Effective pedagogical practices teaching assistants use in hybrid teaching modes: A Community of Inquiry approach.

by

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2012121196

Masters degree in Higher Education

Dissertation submitted in accordance with

the academic requirements for the degree

in the

Faculty of Education

Department of

Curriculum Studies and Higher Education

UNIVERSITY OF THE FREE STATE

Bloemfontein

South Africa

November 2023

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DECLARATION

I, Stefanus Johannes Scheepers, hereby declare that this dissertation titled:

Effective pedagogical practices for teaching assistants in a hybrid teaching and learning environment.

Submitted in fulfilment of the degree, Master of Education with specialisation in Higher Education Studies is my independent work, except where other sources have been acknowledged.

I, Stefanus Johannes Scheepers, also certify that this dissertation has not been submitted to this or any other faculty or institution.

I, Stefanus Johannes Scheepers, hereby cede the copyright of this dissertation in favour of the University of the Free State.

Signature:  Date: 17 November 2023

ACKNOWLEDGEMENTS

I wish to express my gratitude to the following people and departments who made invaluable contributions to the completion of my dissertation:

- I am deeply grateful to my supervisor, Dr. Angela Stott, for her dedication, expertise, and exceptional guidance throughout the entire study. Her insights and constructive feedback proved invaluable in shaping the direction of my work, every step of the way. I could not have asked for a better mentor for my studies. I can honestly say that without her input, this study would not have been possible.
- I wish to express my thanks to the Faculty of Education's staff members who motivated me to finish my Masters within one year. I was part of two Masters' courses and was hesitant about finishing this project within a year, but I received motivation from the Master's administrator, Christa Duvenage, to take on the challenge. Without her support, this journey would have been even more difficult.
- I would like to extend my gratitude to the Centre for Teaching and Learning (CTL) for granting me permission to conduct research on their teaching assistants.
- I thank the UFSS Module Office for their generous contribution of time and assistance with the study, while they were managing all the teaching assistants. I would not have been able to complete this study without their compliance, especially within the given timeline. They also participated in a survey, and I am grateful for their time, support and insights added to the research findings.
- To the 'stars of the show', the teaching assistants, my sincere appreciation to all those who participated in this study. Their willingness to be observed, interviewed, and participated in the survey, provided invaluable insights and perspectives that have greatly enriched this study.
- My appreciation is extended to all my family and friends who supported me throughout this journey. Working full-time and doing two Masters proved challenging, and it was with their support, that I was able to reach the end of this journey.

- Thank you to Carol Keep for her meticulous language editing of my dissertation. Her expertise was instrumental in enhancing the academic precision and clarity of this project.
- Lastly, I wish to thank the University of the Free State for supporting their staff members' studies without the burden of tuition fees. This was highly appreciated, since it allowed me to focus only my fieldwork costs.

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ABSTRACT:

Scripted lessons serve as guides for instructors in various educational circumstances, promoting pedagogical consistency. This study explored the use of semi-scripted lessons in the context of higher education, specifically on a large module that utilised hybrid teaching methods (online and face-to-face) across two campuses. This large module employs a considerable number of teaching assistants (TAs) to teach sections of the module, despite not being specialised instructors. Using the Community of Inquiry framework as a guide to gathering empirical evidence, a pragmatic, sequential, exploratory, three-phase (quantitative-qualitative-quantitative) mixed-methods research methodology was implemented to explore the effectiveness and implications of semi-scripted lessons.

Convenience sampling was used in Phase 1 to observe 31 TAs' hybrid teaching practices across the two campuses. The four highest-scoring TAs, two per campus and one per hybrid mode were chosen as exemplary TAs to be interviewed in Phase 2. An additional TA who had been awarded the "Best Presenter of the Year' the previous year was also interviewed. Phase 3 comprised a full population survey sent to all the TAs and staff members involved in the module. The design of this survey was informed by the findings of the previous phases, and its purpose was to examine ways to improve the TA training programme. Descriptive statistics were used to analyse Phases 1 and 3 and thematic analysis for Phase 2.

It was found that semi-scripted lessons contributed to the enactment of consistent, effective teaching and cognitive presences across the hybrid classrooms. However, while the semi-script included high-order thinking activities and discussion prompts, the TAs' capacity to facilitate these were found to be lacking. Furthermore, the semi-script was found to be least effective at promoting the enactment of social presence, primarily due to TA avoidance of the scripted collaborative activities, due to time constraints. The social presence that was observed, largely arose from TA initiatives beyond the script, and these were evidenced considerably more in face-to-face than in online classes.

Findings from the third phase provide suggestions for improvements to the TA training programme: optimisation of the training objectives; extending the training to five days;

providing early access to the course material; devoting more time for TAs to practise facilitation, and receiving comprehensive feedback.

The significance of this study lies in its exploration of semi-scripted lessons in the given context by providing support for this approach, while also highlighting its limitations.

The primary limitation of this study is its context, which focused on TAs in a unique higher education setting, using semi-scripted lessons. Although this provided in-depth insights for comparable circumstances, the extent to which the findings could be generalised to other contexts would still need to be determined.

Key terms: *Cognitive presence, Cognitive load, Community of Inquiry (CoI), face-to-face teaching, hybrid teaching, Pedagogical practices, online teaching, semi-scripted lessons, social presence, teaching presence.*

GLOSSARY:

The terminology used throughout the study is defined below:

Community of Inquiry	The CoI is a framework that presents a model of online instruction emphasising the importance of three presences, namely, the social, teaching, and cognitive presences (Garrison, Anderson and Archer, 1999:88).
Blended Teaching and Learning	Blended teaching and learning is a mode of instruction that combines F2F instruction with online activities (Anthony, Kamaludin, Romli, Raffei, Phon, Abdullah and Ming, 2022:532).
Fees Must Fall Movement	This movement paved the way for South African students to have free and accessible higher education (Cini, 2019:943).
Higher Education	Higher education is the next tier in education after secondary education (high school). It can also be referred to as tertiary education and is usually offered by colleges and universities.
National Qualifications Framework	It is a comprehensive South African education framework that standardises and categorises levels of learning accomplishments to ensure that the quality of education is measured (Tias, Tongjean and Win, 2023:663).
Pedagogy	It is usually defined broadly as the art and science of teaching. It refers to the teaching techniques, methods and strategies required/used when facilitating teaching and learning (Hodges, Moore, Lockee, Trust and Bond, 2020:13).
Hybrid teaching and learning	This is an approach used where students can choose which mode of class they prefer to attend, since both sessions are the same in terms of content but presented in either online or face-to-face methods (Rahman, Wahid, Afandi, Bali and Hakim, 2019:265).
Teaching Assistants	TAs are employed students who provide support and assistance to staff or teachers, depending on their setting (Jackson, C., Sharma, Odier-Guedj and Deppeler, 2021:70).

Undergraduate Teaching Assistants	Similar to teaching assistants, undergraduate teaching assistants offer support and facilitation roles at universities (Luckie, Mancini, Abdallah, Kadouh, Ungkuldee and Hare, 2020:32).
Graduate Teaching Assistants	Graduate teaching assistants are similar to teaching assistants but hold a degree and are allowed to teach higher NQF level modules, depending on the programme (Jonnalagadda, Singh, Gogineni, Reddy and Reddy, 2022:2).
Exemplary Teaching Assistant	Exemplary teaching assistants are specific to this study and were the highest scoring evaluated teaching assistants from the first phase of empirical the data collected.
Award-winning Teaching Assistant	Similarly, within this study, an award-winning teaching assistant is a teaching assistant who was named the best in a specific category by their employers. This was not determined by this study.
Full Population Survey	A full population survey is a sampling technique that aims to include all individuals within a specified population to complete a survey (Scofield, 2006:27).
Fully scripted Lessons	A fully scripted lesson can be seen as a verbatim oration that the educator will use as their teaching method (Piper, Sitabkhan, Mejia and Betts, 2018:4).
Semi-scripted Lessons	This is similar to a fully scripted lesson, but it provides more flexibility, with some sections scripted, while other sections are devoted to activities (Piper, Sitabkhan, Mejia and Betts, 2018:4).

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Steps have been taken to protect the anonymity of the teaching assistants involved in Phase 2's interviews. Interviewee 1, Interviewee 2, etc., were used in the place of their names to protect their privacy.

Ellipses (…) found in Chapter 5 indicate sections omitted or extract continuation of verbatim phrases from the data.

Unless otherwise indicated, all quotations are the teaching assistants' exact wording.

Clickable cross-references (see …) can be found in the majority of the chapters within this dissertation.

LIST OF ABBREVIATIONS:

Abbreviation	*Expanded*
BFN	Bloemfontein Campus
CLT	Cognitive Learning Theory
CoI	Community of Inquiry
CP	Cognitive Presence
F2F	Face-to-Face
FMFM	Fees Must Fall Movement
HE	Higher Education
HEI	Higher Education Institution
NSFAS	National Student Financial Aid Scheme
QQ	Qwa-Qwa campus
SA	South Africa
SP	Social Presence
TAs	Teaching Assistants
TP	Teaching Presence
UFSS	University of the Free State Skills

1. CHAPTER 1: ORIENTATION OF THE STUDY

1.1 INTRODUCTION

In the rapidly evolving landscape of Higher Education (HE) and with the increasing use of hybrid teaching and learning methods, Teaching Assistants (TAs) play a vital role within these environments (Dziuban, Graham, Moskal, Norberg and Sicilia, 2018:1). This study sets out on an exploratory journey to evaluate the effectiveness of the pedagogical practices used by TAs in hybrid classes that use semi-scripted lessons. To measure the effectiveness of the pedagogical practice, the Community of Inquiry (CoI) framework was implemented. The UFSS1504/1522 module (see Chapter 4.2), situated within the context of the University of the Free State (UFS), aims to equip a large cohort of students with general study and employability skills. This dissertation seeks to evaluate the path towards a more cohesive, inclusive and effective educational experience by evaluating existing paradigms and venturing into uncharted territories examining higher education, semi-scripted hybrid classes enacted by TAs.

This chapter provides a background to this study; the rationale for endeavouring this research project; the problem statement and research interest; the research questions, aims and objectives; the significance of this study; the theoretical framework, and the methods used to answer the main research question.

1.2 BACKGROUND INFORMATION

The HE spaces in South Africa (SA) have undergone substantial changes recently, with a growing importance placed on using technology to enhance pedagogical practices, particularly with the shift towards hybrid modes of teaching and learning. Students are thus allowed to choose whether they wish to attend face-to-face (F2F), online (AlNajdi, 2014:214; Rahman, Wahid, Afandi, Balie and Hakim, 2019:265), or more recently, watch asynchronous videos on their Learning Management System (LMS). The University of the Free State (UFS), where this study was conducted, uses Blackboard as their LMS. The shift towards using hybrid teaching modes was driven by one main factor in the South African context and, arguably, on a global scale: the COVID-19 pandemic. Albeit exhausted in the literature, the COVID-19 pandemic affected all education systems on a global scale that relied on F2F instruction (Hwang and Höllerer, 2020:295-297). Furthermore, the lockdown restrictions caused all

education systems to shift to online-only instruction, but this sudden shift produced many challenges for both students and educators (Alduaimi, Abdeldayem, Keir and Al-Sanjary, 2021:41-42). The most notable challenges were access to internet and appropriate devices. Although SA institutions worked hard to accommodate students with these challenges, many students still struggled to adapt to the sudden shift to remote teaching and learning, particularly those of disadvantaged backgrounds (Ngoatle, Mothiba and Modikana, 2022:8). In other words, students were unable to participate in online classes as they did not have reliable internet access, enough data, or appropriate devices to attend these classes (Dube, 2020:139).

