuing with the syllabus. Whether we understand or not, whether we left behind or not. But we're just continuing with everything, even if the student will come to them and letting them know about the challenge that we're facing. For example, in the network and everything, but they will still continue with the syllabus still.

Researcher: OK. And you yourself don't have any experiences where you reached out to

Annotations

Ite	Content
1	Students helped each other when facing technical challenges and that had a positive impact on the learning experience.

Respondent: During remote learning, like there was from the lectures, it was very difficult to get a hold of them because it was a like we would only communicate on like via emails and I think the only. Like the only people close to lecturers, we had communication with via WhatsApp was our tutors. Who were most of the time occupied and we had to only communicate to them through a group. So the support when it comes to lecturers was not that much, but. Peers, I could say. it was there in a way, cause I remember initially I had friends but they were not doing the same courses so we did have the same challenges per say, but not they did not really understand some of the challenges I had. except for I don't know, maybe. Getting into the online platforms or connecting to a lecturer. And all of that, yeah.

Researcher: And how did that impact your experience of online learning? So the fact that you. Lecturers were or were not as present online. How did that affect your? Experience.

Respondent: I did not like it at all. I yeah, because I'm. I'm a person who loves other people. And so, yeah, I did not. I did not enjoy online. Not at all.

Researcher: Can you elaborate further? If you have any? Examples.

Respondent: I think I already made one. The fact that I was struggling at 1st and it was because I had not known anyone or they were. Yeah, I was not in communication with anyone who was doing the course that I I was doing. So it was difficult to even ask for help. Or when I'm lost, I'm lost alone and the people around me only understand. The common problems we have, but the ones I had with my course, they did not really understand. Yeah.

Researcher: And so would you say the need for your lecture is presence is more prevalent? Or not compared to like physical classes.

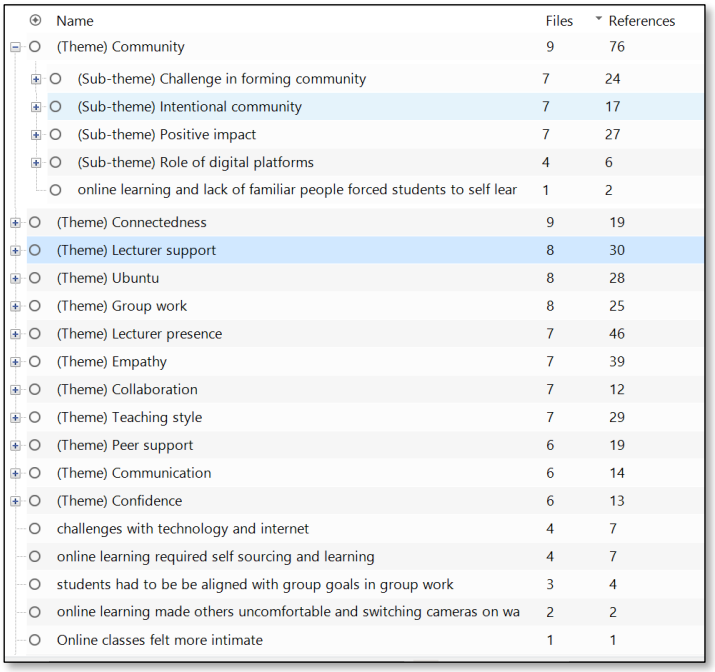
Annotations

Item	Content
1	lack of familiarity with peers made it difficult for students to reach out for help

3.6.4. Theme generation

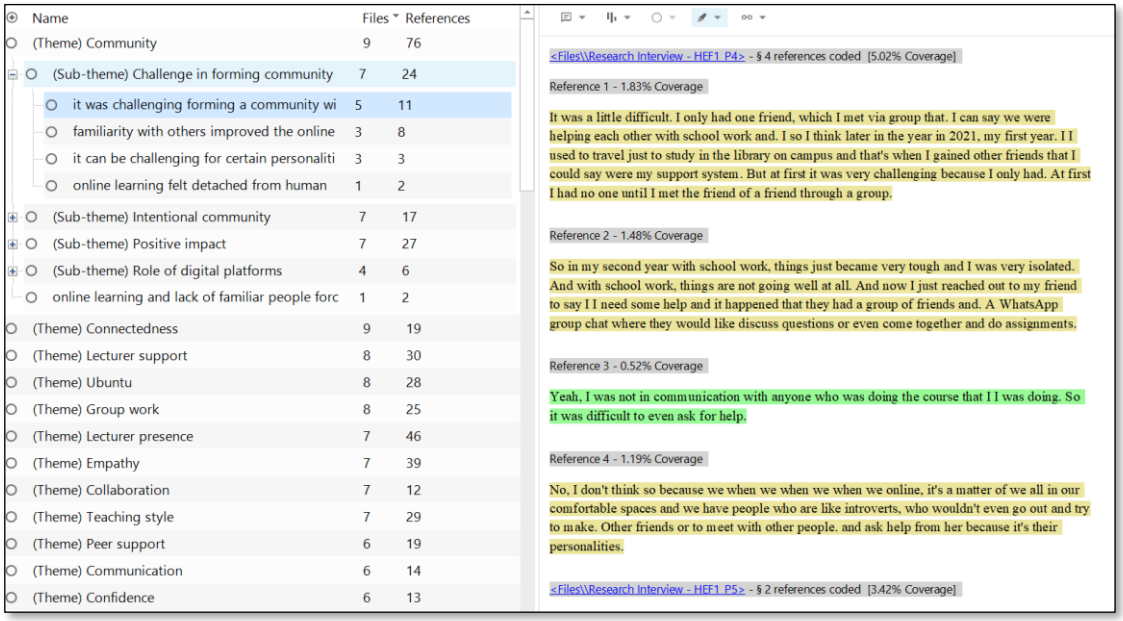
Connections were identified between the codes and from the patterns, associated themes and sub themes started to develop. This process required the iterative reading of each transcript in the entirety of the study and not in isolation in order to uncover the relationships between the codes (Guest et al., 2006). This process enabled the consumption and interpretation of how the remote learning experience was perceived under the guide of the CoI principles (Bradley et al., 2007).

Figure 7: *Multiple coding into themes*



Name	Files	References
(Theme) Community	9	76
(Sub-theme) Challenge in forming community	7	24
(Sub-theme) Intentional community	7	17
(Sub-theme) Positive impact	7	27
(Sub-theme) Role of digital platforms	4	6
online learning and lack of familiar people forced students to self lear	1	2
(Theme) Connectedness	9	19
(Theme) Lecturer support	8	30
(Theme) Ubuntu	8	28
(Theme) Group work	8	25
(Theme) Lecturer presence	7	46
(Theme) Empathy	7	39
(Theme) Collaboration	7	12
(Theme) Teaching style	7	29
(Theme) Peer support	6	19
(Theme) Communication	6	14
(Theme) Confidence	6	13
challenges with technology and internet	4	7
online learning required self sourcing and learning	4	7
students had to be be aligned with group goals in group work	3	4
online learning made others uncomfortable and switching cameras on wa	2	2
Online classes felt more intimate	1	1

Figure 8: *Initial grouping of codes into themes and subthemes*



Name	Files	References
(Theme) Community	9	76
(Sub-theme) Challenge in forming community	7	24
it was challenging forming a community wi	5	11
familiarity with others improved the online	3	8
it can be challenging for certain personaliti	3	3
online learning felt detached from human	1	2
(Sub-theme) Intentional community	7	17
(Sub-theme) Positive impact	7	27
(Sub-theme) Role of digital platforms	4	6
online learning and lack of familiar people forc	1	2
(Theme) Connectedness	9	19
(Theme) Lecturer support	8	30
(Theme) Ubuntu	8	28
(Theme) Group work	8	25
(Theme) Lecturer presence	7	46
(Theme) Empathy	7	39
(Theme) Collaboration	7	12
(Theme) Teaching style	7	29
(Theme) Peer support	6	19
(Theme) Communication	6	14
(Theme) Confidence	6	13

<Files\\Research Interview - HEF1_P4> - § 4 references coded [5.02% Coverage]

Reference 1 - 1.83% Coverage

It was a little difficult. I only had one friend, which I met via group that. I can say we were helping each other with school work and. I so I think later in the year in 2021, my first year. I I used to travel just to study in the library on campus and that's when I gained other friends that I could say were my support system. But at first it was very challenging because I only had. At first I had no one until I met the friend of a friend through a group.

Reference 2 - 1.48% Coverage

So in my second year with school work, things just became very tough and I was very isolated. And with school work, things are not going well at all. And now I just reached out to my friend to say I I need some help and it happened that they had a group of friends and. A WhatsApp group chat where they would like discuss questions or even come together and do assignments.

Reference 3 - 0.52% Coverage

Yeah, I was not in communication with anyone who was doing the course that I I was doing. So it was difficult to even ask for help.

Reference 4 - 1.19% Coverage

No, I don't think so because we when we when we when we online, it's a matter of we all in our comfortable spaces and we have people who are like introverts, who wouldn't even go out and try to make. Other friends or to meet with other people. and ask help from her because it's their personalities.

<Files\\Research Interview - HEF1_P5> - § 2 references coded [3.42% Coverage]

3.6.5. Refining of themes

Themes and subthemes were identified arising from the interrogation of the codes. The table below shows these.

Table 2: *Emerging Themes from The Data*

Theme	Subtheme	Description	Text example
Community	Social presence	Lack of familiarity with people affected students reaching out for help or engage in class.	*"So that helped cause I could lean on those people. But for people who are not familiar with anyone else. I think it's very difficult"* – HEI3_P1
Community	Peer support	Support from peers was important in forging sense of community	*"And that's when we become one as a community and then we get to assist each other and we learn from one another."* – HEI4_P2
Lecturer presence	Teaching style	There was a need to be adapt online teaching style and include more synchronous teaching.	*"I would have appreciated if we had live sessions"* – HEI1_P5
Lecturer support		Additional lecturer was beneficial to learning experience	"She *was a lecturer for human resources and Human Resources development because I would really ask questions and request some clarification, maybe regarding our assignments, our tests. So yeah, like she really did put in some support.* " – HEI2_P4
Communication	Role of digital platforms	Digital platforms were instrumental in filling the gap of reduced communication	"*so there was a platform at the time, don't know if it's still around. It is called Blackboard. So, on the teams, I think there's a chat here even. Yeah, there's a chat option. So, they were sending links to just do those random quizzes on the chats with teams and also on the WhatsApp."* – HEI2_P3
Communication	Lecturer presence	Lecturers only being available on email had a negative effect on learning experience	*"It was very difficult to get a hold of them because we would only communicate via emails"* – HEI1_P4
Communication		Remote learning limited communication with peers and lecturers	*"The interaction between my peers and myself right, there wasn't that where we could actually see each other and actually explain*" – HEI1_P6
Empathy		Lack of empathy had a negative effect on remote learning	*"So some they're always in a hurry. And then when you ask something they say. Yeah, I told you. I told you; you don't listen."* – HEI4_P1
Collaboration		Collaboration was negatively affected by remote learning	*"Number one you feel like you're alone. If you have any kind of questions, you just figure it out yourself or you maybe you're scared to ask other people."* – HEI3_P1
Digital divide		The digital divide negatively affected remote learning	*"Oh, my network is bad. I don't have network in my house and so and so and so and so and so. So, we end up not having our meeting. So that was one of the challenges." – HEI2_P4*
Social Presence		Social presence was important in successful remote learning	*"So, if there is a sense of being connected, then people are now comfortable enough to ask questions." – HEI3_P1*
Role of digital platforms		Mobile digital platforms played an important role in improving remote learning experience	*"we had the WhatsApp group and the lecture is inside. So the lecture will send the notes there and then tell us what? What we should read or study…"*

3.6.6. Generating the report

The final step in this qualitative study involved the summarising of findings and data collection into written format. This enables the sharing of the research problem, process and findings, and thus, the interrogation of the study by the scientific community. This written report further adds to the academic body of knowledge and encourages further research into the research problem. The report ensured to advise the reader of the research question and problems being addressed as well as the research approach and methodology followed. Herein, the researcher was able to explain and motivate the chosen methodologies and their benefit to the study (Nowell et al., 2017). This step consisted of using the refined themes while finding correlations and relationships with the data and providing meaning to them. It involved the researcher further analysing the data making sense of different perspectives to establish findings that relate back to the research question of the study. A key requirement for the researcher was the ability to interpret the themes into findings that the reader can understand in a credible and coherent narrative (Bhattacherjee, 2012).

Themes that had been refined in the previous step were explicitly delved into and corroborated by data extracts from the data as evidence (Guest et al., 2006; Nowell et al., 2017). This is a key step in presenting the findings of empirical research with participant statements that confirm them. Any sub themes that were evident in the data were also grouped accordingly and explained in terms of their relationship with each other and their primary theme. Each theme was then summarised as a finding to show what the study had uncovered in the data. The report concluded with a summary of the overall study and advised on the potential next steps in the research as well as future contributions to society.

3.7. Ethical considerations

An important step in the empirical research process is the consideration of ethics as a guide to ensure fair and transparent practises for individuals and institutions involved. Ethics approval was sought by the researcher from the Ethics Committee in the University of Cape Town as the researching university before any contact with potential HDIs or respondents was made. The researcher was bound by the limitations and standards outlined by the organisation supporting the study. Research ethics provided a guideline on how to ensure authentic interactions with participants by interacting in an appropriate and fair manner

(Oliver, 2010). As this study involved participants from specific HDIs in SA, additional ethical approval was sought from the identified HDIs in the form of a gatekeeper letter. This letter provided the researcher with signed permission to commence research at the institution using data from their past and present students.

Upon receiving approval from the relevant HDIs, all potential participants were sent a consent form at the initial point of contact via email. A potential participant that wished to take part in the research had to agree by way of formal positive correspondence and/or signature before taking part in the study. The nature of the study was clearly communicated upfront to each participant, detailing the potential benefits of their participation in the research as well as the benefits of the study itself (Bhattacherjee, 2012). All participants acknowledged that they take part in the study of their own free will and were able to exit the process at any point with no consequence. Consent was recorded and kept throughout the study for ethical reasons (Nortjé et al., 2019). Consent to record was explicitly requested and obtained before the interview for transparency. Where the participant refused to be recorded, this would have required manual notes to be taken by the researcher or ceasing of the interview, however there were no instances of this throughout this research process.

The results were aggregated and kept in a secure authenticated cloud platform to ensure protection of information and confidentiality (Nortjé et al., 2019). Recordings and transcriptions of the interviews were stored in Microsoft OneDrive which makes use of two-factor authentication to ensure protection of information. During the analysis of the data, scientific ethical standards were maintained, and the data was further kept in an authenticated environment with only the researcher having access to it. Adhering to these mentioned ethical standards ensured that this research and its findings maintain the expected levels of integrity and credibility within the community of scientific research.

CHAPTER 4: FINDINGS

4.1. Introduction

The following chapter will present the findings uncovered in the data collection process of this study. It will analyse and discuss the themes identified from the interviews.

4.2. Descriptive findings

The target population of this study was students who had experienced remote learning at one of the identified historically disadvantaged universities. There was a total of 14 participants interviewed, representing 4 universities in SA that are classified as historically disadvantaged according to the South African government.

They were targeted through purposive sampling where the participating HEIs shared invites to their student base. Social media was also used to invite participants as it provided a large audience to expose the research to and there was high potential to reach the qualifying audience. Two of these institutions made use of Blackboard, one used Moodle and the other used Sakai as LMS for their students. All of these institutions supplemented with Microsoft Teams as well as mobile platforms such as WhatsApp.

All participants had graduated with a minimum of either a diploma or an undergraduate degree. The participants were made up of three types: Those that had completed their initial studies and were currently enrolled in postgraduate studies; those that had completed their studies and since joined the workforce, and those that had completed their initial studies and remained unemployed. Interestingly there were no participants who were currently studying their first degree and still learning remotely.

The table below shows a summary of the participants in this study. Participant code is an alphanumeric code made up of the institution code – *HEI1* representing institution number one. This is followed by an underscore denoting the participant number in that institution. Thus, *HEI1_P1* would represent the first participant from institution one.

Table 3: *Descriptive Findings*

Participant code	Faculty	Field of study	Highest academic level	Years of online experience
HEI1P1	Arts and Humanities	Gender Studies	Undergraduate	3
HEI1_P2	Economic and Management Sciences	Information systems	Honours	1
HEI1_P3	Natural Sciences	Medical Bio Science	Undergraduate	2
HEI1_P4	Natural Sciences	Mathematics	Undergraduate	2
HEI1_P5	Natural Sciences	Medical Bio Science	Undergraduate	3
HEI1_P6	Arts and Humanities	Geography	Honours	3
HEI2_P1	Applied and Health Sciences	IT	Diploma	3
HEI2_P2	Faculty of Management Sciences	Accounting	Advanced Diploma	2
HEI2_P3	Applied and Health Sciences	IT	Diploma	2
HEI2_P4	Faculty of Management Sciences	Human Resources	Diploma	2
HEI3_P1	Science and Agriculture	Entomology	Honours	1
HEI3_P2	Faculty of Law	Law	Undergraduate	3
HEI4_P1	Faculty of Management, Commerce and Law	Business Management	Honours	2
HEI4_P2	Science, engineering and agriculture	Analytical chemistry	Masters	2