Another prevalent challenge during the shift toward online-only teaching and learning was the need for online teaching skills. Regardless of beliefs and opinions, teaching online and F2F have unique content delivery methods. In the case of the abrupt pause of F2F classes and the shift to online only, educators lacked the skills to teach online sessions effectively. One reason was that many educators needed training to use their respective LMSs effectively. This resulted in these educators needing help adapting to an online-only pedagogy method (Lemoine and Richardson, 2020:44).

Despite these challenges, several opportunities were recognised later with the next shift towards a hybrid mode of instruction, which paved the way for more effective pedagogical practices in HE. This was due to educators having more flexibility and personalised learning experiences, allowing remote online learning to become more engaging and effective (Dumulescu, Pop-Păcurar and Necula, 2021:5).

Furthermore, there lies a deeper contextual background regarding the students of SA. Even though there were challenges and opportunities with the shift towards online-only and then hybrid learning, most students were still influenced by their socioeconomic backgrounds. Back in 2015, the Fees Must Fall Movement (FMFM) was a student-led protest that called for decolonised and free education in SA (Cini, 2019:949). This movement highlighted systemic inequalities and that the majority of South Africans could not pay the high cost of HEIs (Cini, 2019:954). When the FMFM concluded in 2017, it paved the way for thousands of students to apply and enrol successfully in Higher Education Institutions (HEIs). This was done through the National Student Financial Aid Scheme (NSFAS) grants that grew significantly in

student support after the FMFM (Ntombana Gwala and Sibanda, 2023:9). Yet, despite the positive outcomes of thousands of students being able to study at HEIs, one challenge was certain; most of these students, funded to study, were from disadvantaged backgrounds and had very limited computer literacy skills (Mpungose, 2020:2; Mzangwa, 2019:11). In fact, a study done by Combrinck and Mtsatse (2019:5) mentioned that there was a decline in computers per school from the year 2011 to 2016. African language schools dropped more than half of available classroom computers, and English or Afrikaans schools dropped more than three times. This means that the chances were higher for learners transitioning from secondary to tertiary schools to struggle using computers in their first year of studies.

According to Kraak (2018:14) the main difference between secondary schools and tertiary institutions are that the latter is more focused on technical and applied vocational training. The manner in which these differences are taught is not what most learners at secondary level are used to. Furthermore, Sikhwari and Pillay (2012:608) argued that tertiary institutions should assist students to develop study skills in order to lessen the large fail rate for most first year students in SA universities.

In response to students struggling to transition effectively from secondary to tertiary level due to their limited computer literacy and study skills, the UFS took inclusive action. The UFS101 (now UFSS1504/1522), is a large-enrolment, first-year general study and employability skills module that every first-year student must take to obtain their degree. To meet the needs of these disadvantaged students, the team behind this module adapted its curriculum to equip them with the necessary skills, such as study, financial, computer literacy, and communication skills. The name of the module also changed later on due to the new policy of module codes at the UFS, from UFS101 to UFSS1504/1522. The module name stands for University of the Free State Skills (UFSS), first-year module: (1) National Qualifications Framework (NQF) level 5 (5), year module (0), and 12 credit-bearing modules (4). The UFSS1522 is a second-semester module for students exempted from the first semester's content because they completed another module that had similar outcomes. Currently, seven permanent staff members, four assistants, and nearly a hundred TAs successfully facilitate UFSS1504/1522 (hereafter, UFSS module) annually. The TAs

responsibilities predominantly are to teach F2F and online classes and mark the 9000+ students' assignments.

1.3 RATIONALE

TAs within this module hold a pivotal role, not only in teaching and learning but also in marking and other administrative tasks. My motivation for this study not only stems from having first-hand experience as a TA in the UFSS module and from my outstanding performance, which rewarded me the best newcomer TA of 2021 but also from working for the UFSS Module Office subsequent to this in 2022.

My personal experience as the newcomer TA of 2021 and my work experience within the module office highlighted the significance of the pedagogical practices enacted within this module. This enabled me to understand how TAs are trained and how they teach during summer and winter schools. However, since I have not been a TA for more than two years, biases resulting from working with the UFSS Module Office are reduced. Thus, the decision to embark on a Master's degree in the higher education field and to focus on the pedagogical practices of TAs within a module that I already knew well and how much of an impact TAs wield on student engagement, was initiated.

Furthermore, while there is research on TAs in general and in various contexts, a study on HE TAs using scripted-lessons in hybrid teaching contexts, could hopefully contribute to research. By providing insights adapted to the UFSS module's context, this research ultimately aims to advance pedagogical discourse. As a result, it is aimed at benefiting TAs' professional development and pedagogical practices, as well as suggesting generic principles from this, which may be of value more broadly in Higher Education.

1.4 PROBLEM STATEMENT

In response to the COVID-19 pandemic, HEIs in South Africa used remote-only teaching methods in the years 2020 and 2021, then shifted to the hybrid approach of teaching and learning in the year 2022 (Domina, Renzulli, Murray, Garza and Perez, 2021:10). Although this approach of pedagogy has allowed for greater flexibility, it has also presented numerous difficulties. For instance, unreliable internet connectivity and access to appropriate devices hindered students from effectively attending classes or

completing their assignments (Mukuna and Aloka, 2020:136; Mpungose, 2020:2). Another area for improvement concerns the absence of F2F interaction, which is an important hurdle, since social cues and personal interaction are diminished in an online class (Baber, 2020:165). Some of the advantages taken from the pandemic's education pedagogies aided the advancement of digital skills in students (Aruleba, Jere and Matarirano, 2022:172), as well as new and innovative teaching and learning approaches that were implemented (Stecula and Wolnaik, 2022:9). Therefore, it was necessary to study the current pedagogical practices of the TAs of the UFSS module within the context of the recent shift to hybrid education.

A study done by Drewelow (2013:1006) explored the pedagogical practices enacted by TAs in a foreign language hybrid course at the University of Alabama. Drewelow mentioned that there is an assumption that these TAs must have the technological skills to teach online classes effectively (Drewelow, 2013:1009). To compensate for any lack of technological skills, these TAs received extensive training beforehand (Drewelow, 2013:1007, 1015). Therefore, for a hybrid teaching programme to expect effective pedagogical practices from their TAs, it is necessary to train them specifically to teach in both hybrid modalities.

The TAs facilitating the UFSS classes have a unique viewpoint on the hybrid form of instruction, as the course material they use is in the form of a semi-scripted lesson. However, most studies on TAs surrounding hybrid pedagogical practices are outside of South Africa. In addition, there are even fewer studies on the use of semi-scripted lessons that TAs use in hybrid classrooms at HEIs. Therefore, by investigating these experiences of the UFSS TAs in hybrid classrooms at a specific South African university, this study aims to contribute to this knowledge gap.

To understand the challenges and to measure the pedagogical effectiveness of the UFSS TAs in this study, a robust theoretical framework had to be used. After conducting research and comparisons, the CoI framework was chosen. This framework has been used in hundreds of studies since its establishment in 2000 (Garrison, Anderson and Archer, 2010:5). It is specifically designed to describe the components required for successful and effective online learning experiences in higher education (Catellanos-Reyes, 2020:556). These components are known as Teaching

Presence (TP), Cognitive Presence (CP), and Social Presence (SP) (Arbaugh, Bangert and Cleveland-Innes, 2010:38). In the most recent studies regarding the CoI model, Wilson and Berge (2023:159) argue that the CoI framework, over the past 20 years, "has become the most widely used theoretical framework in e-learning". Therefore, the succinct nature of this framework, together with its wide use and effectiveness in measuring and guiding quality learning and teaching within blended contexts (Castellanos-Reyes, 2020:557; Crites, Berry, Hall, Kay, Khalil and Hurtubise, 2020:4), made it an appropriate choice for this study. In this study, this framework was used to inform the design of the instruments used to observe the TAs' teaching, from which exemplary TAs were determined as being the highest performing on this.

1.5 RESEARCH QUESTIONS

1.5.1 MAIN RESEARCH QUESTION

What pedagogical practices are effective for teaching assistants of a large-enrolment, general-skill university module to use in a hybrid teaching and learning environment?

1.5.2 SUBSIDIARY RESEARCH QUESTIONS

1. What are the local and global perspectives of the role of teaching assistants in higher education; what comprises their effectiveness, and how can this be measured? (Literature Review)
2. How do the current teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes? (Empirical research question)
3. How do exemplary teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes? (Empirical research question)
4. How can teaching assistants be trained to be more effective in enhancing their proficiency in enacting the components of the Community of Inquiry framework for online and face-to-face teaching modes? (Empirical research question)

1.6 AIMS AND OBJECTIVES

1.6.1 AIM

This study aims to explore the effective pedagogical practices used by TAs of a large-enrolment general-skill university module in a hybrid mode, guided by the Community of Inquiry framework.

1.6.2 OBJECTIVES

1. To explore local and global perspectives of the role of teaching assistants in higher education; to identify factors contributing to their effectiveness and how this can be measured.
2. To investigate how the current teaching assistants of this module enact each of the CoI components in online and face-to-face teaching modes.
3. To examine the strategies used by exemplary teaching assistants of this module in adjusting their implementation of the CoI components in online and face-to-face teaching modes.
4. To identify the best ways to train teaching assistants to be more effective in enacting the components of the CoI framework for online and face-to-face teaching modes.

1.7 SIGNIFICANCE OF THE STUDY

The significance of this study lies in its exploration of semi-scripted lessons used by TAs with the UFSS module, marking a significant contribution to hybrid teaching pedagogies in HE. This method of instruction takes into consideration the necessity for consistent teaching quality, while accounting for the various methods that students engage in, in-person and in online platforms. This study sheds important light on how TAs implement these semi-scripted lessons, offering valuable insights into maintaining a balance between consistency, flexibility and adaptability in instruction. The results provide a conceptual framework for future developments in scripted teaching approaches, which may help educators and decision-makers improve instructional designs for heterogeneous, hybridised learning settings.

1.8 THEORETICAL FRAMEWORK

As delineated in the previous sections above, the CoI model is a widely used and recognised framework that measures key elements of successful and effective blended learning pedagogical practices (Castellanos-Reyes, 2020:558). These elements are known as the three overlapping presences: Social Presence (SP), Cognitive Presence (CP), and Teaching Presence (TP) (Akyol, Vaughan and Garrison, 2011:232). SP is the degree to which students feel comfortable and connected to the educator and their peers (Garrison, Anderson and Archer, 2010:7), while CP is where the constructivist theory comes into play, with students constructing knowledge, using critical thinking to understand content, engaging with high-quality resources, and collaborative inquiry (Garrison, Anderson and Archer, 2010:6). TP refers to the actual facilitation and delivery of the social and cognitive presences to realise the educational outcomes set out in the session (Garrison, Anderson and Archer, 2010:7).