4.3. Emerging factors influencing perceptions of remote learning

4.3.1. Sense of community

In this study, community came up as an important factor for both online and face-to-face learning. A sense of community relates to how students perceive their social belonging within their learning journey. It can be related to things they share in common with others such as course, residence and gender. These are some definitions of community as stated by the participants: HEI1_P2 had the described community by saying *"A community is a group of people that actually do certain activities together for example school like my classes, my community because we are in the same department doing the same thing. So, for me that that is a community."* HEI2_P1 added that *"It's a group of people who will be able to help each other. Yes, where you will be comfortable in being in that particular space. Community it's more like your confidant. I don't know how to further explain it, but I think it's a group of people where you're able to be comfortable where you know when you need anything you'll shout, and you'll be helped."* HEI3_P2 explained that *"Community is a group of people. That shares common interests"* and HEI4_P1 stated that *"I view community as the people, the people who stay together. Who are staying together so that they can help each other on their daily basis on their daily activities? That's how I view the community."* – HEI4_P1

a) Learning from the community

The importance of a sense of community was highlighted as many participants raised how beneficial it was to them and their learning experience to have had a community during this time. Often these communities served as a vessel of learning through peers. The limited physical interaction amongst peers meant students often relied on social media platforms to form a community. Participant HEI1_P4 stated how it was challenging initially to form a community with remote learning when they only had one friend they had met on a digital platform: *"It was a little difficult. I only had one friend, which I met via group chat. I can say we were helping each other with schoolwork."* The participant further added how in regularly going to the library they were able to meet new people and were introduced to a bigger community. *"I used to travel just to study in the library on campus and that's when I gained other friends that I could say were my support system."* This community was not only online but included regular physical meet ups, she further added that *"So then that's how I got introduced to this group and then I would normally after that, if I had to do an assignment and*

all that, go and meet with them." The participant had the following to say about an enriched community: *"it made things, a lot…I wouldn't say a lot easier because mathematics is nothing easy, but more manageable because I knew there was people there to support me and if I had questions or things that I did not understand, I had people to ask."* This presents evidence that the presence of a community of likeminded individuals provided a support system for students and alleviated the difficulties of their studies. This was supported by HEI2_P4 who explained how during remote learning, students held sessions with each other to explain chapters that they had understood better. She said that "*we have a group of we have we are the study group, so I would explain the chapter that I understood better and the other one would explain to us*."

The study shows that a sense of community was beneficial and critical to remote learning. It shows that a community provided opportunities for learning for students during remote learning. It provides opportunities for students to study together and review each other's work.

b) Sharing learning materials

In HEI2, HEI2_P2 elaborated on the benefits of a community and its support with remote learning related to sharing course content by saying *"With remote learning we usually face problems like network and maybe your phone was off because of loadshedding and everything. But if you have like community, no, it's fine. I know that I can go to someone who will share that recording with me. You always know that you're not alone with remote learning."* With the limitations in network connections, community was instrumental in ensuring students that could not learn remotely at any time were supported. In the same HEI, another participant supported this finding by stating how community provided a barrier against technological challenges *"Because of maybe bad weather, the connection is not great, but obviously sometimes when they do pitch up the classes are recorded as, were recorded rather as you are recording and if anyone had missed the class then they were able to just keep those recordings and perhaps share those recordings." – HEI2_P3*

The findings show that a sense of community was an enabling factor to remote learning as it encouraged the sharing of material and resources amongst students. This is in turn made it easier for students who were unable to attend due to technical difficulties, to catch up on material.

c) *Community breaks isolation barriers*

While community was inevitably affected by remote learning, it was still prevalent albeit different, as stated by some participants. When asked about their perception of a sense of community with remote learning, HEI3_P1 said the following, comparing to face-to-face classes: *"If I compare it to traditional learning, I'd say no. Hmm. But what if I compare it to that? But then I'm not saying there wouldn't be any community with remote learning. There would be. There is, but it's not the same."* HEI1_P2 also agreed with this by showing that not only was community present and beneficial to online learning, but it also had a positive impact on wellbeing for peers to check up on each other *"You really see an actual community when you're away from people and then how they carry you, how they make sure that you are well, how they are there for you."*

A sense of community was instrumental in preventing and managing feelings of isolation that became an issue with online learning. Not only was community a positive factor to remedy these feelings, where there was a lack of community, students experienced feelings of isolation and being alone during remote learning. HEI1_P4 explains that feelings of isolation due to remote learning and difficulties with the coursework encouraged her to reach out to her friend and state her situation: *"So in my second year with schoolwork, things just became very tough, and I was very isolated. And with schoolwork, things are not going well at all. I was aware my friend belonged to a community which I then wanted to be part of. I just reached out to my friend to say I need some help…"*

Even though students barely knew each other, they performed acts of kindness and support to ensure their peers were keeping up and well. They would check up on each other regardless of how well they knew each other, solely because they had been observant and noticed their peers' absence. Participant HEI2_P1 supported the importance of a sense of community in remote learning, while also corroborating the feelings of isolation. She explained that *"I isolated myself. I don't wanna lie."* Despite this, their community continued to reach out to her and provide support where necessary: *"since my community were people who always wanted to be in my life, some of them would just pitch and say: 'Hey, what are you busy with? And where have you where are you stuck? Then how can we help you?'"* This had a positive impact on HEI2_P1 as she stated that these were not people she was familiar with already yet they were showing her support. She explained that "*I don't know you don't know me. But you*

had the audacity to say no, this one is always in the class. Why is she not on the class? My peers checked us up." HEI1_P6 also raised issues of isolation and stated how the forced isolation of remote learning highlighted the need for their peers by saying, *" I've always considered myself someone who likes to work alone in isolation, but when that happened, I sort of learned that actually, I need my peers."*

Confidence that the students had in themselves was affected by the challenges in finding a community and this was evident in the responses. HEI3_P1 explained how the feeling of being alone and without a community left students scared to reach out to fellow peers and get assistance: *"It affects it greatly because number one you feel like you're alone. If you have any kind of questions, you just figure it out yourself or you maybe you're scared to ask other people."*

The findings show that a community provides a sense of belonging to students, which helped to transition into and manage remote learning. It does so by breaking barriers that promote isolation and by aiding in providing peer support and academic mentorship easily by firstly breaking isolation barriers and secondly providing academic mentorship and support.

d) Prerequisites for community building for remote learning

Participants found their association to a community yielded benefits that assisted in their academic endeavours and individual wellbeing. However, forming such an online community was perceived as a challenge due to the lack of physical presence, lack of familiarity with fellow peers as well as limitations in personality traits. Participant HEI3_P1 explained that a community's development is based on how familiar the members are to each other: "*It helps to have people you already know and from there a community develops and expands. The thing that helped me was there were a few people that I was familiar with before. So that helped because I could lean on those people. But for people who are not familiar with anyone else, it's very difficult."* HEI1_P5 also explained the impact of not knowing your peers beforehand by saying *"Starting a community online is much difficult. Because when compared to when you are on campus, there are lots of interaction that you can do to meet a lot of people, get to see their faces and then that's when you start the community. So, I feel like it would have been much better if we knew everyone first in an online community because it also makes quicker responses. But with us when you pose your question in the WhatsApp, no one will answer your question, because some do not know you and see no urgency to respond."*

The same participant further explains how without the familiarity amongst other community members, it was challenging to get acknowledgement and support where necessary. The implication is that response time in the community was influenced by the individual's connectedness or familiarity with community members.

Another factor that arose was that there was a lack of humanisation of students and peers behind the screen. This is closely related to the lack of prior familiarisation with each other. In a physical class, students would be able to see each other and naturally form communities. However, with remote learning, lectures were on digital platforms where students rarely had their cameras on. HEI3_P2 said the following: "*Remote learning made us lazy because we were hiding behind our cameras."* HEI1_P1 also supported that claim by stating that *"People didn't turn their cameras on or anything like that."* This has a negative impact on getting to know peers as well as acknowledging that you are engaging with a human and not just a screen. This apathy inhibited the ability to naturally form communities upfront. According to HEI3_P1 this was a critical problem amongst facilitators: *"…because they were also frustrated, they were also detached from realizing that it's people behind those screens."* The participant went on to add that the use of video in class would have had a positive effect on this phenomenon: *"Let's say in person or maybe even have your videos on for one time where everybody meets each other. Like I said, the thing that I feel is lacking with online learning is the human part."*

With the limitations and challenges in forming communities with remote learning environment, students had to be intentional and deliberate about creating that sense of community for each other, given the positive impact it would have on their learning experience. This was noted as well as practised by students during this time. The findings show that familiarity was important in being able to build community and therefore improving remote the learning experience. The study finds that forming a community was made possible by students actively seeking their peers to form a community.