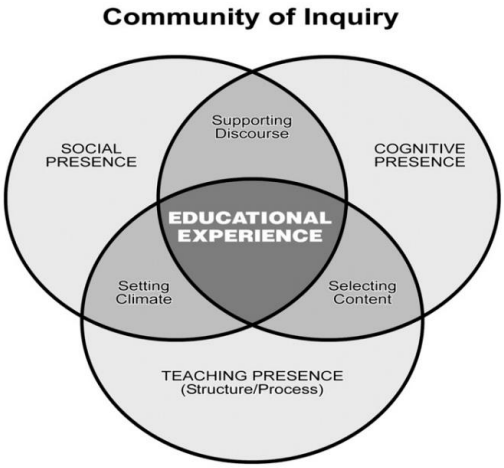

Figure 1: Community of Inquiry framework (Garrison et al., 2000:89)

The CoI model is grounded within several theoretical perspectives, such as constructivism, social constructivism, and the zone of proximal development.

- Constructivist theories are theories wherewith students can actively construct their understanding from the learning process by interpreting and integrating prior knowledge and previously acquired experiences with new information (Muhajirah, 2020:39).
- Social constructivism permits individuals to understand reality through social interactions. Teaching and learning are facilitated through collaboration, such

as pair or group work, enabling students to gain more knowledge through social interactions (Polly and Byker, 2020:3).

- The zone of proximal development is a concept with a larger framework which Vygotsky proposes, refers to how a student cannot complete a task independently and requires the assistance of a more knowledgeable person to accomplish the task (Polly and Byker, 2020:3).

Many studies applied the framework for years after the CoI model's inception. Empirical research demonstrated that the CoI model accurately measures the effectiveness of blended learning modes (Castellanos-Reyes, 2020:557). It was also found that the CoI model can predict student satisfaction, engagement, and academic performance in a blended learning course (Castellanos-Reyes, 2020:558).

An additional theoretical lens was used on top of the main CoI theoretical framework, namely, the Cognitive Load Theory (CLT). This theory posits that students' working memory can hold only a certain amount of information per session; hence, instructional strategies need to be developed to manage this load efficiently (Sweller, 1988:260). There are three fundamental cognitive loads that can be conveyed in a classroom, namely, the intrinsic, extraneous, and germane loads. The inherent difficulty of a topic or task and the extent of the student's prior knowledge determines an intrinsic load. An extraneous load, on the other hand, refers to the unnecessary cognitive effort projected upon students that is outside their control. Lastly, the germane load contributes towards the construction of new information by integrating prior and new knowledge, which aids in building schemas (Lai, Chen and Lee, 2019:235). In this study, the interplay of these loads was considered during the analysis process to aid the interpretation of effective pedagogical practices during the use of scripted lessons.

1.9 BRIEF RESEARCH METHODOLOGY

1.9.1 OVERVIEW OF RESEARCH DESIGN

A pragmatic, multi-level triangulation mixed-methods research design combines different levels of quantitative and qualitative data collection and analysis methods to comprehensively understand a research problem (Johnson and Onwuegbuzie, 2004:16-17; Creswell and Creswell, 2018:304-305). This type of design is beneficial for this study, as it allows the examination of the perspectives and practices of the TAs

in the hybrid classroom, flexibly and responsively. Three methodological phases were used, corresponding to the three empirical research sub-questions. These diverse methodological phases have improved the credibility of the research findings, since multiple methods will be applied to triangulate the findings and mitigate potential biases (Maree and Nieuwenhuis, 2019:142).

1.9.2 PARTICIPANTS

A multi-phase sampling strategy was employed for this study. In the first phase, the aim was to use simple random sampling (Bhardwaj, 2019:159), which would have involved randomly observing TAs during the winter school on both the BFN and QQ campuses. However, to comply with ethical standards, TAs first had to give their consent. Thus, Phase 1 was adapted to a convenience sampling technique, where TAs were observed only when they had given their consent. It is important to note that even though the sampling technique changed to convenience sampling, the sample stayed only within the UFSS TA population. Phase 2 applied a purposive sampling technique where one exemplary TA was chosen from Phase 1 from each of the hybrid modes and per campus (4), and one TA from the previous year who was awarded by the UFSS Module Office the ‘Best Presenter of 2022’ was interviewed (Creswell and Creswell, 2018:304; Neuman, 2018:164-166; Creswell and Creswell, 2018:212). A full population survey technique was used in Phase 3 (Bell, Bryman and Harley, 2022:90: Scofield, 2006:27), where a survey was sent out to all the TAs, as well as all the staff members of the UFSS Module Office who attended or facilitated the TA training programme.

1.9.3 DATA COLLECTION METHODS

Data collection was aligned with the three phases of this study. Phase 1 involved observations that used Likert Scale evaluation forms. The creation of this evaluation form was guided by the CoI framework in correspondence with the research question it was created to answer. In addition, the staff of the UFSS Module Office validated this evaluation form through in-person meetings before using it on the TAs. The evaluation form was designed on Microsoft Forms; however, a contingency paper-based form was also printed in the case of internet connectivity issues. The number

of TAs observed was 31 across both campuses, 13 at the Bloemfontein (BFN) campus and 18 at the Qwa-Qwa (QQ) campus. Phase 2 involved qualitative data collection through semi-structured interviews, which explored the effective practices of the TAs identified from Phase 1 as being exemplary. The number of TAs that were interviewed was five, two from the BFN campus, two from the QwaQwa campus, and an award-winning TA from the previous year. Phase 3 involved collecting quantitative data using Microsoft Forms in the form of a survey, which the TAs completed from Phase 1 (15), the UFSS module staff affiliated with the TA training (13), and the remainder of the TAs (17). The three groups of participants (45) and the use of multiple phases allowed the results to be triangulated for the further reliability and credibility of this study (Creswell and Creswell, 2018:41).

1.9.4 DATA ANALYSIS

Data analysis for this study involved both the quantitative and qualitative methods. The observation and survey data were analysed using descriptive statistics tabulated and graphed in Microsoft Excel to identify response patterns and trends. These descriptive statistics included calculating the frequencies and averages of the responses, regarding each component of the CoI framework. Furthermore, the evaluation forms captured from Phase 1 and the survey forms from Phase 3, had space for open-ended responses.

The qualitative data collected from the interviews were analysed using thematic analysis (Braun and Clarke, 2018:107), to identify response patterns and themes. Thematic analysis is an inductive approach to analysing qualitative data that involves identifying recurrent patterns, themes, or categories. The components of the CoI framework were used to guide the initial deductive coding process. Inductive coding was also used to identify additional themes.

The data were interpreted considering the research questions and the study's theoretical framework. The observation and survey results were presented in tables, figures, and graphs, accompanied by an explanation. The interview results were presented in narrative format, highlighting the key themes and patterns that emerged from the data. The data of all three Phases are presented in Chapter 5, followed by interpretations and discussions in Chapter 6.

1.9.5 ETHICAL CONSIDERATIONS

In conducting this study, several ethical considerations were applied to protect the University's, staff members, and the researcher's rights and well-being.

- Informed consent was the primary ethical consideration. All participants were informed about the study's purpose and procedures, and allowed participants to opt out without negative consequences (Govil, 2013:18-19).
- Furthermore, confidentiality and anonymity were maintained throughout the study to protect the privacy of all participants (Govil, 2013:18).
- The study was designed to minimise potential harm by ensuring that the questions and activities were appropriate for participants and that any sensitive information was handled confidentially and appropriately (Govil, 2013:18).
- The use of TAs from the Centre for Teaching and Learning (CTL) in this study was signed and approved by the senior director of CTL.
- Lastly, this study applied through the Research Information Management System (RIMS) that was reviewed and accepted by the research committee of the UFS. The ethical clearance number is UFS-HSD2023/0504.

1.10 LAYOUT OF THIS DISSERTATION

This study consists of seven chapters.

Chapter 1 provides the scope of the entire study, including the background information of the project; the details of the problem statement; the rationale for taking on this study; research questions along with the aims and objectives that are aligned with the research questions, and the methodology which entails a brief plan and method on how the study unfolds.

Chapter 2 comprises the literature review, detailing the following criteria: pedagogical practices and what makes them effective; higher education context of South Africa; blended learning mode and hybrid learning mode along with their differences; Fees Must Fall Movement in the South African context and its significance; teaching assistants' roles and responsibilities across the world, and lastly, the conceptual framework – Community of Inquiry framework.

Chapter 3 details the plans and methods used in conducting this study, i.e., the methodology. It includes the following: the research approach; research design; sampling methods; data collection and data analysis of the findings; ethical considerations on how the participants and the researcher were protected, and lastly, the limitations and delimitations of this study.

Before the findings are presented, more context is given surrounding the UFSS1504/1522 module and its office. Thus, **Chapter 4** provides a detailed account of the background information of the module; the purpose; the staff members; and the pedagogical practices. This allows the reader to be prepared to understand the findings with the contextual knowledge acquired from the 4th chapter.

Chapter 5 presents and engages with the findings through descriptive analysis for phases 1 and 3, and thematic analysis for phase 2 in report format, respectively.

A fuller grasp of the findings from Chapter 5's interpretations and implications is discussed in **Chapter 6**.

Lastly, **Chapter 7** concludes this study with its findings and reflects on its limitations and provides recommendations for further research on this topic.

2. CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This literature review aims to critically evaluate the literature on effective pedagogical practices for teaching assistants in a hybrid teaching and learning environment, with a particular focus on local and global perspectives in higher education. First, pedagogy will be defined, and different pedagogy practices will be explored. Second, the reason why some schools or education institutions use scripted lessons will be explained. Third, higher education and the instruction modes will be investigated and compared, along with the reasons for shifting to a hybrid mode of teaching and learning. Fourth, background information on the South African context aligned with the Fees Must Fall movement (Cini, 2019:942) will be discussed. Fifth, the literature review will examine the roles and responsibilities of TAs across different countries and explore why hybrid teaching and learning environments are better suited to universities' needs than other models (Singh, Steele and Singh, 2021:141). Lastly, the theoretical framework of this study will be defined, as well as justification for its appropriateness for this study.

2.2 PEDAGOGICAL PRACTICES

The term pedagogy originated in the ancient Greek language as *paid agogus*, with the literal meaning of *leader of children* (Shah, 2021:6). The Latin word for pedagogy had a similar meaning of “oversight of a child” (7). Later on, in the 1500s, pedagogy adopted a meaning that resembles what is currently used to this day, describing the associations and engagements between pupils, teachers and the teaching and learning environment. Opposed to the conventional teaching of the past, pedagogical practices were challenged by Paulo Freire, a Brazilian scholar who wrote the book *Pedagogy of the Oppressed* in the 1970s. In tandem with Vygotsky’s work, his book sought to rethink how children can be taught more effectively by using different methods to those used in the past. In fact, Paulo Freire is also known as one of the founders of the term *critical pedagogy* (Giroux, 2010:715), discussed below. Given the nuances of the term *pedagogy*, the simplified definition of pedagogy is the art or science of teaching (Shah, 2021:8).

2.2.1 CRITICAL PEDAGOGY

Although Paulo Freire is believed to be one of the founders of the term critical pedagogy, he never used the term in his book. Nonetheless, critical thinking was at the forefront of his arguments and at the same time, he challenged the traditional pedagogical practices that hindered students from reaching their full potential, deeming these pedagogical practices oppressive in nature (Freire, 1970:73). Therefore, while he did not specifically use the term critical pedagogy, the ideas he generated through his work by other scholars, such as Henry Giroux, which had an influence to such an extent that it expanded Freire's work into the field now known as critical pedagogy (Maisuria, Evans, Del Fierro, Jackson, Macrine and Rimmer, 2020: 432). Having established the origin of critical pedagogy it becomes essential to understand what this term means, particularly within the scope of this study.

2.2.2 WHAT IS CRITICAL PEDAGOGY?

It is an educational approach that encourages students to develop critical thinking skills and actively contribute to their learning process (Giroux, 2010:715). This is done by challenging the traditional forms of educational practices based on authoritarianism, where teachers transmit information. At the same time, the learners were allowed only to listen, and meaningful discussions were not permitted. Therefore, critical pedagogy encourages educators and students to engage in a dialogue based on mutual respect and critical reflection (Freire, 1970:80; Giroux, 2010:715). The main idea that critical pedagogy tries to achieve is to liberate the educational process by challenging existing power structures perpetuating social and economic inequalities (Freire, 1970:58; Giroux, 2010:715). Critical pedagogy creates the opportunity that provides students and teachers with the tools they need to become agents of change, wherever they are situated (Giroux, 2010:715). It is thus essential to note that the emphasis is not just on education but also on social justice, human rights, and democracy. For an educationist to practise critical pedagogy, they need to rely on the following key principles and practices: an emphasis on problem-solving skills, collaboration, and experiential learning. Students are encouraged to ask questions, challenge assumptions, and engage in critical thinking conversations about the world around them (Giroux, 2010:716). Building on the foundational tenets of critical pedagogy, we now turn to what makes pedagogy effective within a broader scope in education.

2.2.3 WHAT MAKES PEDAGOGICAL PRACTICES EFFECTIVE?

The complexity and diversity of education institutions across the globe render an optimal, standardised pedagogical approach unattainable, leaving educators without a one-size-fits-all teaching method. Teaching different subjects in different schools, requires different teaching strategies. It can be argued that when one brings in the complexities of the disadvantaged rural areas, disabilities, learning disabilities, and cultural preferences, then it is impossible to determine which pedagogical approach is best for all educators (Pashler, McDaniel, Rohrer and Bjork, 2019:105). Given the complex nature of good pedagogy, it is unsurprising that many educators revert to the simpler traditional teaching methods (see 2.4). This is because applying effective teaching practices can be too daunting for educators who experience the abovementioned complexities. It is thus difficult to narrow down effective pedagogical practices into one-size-fits-all teaching methods to be applied in every teaching environment. To alleviate this challenge, educators should focus on understanding their students' individual needs and the specific cultural and socioeconomic context in which they teach. By doing so, they can tailor their pedagogical practices to suit the unique needs of their students and create a more inclusive and effective learning environment, as outlined by the White Paper on Education and Training (White Paper 6 of 2001) (RSA DoE, 2001:5-10). Furthermore, ongoing professional development and collaboration with other educators can help educators stay up to date with the latest research and best practices in teaching, while also providing a support network to overcome the challenges that arise in the classroom. By taking a learning-centred and adaptable approach to pedagogy, educators can meet the needs of their students and promote a more equitable and effective education system (du Plessis, 2020:1).

Although the CoI model is used to implement design and teaching, a learning theory to understand how individuals learn is crucial. Such a learning theory, that has been tested thoroughly to develop the enactment of effective pedagogical practices is the Cognitive Load Theory (CLT). The CLT, developed by John Sweller, focuses on enhancing the working memory capacity and ways that instructional design optimises intellectual performance (Sweller, 1988:260; Plass and Kalyuga, 219:341). According to the CLT, effective instructional design promotes schema acquisition and eventually strengthens problem-solving abilities and knowledge retention (Sweller, 1988:261).

The CLT presents three types of cognitive load: Intrinsic load, extraneous load, and germane load (Lai, Chen and Lee, 2019:235; Leahy and Sweller, 2016:108).

Intrinsic load:

This refers to the inherent difficulty associated with a certain topic or task. The nature of the content and the student's prior knowledge will determine the extent of the cognitive load. The natural difficulty of a topic can be managed through instructional design to support the cognitive load. This includes but is not limited to, scaffolded learning by building on prior knowledge, splitting the content into smaller portions, chunking information, or the use of multimedia (Sweller, 1994:299; Lai et al., 2019:235). An example of the intrinsic load is advanced mathematics, with its interconnectedness of concepts and equations which requires a large amount of prior knowledge to process it.

Extraneous load:

This refers to the load imposed on the students by the manner in which the topic or task is presented to them, rather than the content itself. Extraneous load can be increased by poorly constructed course materials or by an educator who teaches only orally. The purpose of instructional design is to reduce this type of load so that students can concentrate on the actual content (Sweller, Van Merrienboer and Paas, 1998: 259). An example of extraneous load is the use of too much text within the presentation slides or distracting animations that do not link to the topic.

Germane load:

This refers to the cognitive load that is devoted to schema processing. Schemas are mental structures used to organise and store information. Unlike extraneous load, which should be reduced, the goal is to optimise germane load through effective instructional design. This means that the content presented is supported by activities that will assist students in internalising and practising the theory and applying it in context. This not only creates a deeper and more meaningful learning experience but also manages the cognitive load of the information received by the students (Paas, Renkl and Sweller, 2003:2). An example of this load is asking students to explain the concept in their own words – self-explanation. Mind mapping exercises that allow

students to synthesise and analyse content are also useful. Allowing students to teach the newly taught concept to a peer will reinforce their understanding by thinking in different ways to explain the concept.

In summary, intrinsic load is related to the content's inherent difficulty. Extraneous load is the difficulty introduced by the method in which the content is presented. Germane load is the mental effort required to comprehend and internalise the content fully. In educational settings, the goal is to regulate and equalise these loads. Learners might find it difficult to process information if the total cognitive load is too high (due to high intrinsic and extraneous loads), rendering learning inefficient or unsuccessful. Optimising germane load, on the other hand, can improve learning outcomes and compensate for the inherent and external difficulties presented by the other two loads.

2.3 SCRIPTED LESSONS

Scripted teachings have emerged as a source of contention among educators, administrators, and legislators in the ever-changing educational landscape. Scripted lessons are highly structured educational plans that provide exact instructions and the method and timing of how they should be delivered (Ede, 2006:30). Scripted lessons can be fully scripted or semi-scripted. Full scripting essentially entails that the instructor will verbalise the planned lesson verbatim. A semi-scripted lesson is not fully scripted and provides some sections that are scripted, while other sections are for activities (Piper, Sitabkhan, Mejia and Betts, 2018:4; Appendix 7.4). Some scholars argue that while this method of teaching and learning is streamlined and effective (Piper et al., 2018:1), others argue that it stifles teacher creativity and innovation and is more difficult to enact in an inclusive teaching environment (Parks and Bridges-Rhoads, 2012:310; Fitz and Nikolaidis, 2020:198).

If there are some controversies surrounding scripted lessons, why then use them? Some scholars elicit three reasons. The first and probably the main reason is that schools and educational institutions using scripted lessons want to standardise teaching and curricula across classrooms and districts (Fitz and Nikolaidis, 2020:196). Applying this method will ensure that all students receive consistent lessons, regardless of the teacher's specific abilities or experience. The second reason is accountability. Scripted lessons enable administrators or coordinators to hold teachers

accountable for their performance. In other words, the scripted lessons are a benchmark against which teaching effectiveness can be measured (Jimenez, Lo and Saunders, 2014:232). The third reason is the ease of implementation. Scripted lessons have been set up to provide a ready-made structure of the class sequence that may be applied with little prior training (Jimenez, Lo and Saunders, 2014:237). Thus, the use of scripted lessons, regardless of whether it is at schools or higher education, can be seen as an effective alternative to employing certified educators.

As with any method, there will be advantages and disadvantages when using them, and the same applies to scripted lessons. In Table 1 below, different sources were analysed to provide both the pros and cons of scripted lessons.

Table 1: Pros and Cons of Scripted Lessons

Pros of Scripted Lessons	Cons of Scripted Lessons
Consistency: Scripted lessons ensure that instructional content is consistent across multiple classrooms, making management and assessment of educational outcomes easier (Fitz and Nikolaidis, 2020:204).	**Lack of Flexibility**: Scripted lessons frequently fail to account for individual students' various learning needs and paces, making differentiated instruction difficult (Alvarado, 2003:371).
Resource Efficiency: Because scripted lessons save teachers time on lesson planning, they can focus more on student involvement and other tasks (Fitz and Nikolaidis, 2020:204).	**Teacher Autonomy**: The tight framework of scheduled lessons can impair teacher creativity and professional judgement, potentially leading to job dissatisfaction (Piper, Sitabkhan, Mejia and Betts, 2018:1).
Data-Driven: Many scripted lessons are built with educational research and best practices in mind, ensuring that the teaching approaches used are empirically supported (Fitz and Nikolaidis, 2020: 205).	**Concerns about Quality**: If the quality of the script is designed in a poor manner, it will result in poor teaching and learning. These offset the benefits of standardisation (Ahmed, 2023:634).

In summary, scripted lessons present a complex subject with valid arguments on both sides. While they promise standardisation and ease of implementation, they do so at the expense of flexibility, teacher autonomy and creativity. As educational institutions explore implementing scripted classes, it is critical to examine the merits and cons thoroughly. While scripted lessons are structured, the pedagogical frameworks

employed in higher education encompass a broader spectrum of approaches, which will be discussed in the next section.

2.4 HIGHER EDUCATION

A higher education institution (HEI) is an establishment that offers tertiary education comprising colleges and universities. These institutions provide undergraduate and postgraduate education in various degree programmes, ranging from the social sciences, medicine, education, and pathology, to the humanities, and engineering, etc. Teaching these programmes requires a vast number of staff members, consisting of academic staff, support staff and administrative staff.

It is common knowledge that academic staff members in HEIs are responsible for teaching, research, and scholarship and typically hold Masters and Doctoral degrees in their respective fields. They develop and deliver curricula, assess student performance, provide feedback, and implement any improvements based on the feedback. Support staff members provide various services to academic staff and students, including computer services, library services, Information Communication and Technology (ICT) services, academic support staff, writing workshops, and career services. They may also provide administrative support to academic departments and the institution. Administrative staff are responsible for managing the institution's finances and human resources, ensuring HEIs comply with all applicable laws and regulations. Lastly, each of these collective staff groups above can employ assistants in their respective departments to reduce the workload of the staff members. These assistants can range from student and teaching assistants, to tutors, and research assistants, each with their own roles and responsibilities.

Higher education institutions employ a range of pedagogies to facilitate learning and promote student success. With the basis of pedagogy as the art and science of teaching (Shah, 2021:8), educators can use the many pedagogical approaches at their disposal. For example, here follow some contemporary pedagogical approaches in HEIs:

Active learning:

Active learning is an approach to teaching in which students actively participate in the learning process, rather than passively receiving knowledge. The premise behind active learning is that if students are actively engaged in developing their own knowledge, they will retain and understand the content much faster. Active learning is a crucial teaching strategy in contemporary classrooms because it encourages higher-order thinking abilities through exercises, such as problem-solving, group discussion, and real-world application of theory. Active learning is valuable in promoting student engagement and knowledge retention, according to research (Kovarik, Robinson and Wenzel, 2022:2).