4.3.2. Role of digital platforms

a) Digital platforms assisted the formation and sustenance of community

Throughout the remote learning experience, digital platforms played a key role not only in facilitating learning, but also in ensuring students can maintain their communities and connections. The main channel students used to communicate with each other was

WhatsApp. WhatsApp proved beneficial in maintaining connections and in addition to that, as a cheaper low bandwidth alternative for those that had technical challenges with attending class online. WhatsApp provided an opportunity for forum discussions and academic support. HEI3_P1 paints the picture on how students would record Microsoft teams lectures for each other where their peers could not attend. This would be coordinated on WhatsApp amongst the students. They stated: *"they would have to record and also use things like WhatsApp groups where we communicate and all those things…and the WhatsApp groups, if you have any questions, let's say you don't understand something. You can always ask, and people will explain that particular issue or question in the way that they understand."* The benefit of WhatsApp was supported by HEI1_P3 who said that *"even though we might not have seen each other on a daily basis, then obviously I'd be able to communicate with them via WhatsApp or any social media platform because of where they were."*

The findings show that digital platforms were pivotal in forming and sustaining community. They did this by connecting students beyond distance and reducing the physical gap between students. Use of digital platforms therefore was an enabler to remote learning in HDIs.

b) Digital platforms made it easier to share material with peers and students

HEI1_P2 stated how lecturers used digital platforms to share additional material with students: *"We also had a WhatsApp group whereby they sent us materials."* HEI1_P1 also supported this and mentioned how remote learning and lectures on teams made it easier to engage with the course content in real time: *"If the lecture made reference to a source or something, you could just share pretty easily and people could in real time talk about that."* In addition to sharing course material, HEI1_P1 stated how HEF would also use WhatsApp to encourage student engagement with the material by sending them questions as voice notes. *"For example, there was a lot of use on WhatsApp as well, where sometimes actually one of my colleagues was my tutor at the time and she would kind of send a voice note on WhatsApp and then we'd have to type out a response."* He elaborated on how these questions on asynchronous platform encouraged students to think critically before responding, *"So in terms of challenging, you had to think about how things were worded and really put to put those. You know, like written skills to the test as well. And so, I think that that was quite important."*

The study finds that digital platforms made it easier to share material with peers and students. The study also finds that lectures were able to easily share documentation in WhatsApp to students; and students were able to share resources amongst themselves, which made remote learning easier for them.

c) Digital platforms made it easier to collaborate during remote learning

The convenience of online platforms made it easy to coordinate remote collaboration where technology allowed. HEI4_P1 stated the following: *"On the positive impact is that with remote learning, when you are doing group things. It's simple, it's easy. Because…you can just tell the other person. Let's see. We are having an assignment and then we meet online for that assignment. And in that assignment, we say that the other person should write."* Part of the convenience of digital platforms was that students could all work on the same document simultaneously during group work, this was evidenced by HEI1_P6 explaining how he advised students during his time as a tutor: "I *encouraged all the groups to do and that was just to do an online document, online documents where everyone could edit, and I could give my feedback and so forth."*

The findings of the study show that the use of digital platforms made it easier to collaborate amongst students. It allowed students to work on documents at the same time using cloud services, which therefore made it convenient to have during remote learning. Digital platforms also allowed students to meet online which was easier than meeting in person at the time.

4.3.3. Social presence

Social presence emerged in the data as a factor in the remote learning experience. Students were uncomfortable opening their cameras during class. HEI1_P1 stated that "*people like didn't turn their cameras on or anything like that, so. And sometimes people even felt uncomfortable speaking*." He further went on to state how physical non-academic events were necessary as they allowed students to be themselves: *"It's not like it's being recorded or something, so you feel a bit more comfortable sharing sensitive information."* HEI3_P2 also added to this claim in stating how there was a lack of privacy during online classes that resulted in students not asking lecturers about individual issues or feedback. "*Everyone is listening to my problems, you know? When we are in physical class and the class is over, everyone is out. You can just go to the class. No one is listening to you."*

As students became more familiar with remote learning, their feelings of confidence and bravery grew and empowered them to speak up more. Some even stated how although their personalities naturally would not have enabled to them to speak out even during face-to-face classes, online learning nurtured in them that ability. It fostered a confidence that was necessary for success, in their studies and beyond. HEI2_P1 states said that *"Because in class I would, I wouldn't ask. But when it was online learning, I was very much confident. I will speak my mind."* In the same institution, HEI2_P2 also shared their views on remote learning stating that *"OK, it really made me, first of all, not being able to see your lecturers made you to be able to speak out."* Many students explained how while it was beneficial to have a lecturer in the WhatsApp group, not having them in there allowed for more freedom of expression because "*They would comment anything, they would do anything they want. So, the lecturer not being there, was not a bad idea. Yeah. And there was freedom."* – HEI3_P2

Some students therefore had additional groups where only the students were in to ensure students voice their challenges. HEI2_P3 said that "*…to be honest, we kind of also had like, side groups where they were not on those groups because some people feel comfortable with discussing their issues without the lecturer involved*." HEI1_P2 explained how compared to face-to-face classes where they would just share pleasantries in class, they were now actively invested in building relationships with their classmates. She said, *"I kind of like felt like other people I just used to bypass in class and just 'hi' and then you know, sit at the back or in the front. But now when I had to kind of like, know 'ubani' and be invested in communicating with them daily, it becomes more than that."*

The findings show that a necessary level of social presence by students is required to actively participate in remote learning. It shows that social presence has a positive impact on student behaviour and expressing themselves. Thus, social presence has a positive impact on remote learning in HDIs.

4.3.4. Cognitive presence

a) Collaboration as an outcome of cognitive presence

Cognitive presence presented itself through many experiences amongst students, particularly when related to collaborating. Students went beyond the official WhatsApp groups that were created for their classes and course and would create more specific groups to support each other. These groups enabled students to engage with the course content and consult each

other for more informed understanding. This was evidenced by HEI1_P5 saying *"It was during my final year, I think in final you we were all like we want to, to graduate, let's all graduate. So that was when we a lot of people would put in effort and helping others and. In creating other groups so that we can support each other outside the normal class group."*

When asked the importance of community on collaboration, HEI2_P2 stated that "*I think at some point it did help me because it was then when I started to realise the importance of having some community where I should go to them. If I'm getting stuck anywhere in my schoolwork, so, not being able to attend my class and not knowing what we are doing right now, made me to look for people who I can talk to and ask them questions."* HEI1_P2 further confirmed the importance of collaboration in online learning by saying *"compared to when you were doing physical contact class you could easily just say…I'm gonna do this thing alone and I'll just ask the lecturer to, you know, remove me from that group and. But now when you are remote learning. There are a lot of things that you also face currently with maybe your family and also other things. So, you kind of like need other people."*

Many participants expressed dissatisfaction with collaboration during remote learning, largely due to lack of reliable devices and network. HEI1_P6 witnessed this as a tutor for small group and explained how *"…they really had to collaborate and I saw them struggle…because there would be students who do not have access to Internet, especially students who had to go back home and they are living in remote areas, so they really struggled*." This was supported by HEI1_P2 who stated how collaboration was affected: *"a lot of delay. Yeah, because you have to wait. Wait until someone gets a better connection. Better time to do whatever because you're not face to face. So, everyone will come up with anything to just say, oh, let's move to another time zone. But yeah, collaboration was difficult because you have to obviously reschedule after rescheduling."*

This was additionally corroborated by HEI2_P3 who said, *"With online as I did mention, back to that connectivity points again, you'd find that perhaps three or four of your members in your group are actually struggling to like stay connected."* Students also stated how the peer reviews that they had been used to with face-to-face classes were now minimised. According to HEI4_P2 *"You couldn't get a peer review or a peer assistance from others…"* he further elaborated that this was due to lack of data to share and connect with peers. He explained that *"the main issue there was the data. Remember when COVID hit, no one knew it was gonna*

happen. And then? There wasn't any measure put in place because we didn't know it was gonna happen. So, the issue of data came late. In such a way that you had to take, you had to take out a certain amount of money from your own pocket to buy data, and by then data was expensive."

During remote learning, students complained that lecturers were often not going into detail, and they were left to study on their own. To address this, students held regular teaching sessions where they would teach each other course material. *HEI2_P4 stated how "what we do is if we were like four or five students. Staying in one res, we would schedule our time and meet up. And do learning on our own and someone, if I would understand that section better, I'll be teaching the others what the chapter is about."* This was additionally beneficial to students who also had not been able to attend the sessions previously. These sessions were held in person when the students were in on-campus residence but were online when students were at home. This led to challenges with network, but students pivoted and used WhatsApp as an alternative means to share and continue teaching each other. HEI2_P4 added that *"WhatsApp, was our only solution because that person will be required to do a voice notes and send some pictures to explain further about the chapter."*

b) Confidence as an enabler and outcome of remote learning

One of the ways in which cognitive presence as an influencer was evident was through self study and the ability of students to research using the internet for better understanding of the course content. Remote learning gave empowered students to use the internet confidently, be it to search for further assistance on class topics or as a means of enhancing their research skills. HEI3_P1 elaborated on how *"There was something about online learning that made us feel more familiar with…the Internet in terms of where to search for information, where to do all these things."* HEI4_P1 also added to support this notion by showing how increased exposure to the internet resulted in broadening of their horizons. When asked if and how remote learning challenged them to think critically, they had the following to say: *"that thing showed me that I can do business with people online…networking and network online."* The findings show that remote learning was positively affected where students had the confidence to engage in class. It shows the importance of class participation and how confidence can play a supporting role in encouraging participation.