Inquiry-based learning:

This learning instruction involves discovery, where students need to inquire through different means to obtain new information (Husni, 2020:45). This can be done through formulating questions, looking for solutions through research, acquiring fresh insights, defining new terminology, explaining new concepts, and then sharing what they have learnt with others. This improves their capacity for investigation and critical thought (Hong, Hsiao, Chen, Lu, Tai and Tsai, 2021:4).

Universal Design for Learning (UDL):

This is an educational framework that aims to accommodate the learning needs of all students, considering the variability of learners in higher education. UDL principles suggest flexible and inclusive teaching methods, such as providing multiple means of engagement, representation, and expression. Albeit effective, this is not a one-size-fits-all education approach, since it can be adjusted to meet specific student needs in teaching (Al-Azawei, Serenelli and Lundqvist, 2016:40).

Flipped classroom approach:

By offering instructional material outside of the classroom—often online—this strategy challenges conventional teaching strategies. This approach makes more time available in the classroom for interactive exercises, such as debates and real-world applications of the material. It provides advantages, such as an individualised learning pace and more student-teacher engagement. The flipped classroom technique was

found to have a favourable impact on student learning performance and satisfaction in a study by Cheng, Ritzhaupt and Antonenko (2019:794).

Lecture-based teaching:

A lecture-based teaching approach refers to a higher education setting and is usually referred to as “lecturing”. Lecture-based teaching is, in essence, the opposite of active learning, but it does have one main advantage: its efficiency in reaching a large number of students (Kay, MacDonald and DiGiuseppe, 2019:450). While lecture-based teaching has been criticised for its shortcomings in developing deep comprehension and active student participation, it continues to be a popular method, particularly in larger university settings (Kay et al., 2019:450). A study done by Derakhshan, Kruk, Mehdizadeh and Pawlak (2021:7), indicates that most students become bored easily with large online classes, due to the monotonous mode of teaching. In other words, when a lecturer simply reads the slides or explains concepts without engaging with the students in an online class, then students immediately lose interest.

Summary

The approaches mentioned above can be enacted in a blended or hybrid teaching mode. In fact, most approaches adopted in the last decade in HEIs adopted a variety of e-learning teaching platforms, which paved the way for enacting a more technological approach in the pedagogical approaches (Maphalala and Adigun, 2021:8).

Therefore, the following two sections will delineate blended and hybrid learning modes. However, one should keep in mind that all the approaches above can be implemented in either blended or hybrid modes. For example, the flipped classroom approach is well-known to work in tandem with the blended learning mode.

2.5 BLENDED LEARNING MODE

Blended learning is an approach to education that combines traditional face-to-face classroom instruction with online or digital learning activities. This approach offers students the flexibility to learn at their own pace, while also engaging with their peers and instructors in a classroom setting. Blended learning has become an increasingly

popular approach to education, due to the rise of digital technology and the need for more flexible and personalised learning experiences (Hrastinksi, 2019:565).

The concept of blended learning was first introduced in the late 1990s by education researchers Charles Graham and Randy Garrison (Hrastinksi, 2019:564). They argued that combining traditional classroom instruction with online learning could lead to improved learning outcomes and greater student engagement. Since then, the approach has been widely adopted in higher education institutions worldwide.

One common practice of blended learning is the flipped classroom approach. In this model, students are assigned digital learning materials, such as videos or online lectures, to review before class. During class time, the instructor focuses on interactive activities and discussions that allow students to apply what they learnt from the digital materials. This approach has been shown to lead to improved student engagement and learning outcomes (Huong, Huy and Ha, 2018:828).

In addition to the flipped classroom approach, there are other pedagogies commonly used in blended learning, such as project-based learning (Evanita, Afdal and Marwan, 2021:247) and inquiry-based learning (Berie, Damtie and Bogale, 2022:2). The choice of pedagogy depends on the goals of the course and the needs of the students. For example, project-based learning may be more effective for courses that require hands-on experience. In contrast, inquiry-based learning may be more suitable for courses that require critical thinking and problem-solving skills (Wale and Bishaw, 2020:10).

Blended learning is a useful approach to education that can be designed to meet the needs of various students, and combines the traditional F2F classroom approach with an online learning management system (LMS) (Cronje, 2020:120). It allows students the convenience to prepare and learn outside the classroom and then bring their knowledge back into the next class session, creating an engaging and collaborative learning environment.

2.6 HYBRID LEARNING MODE

Hybrid teaching and learning have been around for many years, but there has recently been a shift from a blended learning mode to a hybrid learning mode at universities around the globe. A prominent public institution in the U.S. participated in a study by

Miller, Risser and Griffiths (2013:9), which found that switching to a hybrid learning model enhanced academic performance and student happiness, when compared to a typical blended model. The pandemic that forced the world to stay at home in the years 2020-2021 established the proliferation of online education regardless of whether the education systems were ready or not (Mhlanga and Moloi, 2020:7; Coman, Țîru, Meseșan-Schmitz, Stanciu and Bularca, 2020:1; Singh, Steele and Singh, 2021:141). This triggered education institutions to shift to online-only teaching and learning modes during the lockdown periods in their respective countries. Hoeve and Zitter (2012:6) mentioned in their article that a large-scale change in a country's curriculum depends on a trigger, which in this case was societal changes. In Hoeve and Zitter's article, they mentioned the change from "formal, school-based learning" to "learning in the workplace" (Hoeve and Zitter, 2012:6), which was the change carried out in the Netherlands. However, in the case of online education in 2020, the trigger was not societal or in the scale of a country but through a worldwide pandemic. This led every education institution, whether equipped with the most advanced technology or in the rural areas, to adapt and change their way of practice to an online-only mode of learning to keep up with the lockdown rules and regulations.

In the early 2000s, a rapid growth of online learning transpired. Mossavar-Rahmani and Larson-Daugherty (2007:67) mentioned that integrating the Internet and college courses assisted with the design of hybrid teaching and learning. They also defined that for a course to be considered *hybrid,* "at least 50 per cent of the learning activities" were to be taught online (Mossavar-Rahmani and Larson-Daugherty, 2007:67). In other words, hybrid learning is a form of education that combines F2F instruction with online learning. This explains the continual confusion of definitions between blended learning and hybrid learning, since they were used interchangeably in the literature. According to recent studies, the definition of hybrid education is that which allows students the option to attend online or F2F of the same class (Triyason, Tassanaviboon and Kanthamanon, 2020:4). In other words, the goal of hybrid learning is to provide students with the best of both worlds: the social interaction and support of a traditional classroom, as well as the flexibility and convenience of online learning. Simply put, a student who wants to attend a hybrid class will have the option to either follow the online link or attend the class F2F, since the class will accommodate both

modes concurrently. However, another form of hybrid instruction, put simply, is the same class taught twice but not at the same time, where one is online and the other F2F, where the student still has the choice to attend their preferred method.

Like blended learning, a hybrid model can also employ a flipped classroom approach as its primary model (Cortese, Greif and Mora, 2022:1-2). This involves students watching course sessions or engaging with educational material outside of class time and attending classes to participate in activities, projects or discussions, thus reinforcing their education. The reason why this method is so effective for a hybrid environment is primarily due to how it allows pupils to interact and collaborate on varied content delivery methods alongside both teachers and peers.

Recent studies have shown that hybrid learning can be an effective way to support student learning and engagement. For example, a study by Means, Bakia, Murphy and Jones (2019:14) is a meta-analysis of 51 study effects, of which 44 found that students who participated in hybrid learning courses performed better than their peers who took traditional F2F courses. Hybrid learning has also improved student motivation and engagement, particularly for students who may struggle with traditional classroom settings (Shebab, Alokla, Alkhateeb and Alokla, 2021:2).

Although hybrid learning dates back to the early 2000s, it is now one of the most implemented learning modes since it offers the flexibility of the traditional or F2F options in learning.

2.7 COMPARISON OF BLENDED AND HYBRID LEARNING

As mentioned previously, scholars often confuse blended learning with hybrid learning because these terms have been used interchangeably in the past (Saichaie, 2020: 95). The terms blended and hybrid learning have evolved, and the distinctions between them have become clearer. Blended learning originally referred to the combination of F2F instruction with online learning. Nevertheless, as technology has advanced, it has come to include a wider range of instructional methods that integrate online and offline learning experiences (Staker and Horn, 2012:14). On the other hand, hybrid learning originally referred to a combination of online and F2F instruction in which students alternate between the two modes of learning. However, it has also come to refer to a variety of flexible learning models that combine online and offline

instruction (Bonk and Graham, 2012:477). In other words, with a hybrid mode of instruction, educators of their respective courses are teaching the same content, but just in different modes (Miller, Risser and Griffiths, 2013:9). This provides the students with the flexibility to choose whether they want to attend the F2F class or online class, based on their circumstances or preference.

The confusion between the two terms can also be attributed to the fact that they share some similarities. Both blended and hybrid learning involve the use of technology to enhance the learning experience and to provide greater flexibility for students. In addition, both approaches require a shift in instructional design and pedagogical approaches to effectively integrate technology into the learning experience (Vaughan, Cleveland-Innes and Garrison, 2013:42; Bonk and Graham, 2012:477).

However, it is important to recognise the differences between these two approaches to implement them effectively. Understanding the differences can help HEIs and educators select the appropriate approach for their specific learning goals and contexts. Blended learning is more flexible regarding the amount of F2F and online instruction and how they are combined. In contrast, hybrid learning requires a specific alternating schedule between the two modes of learning (Bonk and Graham, 2012:124).

In summary, the confusion between blended and hybrid learning can be attributed to the fact that the terms have evolved and have been used interchangeably in the past. However, understanding the differences between the two approaches is essential to the appropriate approaches for specific learning goals and contexts.

2.8 SHIFT TOWARDS HYBRID TEACHING

The COVID-19 pandemic has led to a significant shift towards hybrid learning in HEIs worldwide. This shift was largely driven by the need to maintain social distancing and reduce the risk of virus transmission. As stated by Laato, Farooq, Vilppu, Airola and Murtonen (2022:5) and Wang and Sun (2022:11), the flexibility and adaptability of hybrid learning models made them an attractive option for HEIs during the pandemic.

Furthermore, hybrid learning has been shown to offer several benefits over traditional F2F or fully online learning, including increased student engagement and satisfaction

(Sahni, 2019:5). By offering both modalities, hybrid learning provides students with the opportunity to learn at their own pace, while still receiving support and guidance from instructors.

The COVID-19 pandemic also highlighted the importance of providing students with access to high-quality digital resources and technologies. HEIs have had to invest heavily in infrastructure and equipment to support hybrid learning, including upgrading campus networks and providing laptops and tablets to students who may not have access to their own devices. Kamga (2020:570) reported that SA took on initiatives to provide learners with eLearning services. In contrast, du Plessis, Jansen van Vuuren, Simons, Frantz, Toman and Andipatin (2022:6) mentioned that students did not receive the same amount of support in comparison to learners. Both these articles argued that the attempts to assist the learners and students were less successful than intended. Kamga (2020:570) argued that even though the SA government should be commended for its initiative in developing programmes to assist learners across the country in receiving an education, he stated that some learners were not assisted at all during the pandemic, especially learners with disabilities. At the same time, du Plessis et al. (2022:6) argued that the pandemic proved that SA was “not ready for the Fourth Industrial Revolution” and that this exposed the “bigger reality…that we have been leaving students behind for decades”. This was especially seen at the start of the pandemic, with mentions of HEIs identified as being vulnerable when teaching disadvantaged students who were at home during distance learning but “were unable to engage in remote learning” (du Plessis et al., 2022:6). In addition, educators had to adapt their teaching methods and develop new skills to effectively deliver hybrid courses (Singh, Steele and Singh, 2021:143). However, even if the educators were skilled at teaching the hybrid mode, if students could not attend the class, they were deprived of educators who could effectively enact remote classes.