The findings show that cognitive presence was important during remote learning in order to truly engage with the course and understand the content. The findings further show that collaboration was a key builder to cognitive presence and that while effective collaboration was necessary for satisfaction in remote learning, it was heavily challenged by technological restraints. The study provides evidence that cognitive presence is an enabler for remote learning in HDIs but needs to be managed effectively to ensure students continue to be active in it. The findings show that students were identifying gaps in their own understanding and by using their cognitive presence would problem solve either through peer study or self-lead research.

4.3.5. Digital divide

The lack of access to the necessary equipment and network, as well as inadequate skills to use online platforms came up as a limiting factor in the data. HEI2_P2 stated how the lack of reliable network and data led to feelings of demotivation regarding remote learning by saying "*I didn't enjoy the online learning at first. I was left behind with my schoolwork and I was not motivated to attend class if I have a class, because I would know that I won't be able because of network or maybe of data. So, I was not motivated at all."* HEI2_P2 further added to this claim and stated how recordings were necessary as students could not always attend in real time due to network challenges "…*I was not able to attend because where I live the network was very bad. So, one of the girls that was attending it with, she will always make sure that she sends the recordings to me every time when we have class and let me know what you should do…"*

Students in HDIs faced data challenges that limited them from taking part in online learning. At some point, the HDIs assisted with providing monthly data to students. However, because of the remote locations, student still experienced challenges with remote learning as they had coverage issues. HEI1_P6 explained that *"You could sign up to receive free data. It was 30 gigs. It didn't matter what cell phone network you were with, but you will receive 30 gigs of daytime data, right? For a month and 30 gigs of nighttime data as well for a month and then that would repeat every month, right? So that was some sort of relief for students who had no access to, to internet. However, like I said, the students that were living remotely. They still struggled with signal, especially when they had to access high consuming data platforms such as teams, some instances."* HEI1_P4 added to this claim, referencing how unreliable

connections would result in interrupted submissions on the LMS: *"Trying to connect to the school's platform and trying to submit and being kicked out of the system because of connection issues."* The effect that a lack of infrastructure had on collaboration with peers during study groups was evidenced by HEI2_P4 saying "*And then the person is supposed to teach us would say oh I don't have data. Oh, my network is bad. I don't have network in my house and so…so, we end up not having our meeting."* In an attempt to address some of the challenges with the digital divide, some HDIs provided their students with laptops through a program that would have it added onto their fees. This was not without its challenges. According to HEI1_P6, "*…the university also had the option whereby students could apply for a laptop, right? This laptop would be charged to their student accounts, right...either you had to collect the laptop or have them delivered. And then some students who could not travel during that time of COVID those laptops were delivered to them, but the system of delivering laptops was also very delayed.*"

The limited prior exposure to digital platforms also disadvantaged students in HDIs. HEI4_P1 states how this affected him: "*The university itself is disadvantaged so my friends and I, we were unable to use these online things. You understand? So, I only had one friend who was. Like the friend he grew up in in. Let me see. I cannot say rich family. But let me just say a family where he was able to access a lot of technological things so. He was the one who helped me*." This lack of skills affected the lecturers too, as HEI3_P1 stated how peers assisted those affected by network challenges during class as some lecturers did not know how to record the sessions: "*The best we could do will ask whoever it is to record the lesson. So that you can be able to access it if you know that you probably you don't have maybe good connection. Then you'll ask someone please record it. Record the lesson for me because some of them the lecturers didn't even know how to record a lesson.*"

It was not only students affected by these challenges, HEI2_P4 further added how lecturers would sometimes have to cancel class, saying "*we faced so many difficulties with online learning, sometimes it was networks and sometimes the lecturers would cancel classes, and we had to make it on our own.*" This was corroborated by HEI2_P3 who stated that "*They kind of had like technical issues sometimes when it comes to, you know, connectivity, it actually varies from where you are located. So sometimes it will, they'd schedule a class and then they cancel it*."

The findings show that the digital divide was a key constraint for remote learning in HDIs. It shows that while some of the challenges were addressed by the HEIs, some issues would persist because of the remote location of students.

4.3.6. Lecturer support and presence

a) Remote learning requires additional support from academic staff

Participants mentioned that with online learning there was a definite need for more support from their lecturers than with physical contact teaching. This can be attributed to additional challenges with technology and access to platforms that was unique to the online learning experience, in addition to the anticipated academic challenges (Ndebele & Legg-Jack, 2024). There was consistent indication from participants that some support systems that were present during the face-to-face learning were not available during remote learning. For example, participant HEI4_P1 explained that *"After classes they will say if you got, let's say via I got, I failed the test and then they will say if you know that you got below 40% for example, remain in the class we must discuss these things. How did you fail and what can be done to assist you. This was the norm with most of our classes and we appreciated this because it was easy to know what to do to better prepare. But now in remote learning, they ask you why you failed and do nothing about it. They'll just ask you and then leave. It is like the commitment that lecturers had prior to remote learning became less because the other challenge is that during online, the lectures were not lecturing. Most of the things, some of the things they just say you will read, you will read."*

Most participants, such as participant HEI2_P2 corroborated these perceptions stating that "*Even when we raised concerns with lecturers, they were ignored and no commitment to remedy the challenges we experienced*. *Some were complaining that like they don't understand what is happening, but the lecturers would just continue with the syllabus."*

Teaching presence was negatively affected during remote learning as it required an enhanced skillset that many HEF were not used to, particularly in HDIs. Many of the aforementioned challenges and frustrations in additional support, stem from the fact that HEF were inadequately equipped to adapt to online learning. HEI3_P1 evidenced this and stated how HEF were so used to traditional classes they had never had the need to advance their technical skills. They said that *"… imagine you are a lecturer and have been lecturing since 2007 and*

you have been using the same slides. All you need is open, open the computer. Probably someone took the slides for you. So now you have to share the slides. You have to do all these things. They will be frustrated if something goes wrong." HEI1_P1 added to this by saying *"Lecturers obviously had their own issues, but they were kind of felt a bit rushed at times where they were trying to just get through."*

These findings show that the lack of expected normative behaviour, additional support and commitment from academic staff negatively affected students remote learning. HEF did not adapt their teaching styles and presence accordingly to meet the need of students during remote learning and this had a negative effect on the remote learning experience.

b) Lecturer presence on digital platforms

Institutional LMS played a fundamental part in delivering lecturers and sharing course material to conduct remote learning. In addition to these, positive reflections of the additional support from lecturers, was evident where lecturers were present in and active on digital platforms to support students. HEI4_P1 stated that *"We had the WhatsApp group and the lecture is inside. So, the lecturer will send the notes there and then tell us what we should read or study until where…"* This participant further mentioned that some lecturers went to the extent of calling students to assist with work and access to the relevant learning platforms: *"The support that we got from our lecturers, it affected us positively because they will call us via cell phones and tell us, like they will send the instruction how, when you want to log in you have to do this."* This was perceived to be rather useful particularly in instances where students faced network connectivity trouble or data costs, as participant HEI1_P2 explains *"But now there's these levels of like network problems and that. So, we kind of like had to move to a WhatsApp group so that maybe even if you have a WhatsApp data, you can also get the information…so they were very flexible and comfortable with us as we moved to remote working."*

Some lecturers were present in the WhatsApp groups that had been formed, and this was often beneficial to students' experiences, however some may have been present but did not add any academic value or support in said groups. HEI2_P2 explains that *"This was useful to us, but not all staff used this method, and if some were in the WhatsApp group, they did not all participate in these groups."* With the additional groups being created and sometimes lack of formalities in such groups. There were negative effects where the teaching presence of

lecturers was not available in a WhatsApp group to lead it. One participant stated how the WhatsApp group with only students could be demotivating at times when they would discuss the experiences with a course, including numerous failures and repeats. According to HEI4_P1: *"But when I open my WhatsApp and go to that group. I will be discouraged again."* Some lecturers were availing themselves on email and LMS to the students and that had a positive effect. Lecturers used these platforms to keep students engaged. HEI2_P3 stated how these platforms played a role: *"They'd just send a Teams, so just send a link to that Blackboard thing. It was like quizzes so that you just be productive and stay familiar with the content" So yes, there were quizzes."*

Many participants noted that often it would be the class representative who would reach out directly through email to the lecturer. This practice received mixed reviews. HEI4_P1 stated that how they did not prefer it because "*You know, because sometimes you don't even know how this person is relaying the message to the lecturer."* HEI4_P2 however said that *"The experience, it was good. I don't remember a way in which he didn't convey a certain session, like he didn't get back to us. He would always come back with a good feedback on what, what the supervisor the lecturers has said."* HEI1_P3 also expressed that while it was a good thing to have a class rep, they still had doubts about the questions being relayed correctly. They said *"With them now being online it was that thing of, obviously it was kind of difficult to get a hold of them, you know? But like luckily now, because we had a class rep, it was like so much better. But then sometimes maybe the class rep doesn't ask the lecture the relevant questions, you know, all the questions that you would have wanted the class rep to ask, you know."*

Some participants reported how their lecturers would sometimes post pre-recorded lectures. This then removed the ability to engage in class and ask further questions. These sessions were also without video, which would have had an impact on the studies. HEI1_P5 explained their experience: *"They only recorded their lessons, so we were listening to recordings, not a session like what we are having now. No, it wasn't like that. We were not seeing them."* The same participant went on to explain further on how they appreciated the live sessions when they were held as they were more interactive and had a positive impact on their learning experience: *"The live sessions were more understandable, and they were more interactive because we were able to ask questions rather than having to e-mail your questions to the lecturer or having to ask the tutor."* Another participant added how some lecturers were quick

to dismiss the class and underestimated remote learning, offering limited opportunity for further discourse. HEI4_P1 explained that "*online some they don't demonstrate, just explain and then leave.*" HEI3_P1 detailed how lecturers were less available for their needs with remote learning due to their own struggles with the concept and they would overlook the fact that it was still students behind the screen: *"… also because they were also frustrated, they were also detached from realizing that it's people behind those screens. So, to be quite honest, they were not very much available."*

The findings show that there was limited lecturer presence during remote learning. Their availability was reduced and students felt they were not as accessible as in face-to-face classes. The findings further show that increased presence of HEF on additional digital platforms such as WhatsApp and LMS had a positive effect on remote learning and student engagement.