The COVID-19 epidemic also impacted teaching methods, causing a transition away from conventional F2F instruction and toward remote and hybrid learning environments. To account for these changes, new teaching techniques were investigated and developed. Some of these teaching methods, as can be seen in Table 2, have advantages and disadvantages when implemented. Therefore, it is

important to know these traits when deciding which teaching method is appropriate for a particular approach to ensure effective learning optimisation.

Table 2: Teaching Methods, Advantages and Disadvantages

Teaching methods		**Advantages**	**Disadvantages**
Synchronous online learning:	Synchronous online learning involves real-time communication between instructors and students, frequently through video conferencing applications, such as Zoom, Microsoft Teams, and Blackboard.	It preserves real-time communication and prompt feedback, which helps to dispel confusion and enhance comprehension (Gelles, Lord, Hoople, Chen and Mejia, 2020:2).	It may exclude students with unstable internet connections and can cause "Zoom fatigue", due to constant screen usage (Gelles et al., 2020:2).
Asynchronous online learning:	Allows students access to course materials and tasks, which they can do at their own pace within a predetermined timeframe.	It gives students flexibility and enables independent learning (Hrastinski, 2008: 52).	It may be difficult to verify whether all students are equally engaged and meeting deadlines, and students may feel isolated (Darby, 2019:21). It also lacks the elements of academic advising and other instant support services usually offered on campuses (Gelles et al., 2020:2).
Utilisation of learning management systems (LMS):	Course materials, assessments, and communication, are frequently organised using platforms, such as Canvas, Blackboard, or Google Classroom.	According to Almaiah, Al-khasawneh and Althunibat (2020:5262), these systems offer a central repository for course materials, making it simple to track students' progress, and improve communication between educators and students.	Students and teachers may experience hurdles, due to technical difficulties and navigational problems. Furthermore, it calls for dependable internet access, which not all students may have (Gelles et al., 2020:2).
Digital assessment tools:	It has been utilised to evaluate student learning in an online context through online tests, projects, and examinations.	Digital tests can offer immediate responses and support a range of question styles, including multiple-choice, short-answers, and interactive exercises (Holden, Norris and Kuhlmeier, 2021:4).	Online tests raise questions about academic honesty (Holden et al., 2021:2). Moreover, some students could experience technological issues when performing online exams (Cramp, Medlin, Lake and Sharp, 2019:6)

Following the pandemic, many institutions have decided to retain these teaching methods, particularly the usage of LMS and digital assessments, because of their effectiveness and adaptability (Setiawan, Munzil and Fitriyah, 2021:4). The extent of their use, nevertheless, frequently depends on the requirements of the course, the resources at hand, and the requirements of the students.

To conclude, the COVID-19 pandemic fast-tracked the shift towards hybrid learning in HEIs globally. However, South Africa did face many problems with students with disadvantaged backgrounds. While the transition has been challenging, it has also provided an opportunity for institutions to explore new teaching methods and technologies. This shift towards hybrid teaching and learning has highlighted the importance of flexibility and adaptability in higher education. With the pandemic in the past, hybrid learning will likely continue to evolve into an increasingly important component of the higher education landscape that will accommodate more students.

2.9 SOUTH AFRICAN CONTEXT

In South Africa, the higher education sector faces challenges related to access, equity, and quality. The Fees Must Fall movement in 2015 highlighted the urgent need to address these issues and improve the higher education system (Griffiths, 2019:2). The adoption of hybrid teaching and learning environments could provide a solution to some of these challenges and increase access to quality education.

2.9.1 FEES MUST FALL MOVEMENT

The #FeesMustFall movement was a student-led protest that occurred in South Africa in 2015, with subsequent waves of protests in 2016 and 2017. The movement responded to the rising cost of higher education and the inaccessibility of education to many students, particularly those from disadvantaged backgrounds. The movement also called for the decolonisation of higher education in South Africa, advocating an education system that reflected and respected African cultures and ways of knowing (Griffiths, 2019:2; Mavunga, 2019:82).

The movement highlighted several challenges in the South African higher education system, including the lack of financial support for disadvantaged students, inadequate facilities and resources, and the need for more diverse and representative faculties

and curricula. The protests were also a reaction to the perceived slow pace of transformation in higher education since the end of apartheid in 1994 (Griffiths, 2019: 2).

In response to the movement, the South African government increased funding for higher education, introduced fee-free education for some students, and established a commission to investigate the feasibility of fee-free education for all students. The movement also sparked discussions and reforms around decolonisation in higher education, leading to efforts to diversify curricula, hire more faculty from diverse backgrounds, and create more inclusive learning environments (Msimango, 2019:26).

However, this caused the number of students studying at HEIs to drastically change with students from all backgrounds, especially students from disadvantaged backgrounds (Mavunga, 2019: 96). As commendable as this is, it brought to light a different challenge, which is that the students from disadvantaged backgrounds struggled to transition from secondary to tertiary studies. In other words, most of these students had never used a computer nor owned one; therefore, they needed more computer literacy skills to complete assessments (Combrinck and Mtsatse, 2019:5)

Overall, the #FeesMustFall movement catalysed change in the South African higher education system, bringing attention to long-standing issues and initiating a movement towards greater access, equity, and decolonisation in education.

2.9.2 NSFAS REPORT SUMMARY

The analysis of the National Student Financial Aid Scheme (NSFAS) reports from 2010 to 2021 provides valuable insights into the number of students who received financial assistance from NSFAS to study at the tertiary level. A table was created (see Table 3 below), with the total number of students assisted by NSFAS each year, which includes Technical and Vocational Education and Training (TVET) colleges, universities, and, in some cases, “other” undisclosed institutions also included in the reports. The data showed a consistent increase in the number of students assisted each year, except for a slight decrease in 2017. From the literature above, it is speculated that this decrease may have been due to the Fees Must Fall movement, which had an initial negative impact on the number of students assisted. However, the number of students assisted by NSFAS drastically increased, indicating that the FMFM

resulted in more students having the opportunity to enrol at HEIs. The latest available report for 2020/21 showed that 767,001 students received financial assistance from NSFAS (NSFAS, 2020/21:45), which is a significant increase, compared to the number of students assisted in the earlier years. Overall, the analysis of the NSFAS reports provides valuable information on the impact of the organisation on access to tertiary education in South Africa. In Table 3 and Figure 2, the number of students supported by NSFAS is illustrated per year.

Table 3: NFSAS Number of students per year

NSFAS Report	Other	TVET Colleges	University students	Grand Total
2020/21 Report		270476	496525	767001
2019/20 Report		337276	387080	724356
2018/19 Report		239797	346966	586763
2017/18 Report		260002	200339	460341
2016/17 Report		255557	225950	481507
2014/15 Report	10	228642	186150	414802
2013/14 Report		220978	194923	415901
2012/13 Report	428	188182	194504	383114
2011/12 Report	345	114968	216874	332187
2010/11 Report		61703	118169	179872

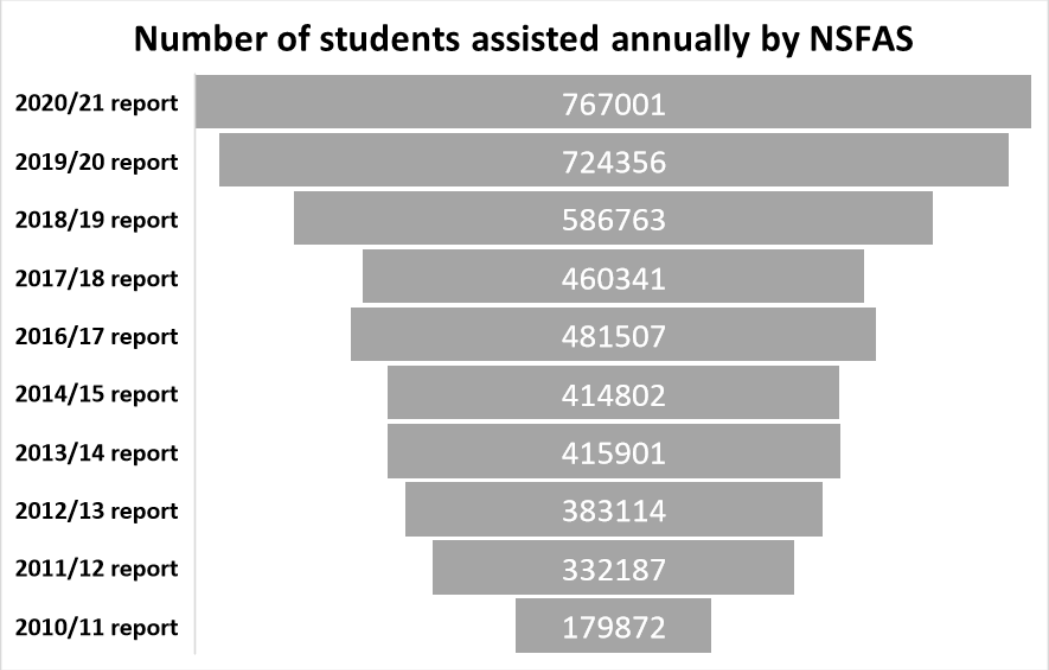

Figure 2: NSFAS Student numbers illustration

(NSFAS, 2010/11:58-59; NSFAS, 2011/12:51; NSFAS, 2012/13:63; NSFAS, 2013/14: 48; NSFAS, 2014/15:9; NSFAS, 2016/17:5; NSFAS, 2017/18:2; NSFAS, 2018/19:4, 114; NSFAS, 2019/20:30; NSFAS, 2020/21:45)

To conclude, the FMFM has not only been pivotal in making higher education more accessible to students from disadvantaged backgrounds but also in significantly increasing the student population. This surge in enrolment highlights the indispensable role of TAs in managing the heightened demands for teaching, marking and other administrative tasks. Consequently, understanding the varied roles of TAs across different educational contexts becomes crucial in addressing the diverse needs which will be discussed below.

2.10 TEACHING ASSISTANTS

TAs play a vital role in the education system, providing support at various levels of education. TAs can be employed in primary schools, secondary schools, and tertiary institutions, each with specific roles and responsibilities which can differ, based on the level of education in which they are working. In this section, the roles of the three levels of TAs will describe a comparison of TAs in tertiary institutions, roles of TAs specifically in SA, and then TAs' roles and responsibilities at the University of the Free State.

2.10.1 ROLES AND RESPONSIBILITIES OF THE THREE LEVELS OF TAS

Primary Teaching Assistants:

Primary school TAs play a crucial role in supporting classroom learning and ensuring student success. They are responsible for supporting the teacher in the delivery of lessons and activities, assisting with classroom management, and providing one-on-one support to learners who need extra help (Sharma and Salend, 2016:118; Cassim and Moen, 2020:3). In addition, they may provide support to students with special educational needs or disabilities, prepare and organise classroom materials, supervise learners during lunchtime and breaks, and attend meetings and training sessions as required (Sharma and Salend, 2016:121).