4.3.7. Remote learning limited communication amongst peers and academic staff

Almost all participants mentioned the shift in communication with remote learning. Students faced limited communication with their peers initially due to lack of knowing who their classmates were and being scared to reach out to strangers to ask for help. HEI1_P6 stated that *"The interaction between my peers and myself right, there wasn't that where we could actually see each other and actually explain."* HEI1_P4 also mentioned the challenge in reaching out to unfamiliar people, saying *"Yeah, I was not in communication with anyone who was doing the course that I was doing. So, it was difficult to even ask for help."* This was also validated by HEI3_P1 who explained that *"I think you with online learning you find it's not. It's not very easy to just contact people.*"

Communication issues arose with lecturers too, as some students missed the opportunity to speak to the lecturer after physical class or the opportunity to pay a visit to their offices which was available with face-to-face class. With remote learning, communication was often limited to email, and that was mostly reserved for the class representatives. HEI1_P5 mentioned how *"they would just pose our questions through a class representative and then the class representative will be the one who emails the lecturer and then the lecturer would make a bulk e-mail of all the questions that were being asked, yeah… I would have appreciated being able to communicate with that lecturer myself more than having to pose the question through someone."* The inability to communicate directly with lecturers presented a challenge to

students in their experience of remote learning, as using class representative ran the risk of miscommunication on both sides. HEI1_P5 further added that *"we had to communicate through class representatives. Of which like a question that is asked by someone else on your behalf is not the same as the way you would ask."* HEI4_P1 reported that where a lecturer was present and active in a WhatsApp group, communication was better with positive outcomes because *"They are able to send the communication in the group and then it's clear because the message comes straight from the lecturer."*

There were expressions of dissatisfaction where email was the only form of communication with the lecturers. HEI3_P1 had the following to say when comparing to face-to-face classes: *"Now you're relying on an e-mail. Whereas before you just walk into the office."* HEI1_P4 also added that *"During remote learning…it was very difficult to get a hold of them because it was like we would only communicate via emails."*

The findings show that there was general dissatisfaction with communication in HDIs during remote learning. This challenged the communication between lecturer and student and amongst students themselves. The findings further show that where steps were taken to improve communication, there was a positive influence on the remote learning experience.

4.3.8. Ubuntu and empathy

The practise of Ubuntu principles was prevalent throughout the study and amongst most of the participants. As the participants were identified from historically disadvantaged universities, they were exposed to challenges related to internet connectivity, data, lack of exposure and familiarity with the technology tools and platforms. This gave many opportunities for these principles to be practiced by students and HEF alike. The findings show that the practice of empathy improved the experience of remote learning for students. HEI2_P2 shares how she would rely on a fellow classmate to share meeting recordings when she was unable to attend due to network challenges: *"every time when we had an online class, I was not able to attend because where I live the network was very bad. So, one of the girls that I was attending it with, she will always make sure that she sends the recordings to me in every time when we have class and let me know what you should do."* In the same institution, HEI2_P3 shared how students would look out for each other in the spirit of Ubuntu and ask the lecturer to adjust the pace as other students fell behind due to lack of attendance. They explained that "*we would suggest to our lecturer to just slow down the pace a bit because we*

notice that we're actually moving too fast and there's a lot of people who are actually still behind." The participant further went on to add *"So, we made that request to try and just like slow things down, so that a lot of people can actually eventually catch up when the institution can actually send data."* The study found that those that experienced Ubuntu appreciated those acts and actively participated in it going forward. HEI2_P2 states how receiving Ubuntu encouraged her to pay it forward: *"I just practiced it more when I started doing in service training. Dealing with real life problems now I really saw that you really need to be kind. I must really practice the Ubuntu I've been receiving university."*

HEF empathy and support was also beneficial to remote learning. Some lecturers went to the extent of making and compressing videos into formats that are easily consumable on mobile devices. HEI1_P6 explained how *"lecturers were making videos of the lecture slides and sending out links so that students can access these links and watch the videos right. One lecturer went as far as making these videos. Going through great lengths to compress the size of these videos…and then these videos could be passed around on WhatsApp because there were students who only had access to WhatsApp."* Lack of empathy from HEF had a negative effect on students' experience. This was evidenced by HEI1_P3 stating that *"This one lecturer right. He was just like, you know, he was that person who would tell you, OK, if you have a problem, then come to me. You know? And then you come with your problem and then suddenly he makes it seem as though like it's your problem. It's not his problem."* In support of this, HEI3_P1 also explained how she perceived a lack of empathy while navigating digital platforms with remote learning*: "I feel like there is a lot of lack of. Because people always assume that you understand, let's say you're struggling to log in on something and now seems like it's a you problem."*

The findings show that the practise of empathy and ubuntu by students and HEF had a positive effect on remote learning in HDIs and supported satisfaction thereof. It provided a sense of togetherness that was instrumental in improving remote learning. It also showed that the practice of Ubuntu encouraged students to practise it themselves going forward as it had a positive effect on their remote learning.

4.3.9. Conclusion

This chapter presented the findings of the study, identified through the rigorous analysis of the data from the individual interviews. The findings provided evidence in the form of data

extracts from the participants to support the initial claims. Seven key themes were established, including but not limited to community, cognitive presence, Ubuntu and the digital divide. These primary themes were divided into sub-themes, where necessary for more detailed analysis thereof. The study found that cognitive presence and remote learning share a relationship that goes both ways. While cognitive presence was inhibited to an extent by technological challenges that affected real-time discourse in class, when it was exercised it provided a positive impact on the learning experience. The findings show a positive impact of a sense of community with the remote learning experience for students in HDI. It further showed there is a relationship between the sense of community and the ability to practise and receive Ubuntu. Ultimately the findings show that there are multiple complex relationships between the themes that influence the overall remote learning experience for students in HDIs. Such relationships provide ground for further research in the area, and the extent to which they influence each other.

CHAPTER 5: DISCUSSION OF FINDINGS

This chapter discusses the findings derived from the data analysis. The main objective of this study was to explore how students' experience of remote learning in HDIs affected their social, cognitive and teaching presences. This chapter will examine the findings against what the literature had proposed.

5.1. Social Presence and community

According to literature, social presence has a positive impact on remote learning in higher education (Shea et al., 2022). This study findings show that this is the case in HDIs as proposed. There is a positive relationship with students accessing their social presence and their satisfaction with remote learning. This was shown in the data where students who spoke out in class benefitted from those interactions. Social presence was highly related to community (Yildirim & Kilis, 2019), showing a cyclical relationship where one is in constant flux with the other. Students stated how they lacked the confidence to seek help from the peers or even HEF in the beginning due to their unfamiliarity with each other. Social presence was challenged during this time and the students lacked the freedom to express themselves as authentically as they would to people they know (Leslie, 2020). Their ability to contribute meaningfully to class discussions was also challenged during this time as they were unsure about their social belonging in their classes. As their sense of community stabilised, they were able to find their voice and were no longer afraid to speak up or ask questions.

The findings show that a sense of community was an enabling factor in remote learning within HDIs, as evidenced in the literature (Su et al., 2024). The study finds that the limited interaction and lack of familiarity initially posed a challenge to forming community. However, where there were groups that students belonged to, community was a strong force in breaking isolation amongst students and improving the remote learning experience. The findings also show that without a strong social presence, students would struggle to form that initial community and often relied on others to be the initiators. This has a negative impact on student satisfaction in remote learning because during the time that they wait, they may miss critical learning opportunities.

5.2. Role of digital platforms

Digital platforms were beneficial in providing convenience for students during remote learning. Mobile platforms were preferred as they are less data intensive and could be accessed with a mobile device. These platforms serve to enhance social presence by enabling community to engage. The type of engagement ranged from peer support to academic support from lectures and general rapport building amongst students. The platforms were used by lecturers and students to share materials with each other which proved to have a positive impact on remote learning as evidence by literature. Digital platforms extended beyond the formal LMS that the institutions were using, they also included mobile platforms such as WhatsApp which were more readily available and familiar to students.