Secondary School Teaching Assistants:

Similarly, secondary school TAs are also responsible for supporting teachers with lesson planning and delivery, as well as classroom management and one-on-one

support for students who need it. In addition, they may assist with exam preparation and grading, supervise students during break times and extracurricular activities, and attend meetings and training sessions as required (Sharma and Salend, 2016:121).

Higher Education Teaching Assistants:

In higher education, TAs are often responsible for supporting the delivery of lectures and tutorials, as well as providing one-on-one support to students who need extra help (Mirza, Conrad, Lloyd, Matni and Gatin, 2019:32). They may also be responsible for marking assignments and providing feedback to students, supervising students during research projects or laboratory work, and assisting with administrative tasks related to the course or programme. Furthermore, TAs in higher education may conduct independent research or assist with research projects under the guidance of a faculty member (Bale and Moran, 2020:158; Lee, 2018:1). Lastly, TAs in higher education are required to be a student at that university and is thus a student position and not a position for external individuals.

TAs are an indispensable part of higher education institutions. In the context of hybrid learning, TAs play a crucial role in supporting instructors in the development and delivery of course content, communication with students, and assessment marking (Bale and Moran, 2020:161; Crowe, Ceresola and Silva, 2014:760; McLaughlan, 2020:178).

2.10.2 TEACHING ASSISTANTS IN OTHER COUNTRIES

In many nations around the world, teaching assistants (TAs) help the educational system in a significant way. While different locations may interchangeably use acronyms, such as GTA (Graduate Teaching Assistant), UTA (Undergraduate Teaching Assistant), or simply TA, the core obligations and expectations are the same. This section gives a general summary of the responsibilities and qualifications for TAs in the United States, Europe, Australia, and Japan.

Teaching assistants are frequently referred to as Graduate Teaching Assistants (GTAs) in the United States (Lee, 2019:1). At the graduate level, students often need to be enrolled in a Master's or Doctorate programme in order to become a GTA (Bale and Moran, 2020:157). A bachelor's degree is frequently required of GTAs in American universities, along with proof of competence in the subject with which they will be

assisting. If English is not their first language, GTAs might also need to meet certain language competency criteria. Assisting professors with teaching tasks, such as leading discussions, grading papers, and occasionally giving lectures are the main duties of GTAs in the United States (Lee, 2019:4).

The function of teaching assistants differs from nation to nation in Europe. For instance, in the UK, they are frequently referred to as GTAs or Teaching Fellows. Similar to the requirements in the US, individuals must normally be enrolled for a postgraduate degree to qualify as a TA in Europe. TAs could also be required to finish a teaching certification or training programme, depending on the university/school and the country. Their duties include leading tutorials, giving feedback on assignments, and aiding professors/teachers with educating and supervising students (Riese, Lorås, Ukrop and Effenberger, 2021:547).

According to Goodman, Broadbent, Brown, Dados, Junor, Strachan and Yasukawa (2020: 17), teaching fellows (TFs) are the most common names for teaching assistants in Australia; completing a bachelor's degree is typically necessary, as well as demonstrating topic mastery. The experience of TFs in mentoring or teaching students is also commonly expected by institutions, and some require TFs to pursue studies up to a doctoral degree. They oversee small group tutorials, grade papers, and assist students with their academic work.

In contrast to other nations, Japan has a unique educational system where the use of Teaching Assistants is less common. However, TAs are sometimes referred to as Assistant Language Teachers (ALTs) in secondary schools, universities and English language institutions. Having a bachelor's degree, ideally in English or a closely related profession, and being fluent in native- or near-native English are frequently requirements to work as an ALT in Japan. When teaching English to Japanese students, ALTs work with the Japanese teachers to organise lessons and give the students the opportunity to practise speaking English (Davids, 2004:96).

To sum up, teaching assistants—also known as TAs, GTAs, UTAs, or Teaching Fellows—play an important role in educational institutions all over the world. While requirements may vary by nation, it is typical to expect applicants to be enrolled in a relevant academic programme and possess subject-matter competence. Their duties

include promoting students' learning, assisting professors with teaching activities, and offering academic counselling. In America, Europe, Australia, Japan, and China, students benefit greatly from the invaluable contributions of teaching assistants, which improve the educational process and contribute to overall success.

2.10.3 TEACHING ASSISTANTS IN SA

In South Africa, teaching assistants (TAs) are a vital component of the education system. Individuals normally need a bachelor's degree in a related discipline to work as a TA, while some universities may favour applicants with postgraduate degrees. In South Africa, TAs serve lecturers by distributing course materials, leading tutorials, assessing homework, and counselling students regarding their academic progress. They serve as a conduit between students and lecturers, assisting in the creation of instructional materials and evaluations. In addition, TAs support and encourage active participation from students while addressing their issues. Their contributions improve the educational setting and aid in the academic growth of the students (Conradie, 2023:77).

What are the requirements to become a UFSS TA?

To become a UFSS TA, one must first apply by sending one’s Curriculum Vitae (CV), cover letter, proof of registration, as well as any tutoring experience certificates to the UFSS module office. The UFSS TAs must make available 25 hours each week for the position, and international students will need to be available for 20 hours a week, as per foreign policies for these students. The TA advert to recruit potential TAs for the UFSS module can be summarised in Figure 3 below:

Inherent Requirements	Competencies	Responsibilities	Opportunity for Development
➢ Final year of study or postgraduate student, ➢ Must be a UFS student with proof of registration, ➢ Must have tutoring, facilitation, or teaching experience with provided proof, ➢ English proficient, and ➢ Access to stable internet with at least 10GB data/month for TA work.	➢ Excellent communication skills, ➢ Microsoft Office proficiency, ➢ Internet navigation, ➢ Blackboard familiarity, ➢ Good time management, ➢ Excellent English writing, ➢ To work independently and as a team, ➢ Work in a respectful manner with colleagues of different backgrounds, cultures, and beliefs, and ➢ Be able to conduct online classes.	➢ Facilitation of Summer school and/or Winter school classes (both F2F and online), ➢ Assessment marking, ➢ Module content review, ➢ Success coaching (similar to consultations), ➢ Must attend TA training, ➢ Attend webinars offered by the module.	➢ Personal and professional development through training programmes, ➢ Involvement of career development pilots, and ➢ Digital literacy skills.

Figure 3: UFSS TA advert summary

The nuanced roles of TAs, crucial in addressing the diverse needs of an increasingly large and varied student body, underscore the importance of a structured theoretical framework to guide educational practices. Enter the Community of Inquiry framework, which provides a comprehensive model for fostering meaningful learning experiences through the development of social, cognitive, and teaching presences. This framework serves as a foundational lens through which the contributions of TAs can be evaluated which will be discussed below.

2.11 THEORETICAL FRAMEWORK – COMMUNITY OF INQUIRY

Understanding effective pedagogical practices in hybrid teaching modes is a critical aspect of advancing educational techniques, particularly with the rising trend of digitalisation in education. The ongoing trend of digitalisation within the education sector emphasises the significance of understanding effective pedagogical practices within digital classrooms. The CoI framework was chosen to be used in this study, since it has been used numerous times to test effective practices in the education sector. It also offers a comprehensive methodology used for measuring effective blended learning environments (Castellanos-Reyes, 2020:557).

The CoI posits that effective blended teaching and learning requires the presence of three interrelated presences: social, cognitive, and teaching, as seen in Figure 3 below (Garrison, Anderson and Archer, 2000:89; Zhang, Chen, Wang, Zhao, Yuan and Wang, 2020:226).

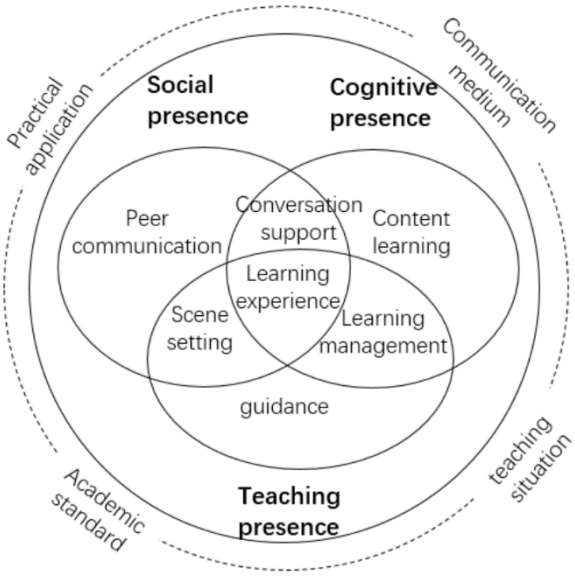

Figure 4: The CoI Interrelated Presences (Zhang et al., 2020: 225)

2.11.1 SOCIAL PRESENCE

According to Garrison et al. (2010:7), social presence is the capacity of members to identify with the group or course of study, speak intentionally in a safe space, and build interpersonal connections by projecting their unique selves. Strong social presence fosters a sense of community, which is essential for the success of hybrid learning settings, according to studies.

2.11.2 COGNITIVE PRESENCE

According to Garrison et al. (2010:6), cognitive presence describes the extent to which students can create and verify meaning through extended contemplation and discussion in a critical community of inquiry. In hybrid learning, cognitive presence can be fostered by reflectively combining online and in-person learning opportunities. Because they blend the immediacy and social cues of in-person instruction with the reflective nature of online discourse, hybrid models offer exceptional prospects for the development of cognitive presence.

2.11.3 TEACHING PRESENCE

According to Garrison et al. (2010:7), teaching presence is the design, facilitation, and management of cognitive and social processes to produce personally meaningful and educationally valuable learning outcomes. Effective adoption of the hybrid teaching approach depends on the educator's ability to maintain a strong teaching presence. The management of both online and in-person components, the setting of learning objectives, and the facilitation of discussions by teaching assistants, will have a significant impact on the overall learning experience.

2.11.4 THE APPROPRIATENESS OF THE COI FRAMEWORK IN THIS STUDY

The CoI framework stands out as a versatile tool in research, especially for studies undertaking research that includes digitally enhanced learning environments. The inherent nature of this framework allows it to measure and guide quality teaching and learning design within online and blended contexts (Castellanos-Reyes, 2020:557; Crites, Berry, Hall, Kay, Khalil and Hurtubise, 2020:4). While the CoI framework is designed to measure blended learning design, its intrinsic flexibility allows it to adapt from blended to hybrid teaching and learning environments seamlessly. This is because hybrid classes can still use a blended and a flipped classroom approach, since the main criteria of hybrid instruction is that it offers both online and F2F concurrently or separately. Thus, the CoI framework, with its versatility and uses in hundreds of empirical studies over a 20-year period, was the reason why it was chosen for this study (Castellanos-Reyes, 2020:557). These studies support the validity of using the CoI framework in measuring pedagogical practices.

However, even in Castell's study of the use of CoI over a 20-year period, which ended in 2019, not once was the term hybrid mentioned. Although the term hybrid is not new, it became more popular after the recent worldwide pandemic in 2020 (Castellanos-Reyes, 2020:557-559). Thus, there is a gap in using the CoI in hybrid teaching and learning settings, especially in practices using semi-scripted lessons. Therefore, by utilising the CoI framework, this study not only fills these gaps in the literature but also contributes to the expanding discussion of effective hybrid teaching practices that incorporate semi-scripted lessons.