Digital platforms provided a separate opportunity for HEF to adapt their teaching presence and reach students where they were at the time. This made learning accessible to students and also improved communication between lecturer and students. The presence of lecturers within these accessible platforms provided challenges to students to engage in more academic behaviour and learn how to engage with course material. This enabled the use of their cognitive presence as evidence in literature that shows that a key attribute of cognitive presence is critical assessment of the task and content (Englander & Russell, 2022):

The findings corroborate the existing literature that highlights the digital divide as a constraint to remote learning In HDIs (Maluleke, 2024). They however also show that digital platforms still play an enabling role in remote learning and that appropriate platforms need to be adopted by HDIs, in order to mitigate challenges from the digital divide.

5.3. Cognitive Presence

Cognitive presence was an important part of remote learning in HDIs. It presented itself primarily in student-to-student interactions and self-directed learning. Findings showed that students found value in collaborating in an online setting as it provided them with diverse perspectives. This finding corroborates literature that claimed that collaboration improves remote learning satisfaction (Barikzai et al., 2024; Yildirim & Kilis, 2019).

The findings show also that collaboration was negatively affected by remote learning. While the convenience of digital platforms is acknowledged, the intense lack of access to data and

reliable network proved to be a more prominent factor in HDIs that restrained remote learning. Many participants stated how group members would not be able to meet up for collaboration due to connectivity challenges, thus hampering their cognitive presence. Real time discussion during lectures was also limited as some students were unable to attend these synchronous classes due to these challenges. Discourse and engagement are critical components enablers respectively of cognitive presence and such factors inhibited that. This finding corroborates the literature that show that HDIs are more prone to challenges with collaboration, and thus cognitive presence due to the digital divide (Themane & Mabasa, 2022). The study also found evidence that it was necessary for students to tap into their own teaching presence to foster collaboration and share knowledge amongst each other through leading group discussions and peer reviews (Shea et al., 2022). In these situations, students tapped into their cognitive presence by taking initiative and conducting peer-to-peer learning.

Cognitive presence was also evident as students found alternative ways to study or source information online. This was due to increased confidence and familiarity with the internet as well as circumstance that necessitated sourcing additional information online. This shows that cognitive presence is important factor in enabling a positive perception of remote learning (Shea et al., 2022). The finding also shows that the persistent exposure to digital platforms to students in HDIs provided them with a confidence that triggered their cognitive presence, further enhancing their experience with remote learning.

5.4. Empathy and ubuntu

The study finds that practicing ubuntu and empathy amongst students improves satisfaction with remote learning. This is true for receiving and giving empathy and Ubuntu, as well as from HEF or from fellow peers (Pika, 2024). Ubuntu and empathy were found to work hand in hand with participants using the terms interchangeably. Ubuntu was reflected in everyday practises such as recording lectures for students who were unable to make it due to technical constraints and sharing them with them. Students even requested HEF slow down the curriculum so that other students could catch up, when students were being excluded due to lack of data provision. This was a selfless act that barely benefited the students asking for it as they were present in the lecture, however it was solely in consideration of their peers.

Findings also demonstrated that Ubuntu and empathy are practices both ways, that is you need to give to receive. However, it is also subjective and not every person is receptive to acts of Ubuntu or empathy. Receiving of Ubuntu challenged students to initiate it themselves. Students that had been on the receiving end of Ubuntu were likely to pay it forward as they appreciated the importance of practising and acknowledged the positive impact it had had on their learning experience. This corroborates evidence in literature that empathy and Ubuntu can have a positive influence on remote learning in HDIs (Omodan & Diko, 2021), and that lack thereof can have a negative influence on satisfaction for students in HDis.

5.5. Teaching Presence

The findings demonstrate that teaching presence was the most critical presence in determining student satisfaction with online learning. It was an important factor that also had a lasting impact on students' cognitive presence. This is evident in literature as HEF play the role of the leader in that their teaching presence can either encourage or discourage student engagement and collaboration. As such, their inability to fully access their teaching presence negatively affected students experience with remote learning. This is corroborated in literature by (Naghdipour & Manca, 2023). Teaching style is required to adapt to online environment as there are limitations that need to be accounted for when learning online, therefore a different teaching presence needs to be accessed during remote learning (Gurley, 2018). The findings show that this was often not the case and HEF were not adequately designing courses that encouraged participation or motivated students to engage. This may also be related to the lack of appropriate skills by HEF to effectively conduct remote learning as shown in literature (Dube, 2020; Scherer et al., 2023).

The missing engagement of teaching presence resulted in many missed opportunities to engage social and cognitive presence amongst students. The lack thereof reduced the quality of content to students as some stated the lectures felt rushed by the HEF. As shown in the findings, HEF had to explicitly be advised to slow down the syllabus as students failed to keep up with the remote learning curriculum.

5.6. Digital divide

The study finds that the digital divide had a negative effect on students' ability to take part in remote learning in HDIs (Pika, 2024). This challenge not only resulted in interrupted classes but completely excluded some students during a certain period. HDIs service largely communities that are in remote areas with limited technical infrastructure and bandwidth to hold long classes online (Ndebele & Legg-Jack, 2024). This was evidenced in the data where students relayed that they or their peers consistently could not attend class due to network challenges. To mitigate this, students would record or ask for the classes to be recorded so that their classmates could access the recording at a later time.

Due to these challenges, HDIs attempted to close the gap by providing data to students. The data shows that while this was provided, it was delayed, leaving students unable to learn remotely for months. Some HDIs, were only able to resume classes months later when the data had been provisioned or after returning students to their on-campus residences where there was wi-fi. This data provision was helpful to students; however, it did not completely remove the challenge as network and signal issues still persist even if students had the required data. Some classes had to be cancelled due to the lecturers themselves having network issues.

Students also face challenges of not having required devices such as laptops. Again, some HDIs assisted in plans where students could receive laptops that would be placed onto their student accounts. This process was also not without its challenges and resulted in delays in students receiving their laptops. This shows that the lack of appropriate technological equipment had a negative effect on the remote learning experience for students in HDIs as seen in literature (Madhubhashini, 2022; Mhlanga, 2024). The findings support the literature that exists stating that the digital divide remains a limiting factor in students' ability to effectively learn and engage remotely in HDIs. Going forward, to ensure equitable and inclusive education for all, these challenges need to be addressed for students and HEF in HDIs as their persistence further leaves HDIs behind other universities (Madhubhashini, 2022). When LMS are being created and proposed to institutions and implementors, socio-contextual factors need to be considered so that the solutions that are implemented in these HDIs are relevant and meet the needs of the students and HEF in HDIs.

5.7. Conclusion

This chapter discussed the findings and how they can be related back to literature. It also provided interpretation of the findings by the researcher and how they may answer the research question at hand. A highlight of the findings from the study suggests that in the context of HDIs in South Africa, the digital divide plays a key role in constraining and limiting the remote learning experience for students. This is shown by that students and HEF were affected by lack of technical skills and lack of adequate technical infrastructure to support seamless remote learning. The discussion provided insight into how to improve the digital offerings that are meant to facilitate remote learning, to ensure that they meet the needs of those affected communities. These findings provide valuable insight into this area of research, however they also present some limitations that will be discussed in the final chapter.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

This final chapter discusses the identified key findings of this study. With the increased saturation of digital adoption across industries in SA, it is important that the sector of Higher education be prepared for continued changes in how education is facilitated.

Remote learning was initially implemented abruptly at a time where there was little to no time to adjust from students, facilitators and institutions. This resulted in many challenges that impeded successful implementation. Remote learning was therefore considered a temporary solution rather than a sustainable movement in the right direction by many HEIs, particularly by those that classified as previously disadvantaged where challenges remain. This is evidenced by the fact that many of these universities have since reverted to full time face-to-face classes once more. This puts these institutions in a vulnerable position in future as the requirement for more virtual engagement arises.

This study was aimed at past and current students who had experienced remote leaning at historically disadvantage universities. It sought to explore how students in these universities experience remote learning and what factors affected that experience. The study followed a qualitative approach and comprised of 14 semi structured interviews that were held with each participant. These interviews were qualitatively analysed through thematic analysis.

6.2. Revisiting research question

This research explored the remote learning experiences of students and how they shape their social, cognitive and learning presence in a remote learning. The study found that community and social presence played a big role as influencing factors on social identity amongst students. It found that lack of familiar faces in the initial stages of remote learning hindered the ability for students to place themselves socially and thus impacted their satisfaction of remote learning. The study found that social presence was a factor as some students were scared to ask questions in class, citing discomfort in voicing their grievances amongst strangers. It further showed that the establishment of a community had a positive impact on students as it enabled a sense of belonging. Community was also important in breaking barriers of isolation that often result from remote learning, and this too was a positive

influence on social identity and thus, their learning experience. The study finds that students are heavily reliant on teaching presence and social presence to activate their cognitive presence. This is due to the role HEF play in encouraging engagement in class, and the role that this participation plays in students to motivate their critical thinking and reflection in discussions. As digital platforms are often new to students in HDIs, there is an expectation for HEF to support. It was also found that lack of reliable infrastructure or technology was a constraint to collaboration and critical discourse for students as some students were unable to take part in synchronous remote learning.

Community played a fundamental role in collaboration as it allowed for a space to share ideas and review each other's work. A sense of community also allowed students to apply their knowledge through knowledge sharing sessions with peers, this showed a positive influence on critically engaging with the courses remotely. HEF had to adjust their course designs and adapt their teaching style to an online environment. The findings reveal that this was not always the case in HDIs and that was to the detriment of the remote learning experience for students. Most HEF struggled to appropriately adapt their learning material for remote learning, and this resulted in grievances amongst students. Where HEF did adapt their course material and methods of dispersing them such as distributing material on mobile platforms like WhatsApp, students were receptive, and it improved the satisfaction of remote learning.

6.3. Contributions of the study

These findings present opportunities for practitioners in Higher Education in SA to use as foundations to their ways of work. This study has shown and presented the remote experience for students in HDI by applying CoI lens that is already an established framework. Thereby, enabling applicability of the results in a wider context. As the global world moves towards more advances in technology, it is important that emerging economies such as South Africa maintain global standards. HEIs play an important role in shaping future innovators and leaders. Remote learning therefore is key in ensuring students of all backgrounds and socio-economic standing have the same opportunities to succeed at it.

This study provided details of the remote learning experiences of students at four HDIs in South Africa and this is an important step in understanding how to sustain remote learning and improve it in the future. This study contributes to literature by distinguishing HDIs from

other HEIs and therefore specifying related ways that remote learning can be improved specifically in this sector of society. It does so to highlight the cultural and societal disparities that exist in HDIs and ensure that they do not fall under the radar of sight through general studies on remote learning. These findings are important in shaping higher education policies that strive for accessibility and equitable forms of learning, particularly in contexts that are characterised by infrastructure and resource challenges.

Finally, this study contributes to the field of information systems as remote learning is heavily dependent on not just the technology, but how the student and HEF engage with said technology for the desired outcomes. It therefore provides an opportunity for IS practitioners and developers to consider these findings as they improve digital platforms for education.

6.4. Limitations and future research

This study provides contributions to the scientific community in higher education however there are limitations that must be considered. The study comprised of participants that had since completed their studies and were no longer actively engaged in remote learning. Although this as not a specification in the target criteria, it may be an indicator that HDIs are no longer prioritising remote learning post pandemic. There may have been different findings had the data included student that are currently taking part in remote learning in HDIs. This should be considered for future research. Due to lack of cooperation from administrative departments in some HDIs and time constraints, only four of the eight identified HDIs consented to participating in the study after being contacted. Future research could aim for a larger sample of HDIs to ensure diversity in experience.

Future research could expand on this study and identify how CoI can be formally implemented and regularly used in HDIs. This would assist in rating student satisfaction of remote learning experiences and improve them going forward. Future studies can also use this research as a foundation in secondary education as online high schools have emerged in SA. While these are not necessarily treated as HDIs. Their existence is bound to attract students that reside in disadvantaged communities and thus face similar challenges to those faced by students in HDIs. Furthermore, qualitative studies focus on depth instead of breadth, which quantitative studies consider. For breadth, future studies can consider HEI environment and how it affects

the application of Ubuntu and the other factors affecting students' engagement with remote learning.

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Appendix A: University introductory letter and consent

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Leslie Commerce Building
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OR
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Tel: +27 (0) 21 650 2261 Fax: +27 (0) 21650 2280
Internet: http://www.commerce.uct.ac.za/informationsystems/

18 April 2024

Request to conduct research and interview participation consent form

Dear Sir/Madam,

In terms of the requirements for completing a Masters Degree in Information Systems at the University of Cape Town a research study is required.

The researcher, in this case Anelisa Tyutyu, has chosen to conduct a case study entitled 'Exploring How Students' Experience of Remote Learning in Historically Disadvantaged Universities of South Africa Shape Their Perception Of Remote Learning'. The researcher would like to request permission to conduct this case study at your organization. The objective of the research is to: To explore experience of students in historically disadvantaged universities of South Africa and how it shapes the learning experience.

We would like to inform you that the ethical aspect of the research ensures the preservation of the identity of the participants, the data collected will be used purely for academic purposes. All personal details will be treated with the highest form of confidentiality. Please note that participation in this research is voluntary and participants can opt out of the study at any time.

The data collection method will be one-on-one interviews with a small group of the students]. The interviews will be conducted online and will last 45 minutes. If you authorise this study to be undertaken at your organization, please kindly sign the attached form and return to me at your earliest convenience.

Should you have any questions regarding this research, please feel free to contact me on 0791630981 or email: anelisa.tyutyu@alumni.uct.ac.za

Your organization's participation in this study would be greatly appreciated.

Sincerely,

Anelisa Tyutyu
Researcher \ M.Com Student, (UCT)
Department of Information Systems
University of Cape Town
Email: anelisa.tyutyu@alumni.uct.ac.za

Salah Kabanda
Research Supervisor
Department of Information Systems
University of Cape Town
Email: salah.kabanda@uct.ac.za

Appendix B: Individual interview consent and introductory letter

Department of Information Systems
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12 August 2024

Request to conduct research and interview participation consent form

Dear Sir/Madam,

In terms of the requirements for completing a Masters Degree in Information Systems at the University of Cape Town a research study is required.

The researcher, in this case Anelisa Tyutyu, has chosen to conduct a case study entitled 'Exploring How Students' Experience of Remote Learning in Historically Disadvantaged Universities of South Africa Shape Their Perception Of Remote Learning'. The objective of the research is: To explore experience of students in historically disadvantaged universities of South Africa and how it shapes the learning experience.

Your participation in this research is voluntary. All information will be treated in a confidential manner and used exclusively for the purpose of this study. No individual names will be recorded or published. You will not be requested to supply any identifiable information, ensuring anonymity of your responses. You can choose to withdraw from the research at any time for whatever reason, in accordance with ethical research requirements.

The data collection method will be one-on-one interviews with a small group of the students. The interviews will be conducted online and will last 45 minutes. If you are willing to participate in this study, kindly sign the attached form and return to me at your earliest convenience.

Should you have any questions regarding this research, please feel free to contact me on 0791630981 or email: anelisa.tyutyu@alumni.uct.ac.za

Your participation in this study would be greatly appreciated, but is entirely voluntary.

Sincerely,

Anelisa Tyutyu
Researcher \ M.Com Student, (UCT)
Department of Information Systems
University of Cape Town
Email:

Salah Kabanda
Research Supervisor
Department of Information Systems
University of Cape Town
Email:

Appendix C: Interview Guide

Section A: Social presence/Community	
Q1. How have you perceived the sense of community with your peers in the online learning environment? Q2. How has it affected your remote learning experience thus far? How has it affected collaboration? Q3. How has support from instructors and peers changed since remote working? Q4. What has been your experience of collaboration during remote learning?	(Englander & Russell, 2022; Rajah, 2019)
Section B: Teaching presence	
Q5. How have you perceived the support from your instructors during remote learning? Q6. How has your instructor's presence online affected your experience of remote learning?	(Nasir & Ngah, 2022)
Section C: Cognitive presence	
Q7. How has remote learning encouraged you to think critically and engage with course content? Q8. What ways to instructors challenge you to contribute meaningfully during class discussions?	(Chaves, 2022)
Section D: Community	
Q9. What do you understand about Ubuntu? Q10. How has Ubuntu influenced your experience of remote learning? Q11. Have you practices elements of Ubuntu in your engagement with peers? Have you encountered any challenges practising it? Q12. Do you feel remote learning fosters a sense of community? What examples of community during remote learning	(Omodan & Diko, 2021; Rajah, 2019)
Section E: Collective Responsibility	

Q13.	How has your perception of group work been affected by remote learning?	(Prayaga et al., 2017)
Q14.	How do you balance your individual goals and those of a group when tasked with group activities?	
Q15.	How has a sense of collective responsibility influenced your experience of remote learning?	
Q16.	How does collective responsibility influence your motivation to engage in online discussions?	
Section F: Empathy		
Q17.	How have you perceived empathy from your peers or instructors during remote learning?	(Tapani et al., 2022; Vandeyar & Mohale, 2022)
Q18.	Can you provide examples of how empathy has affected your satisfaction of remote learning experiences?	
Q19.	What challenges have you faced practising or experiencing empathy in your remote learning environment and how did you overcome them?	
Section G: Inter connectedness		
Q20.	Can you provide examples of how you have felt a sense of connectedness during remote learning?	(Tapani et al., 2022; Vandeyar & Mohale, 2022)
Q21.	How can interconnectedness improve your sense of belonging in a virtual learning environment?	