While the Technological, Pedagogical, and Content Knowledge (TPACK) model provides a solid framework for understanding the interplay of technology, pedagogy, and content in education, it focuses on educators' knowledge domains, rather than students' learning experiences. The CoI framework, on the other hand, is designed to evaluate the dynamics of online and blended teaching settings, and in this case, a hybrid teaching setting, with an emphasis on the quality of interpersonal interactions, cognitive engagement, and teaching methodologies. Because the CoI delves deeper into the experiential aspects of learning and teaching, it provides a more holistic perspective on the instructional design (Garrison et al., 2010:6; Shea and Bidjerano, 2010:1772). In addition, the CoI framework is primarily used to evaluate lesson design and pedagogical practices from the teacher's perspective because it focuses on the creation of an optimal educational experience through the interplay of social, cognitive, and teaching presence. This approach emphasises the instructor's, in this case, the TAs' role in establishing an environment conducive to learning rather than directly assessing student perspectives, which may not fully capture the complexities of instructional design and its impact on learning outcomes. Furthermore, the CoI framework's intricate components require a level of pedagogical understanding that the first year UFSS students may not possess, making it more suitable for analysis by educators and researchers with a deeper insight into educational theories and practices.

Lastly, the real-world implications of utilising the CoI framework cannot be overstated. The insights gained through its use have the ability to transform TA pedagogical practices. Understanding the relationship between social, cognitive, and teaching presences in hybrid classes enables TAs to engage students better, adjust their instructional strategies, and ultimately create a more effective learning environment (Vaughan et al., 2013:4).

2.12 CHAPTER 2 CONCLUSION

Chapter 2 had a dual purpose; the first was to provide context of the research topic through the literature, and the second was to answer the first subsidiary research question. This chapter meticulously explained pedagogical practices and what could make them effective, specifically in higher education. It was also highlighted that there are challenges involved in adopting a universal pedagogical approach to various

educational settings. This study emphasised the efficacy of applying inquiry-based and active learning in higher education and hybrid modes. Concurrently, the duality of scripted lessons was investigated, revealing both their benefits by ensuring consistency in delivering content, and their possible limitations in fostering dynamic teaching. A difference between blended and hybrid teaching was underscored, emphasising their distinct characteristics, together with highlighting the importance of not confounding the two terms. The South African context was delineated into the narrative, bringing background information on events surrounding challenges from socio-political events, such as the FMF movement. This allowed context to be provided for Chapter 4. TA roles and responsibilities were explored, both within the context of this study's TAs in South Africa and more widely, emphasising the important contribution of TAs to the learning process. The CoI framework was introduced as the theoretical lens that guided this study, in order to measure the effectiveness of the TAs. Through this in-depth investigation, Chapter 2 laid the groundwork for a deeper insight into the empirical facets of TA pedagogical practices in this study's subsequent methodological phases.

3. CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methods implemented which were applied in this study. The aims are to discuss the research approach; research design; sampling procedures; data collection methods; data analysis strategies; trustworthiness; ethical considerations, and the limitations and delimitations of the study. In addition, the research questions will be revisited below, as well as a summary of the research approach, before discussing the methodology.

Main research question:

What pedagogical practices are effective for teaching assistants of a large-enrolment, general-skill university module to use in a hybrid teaching and learning environment?

Subsidiary research questions:

1. *What are the local and global perspectives on the role of teaching assistants in higher education; what comprises their effectiveness, and how can this be measured? (Literature Review)*
2. *How do the current teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes? (Empirical research question – Phase 1)*
3. *How do exemplary teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes? (Empirical research question – Phase 2)*
4. *How can teaching assistants be trained to be more effective in enhancing their proficiency in enacting the components of the Community of Inquiry framework for online and face-to-face teaching modes? (Empirical research question – Phase 3)*

3.2 RESEARCH DESIGN

The mixed methods strategy used in this study includes the quantitative and qualitative research techniques. According to Dawadi, Shrestha and Giri (2021:27) and Johnson and Onwuegbuzie (2004:16-17), this combination is appropriate for investigations when the research problem is complicated and multifaceted; such as when determining the most successful pedagogical strategies used by teaching assistants (TAs) in hybrid teaching and learning contexts.

This study's pragmatic foundation is especially pertinent because it concentrates on the research questions at hand and makes use of all available methodological tools to answer and understand them (Creswell and Creswell, 2018:304-305). This is consistent with the study's goal, which is to fully comprehend and investigate how TAs enact the elements of the Community of Inquiry (CoI) theory in the UFSS1504/1522 module.

Each of the three phases of the study's multi-level triangulation design corresponds to one of the three empirical research topics. With this approach, quantitative data are first gathered and examined before the qualitative data are used to further explain the results. This methodological approach was selected to facilitate a thorough comprehension of the research problem.

Being quantitative in nature, the first phase entails the gathering of observational data on the pedagogical approaches of the TAs measured against the CoI framework. Gathering an initial, comprehensive grasp of the phenomenon being studied is the aim of this phase. Observational data can paint a complete picture of the conditions of the TAs enacting pedagogical approaches as aligned with the first empirical research question (Ke, Pachman and Dai, 2020:614).

Interviews were used to gather qualitative data in the second phase. This phase aims to explore more deeply the results gathered from the observations of the TAs in the previous phase. The qualitative nature of interviews enables a richer, more complex study of TAs' experiences and perceptions, providing insights that might not be visible through strictly quantitative data (Ke, Pachman and Dai, 2020:614; Heim and Holt, 2019:2-3).

With the administration of surveys, the final phase returns to a quantitative approach. Surveys can give a significant amount of data from a large population, enabling the testing and application of the results from the first two phases to a wider population (Wang, Saha, Gregori, Joyner and Goel, 2019:4). Interviews of the previous phase of the exemplary TAs, determined the criteria of the survey. This scaffolded approach enabled a more credible and comprehensive trajectory, since each phase could not have been implemented before the previous phase had been successfully completed and analysed.

By cross-verifying data from these three phases, the mixed-methods approach of this study aims to triangulate data, a technique that improves the validity and depth of research findings (Maree and Nieuwenhuis, 2019:142). This strategy will provide a more thorough comprehension of the research issue and result in more trustworthy findings because each phase was specifically designed to answer its respective corresponding empirical research question (Aguilar Solano, 2020:32).

Using this specific mixed-methods research design, the study hopes to not only thoroughly explore and comprehend the research problem but also to offer sound, fact-based recommendations in line with the aim of the study. Figure 5 below provides an overview of the research design:

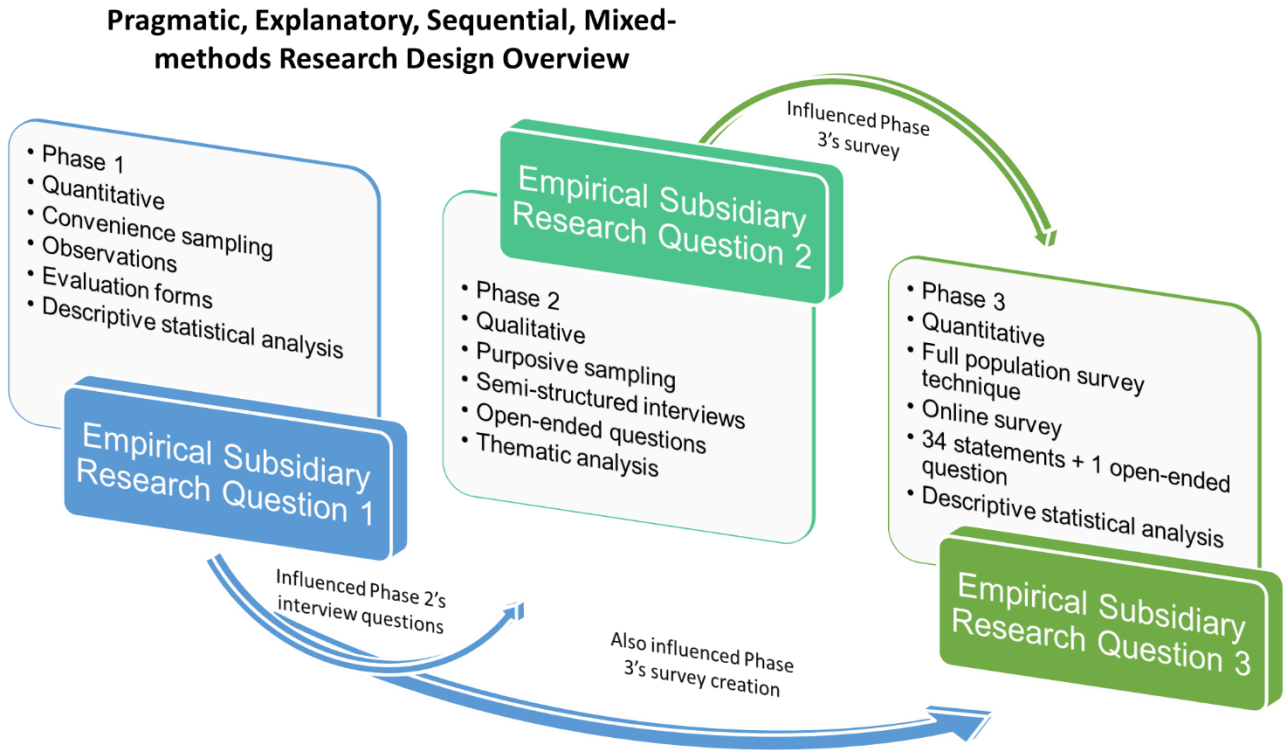

Figure 5: Research Design Overview

3.3 STUDY POPULATION AND SAMPLING

The multi-phase sampling strategy used in this study is in accordance with the three-phase approach to data collection. According to Bhardwaj (2019:161), this design is defined by the use of diverse sample approaches at various points in the study process.

The initial intent for Phase 1's sampling was to randomly observe the UFSS TAs during the winter school timeframe. This would have ensured an unbiased practice of selection, i.e., simple random sampling (Bhardwaj, 2019:158). However, upholding ethical procedures, TAs must first give their consent before the researcher can observe them. This turned the sampling approach into a convenience sampling technique. Convenience sampling is a non-probability sampling method that selects participants based on their ease of access (Bhardwaj, 2019:161); in this case, the TAs agreed to be observed. Although convenience sampling is not randomised, to preserve an unbiased practice of selection, TAs were still randomly chosen, but based on the premise of giving their consent after being recruited. Implementing this, ensured that TAs teaching during the two weeks who gave consent for inclusion, had an equal chance of being observed.

A non-probability sampling technique of purposively selecting participants based on certain criteria was employed in Phase 2 (Bhardwaj, 2019:161). Phase 2's objective was to examine exemplary TAs from Phase 1. With two campuses, BFN and QQ, and two teaching modalities, online and F2F, the selection would end up with four exemplary TAs. One TA was chosen with the highest score in Phase 1 per campus and per teaching modality. In addition, a TA that was awarded the 'Presenter of the Year' from the previous year (2022) was also chosen to be part of Phase 2's exemplary sample. Thus, Phase 2 had a sample size of five participants who were interviewed.

Phase 3's objective was to identify ways to improve the TA training programme using a survey. Therefore, a full population survey technique was used to request all staff members affiliated with the UFSS module and all TAs to participate in the survey (Bell, Bryman and Harley, 2022:190: Scofield, 2006:27). With nearly a hundred TAs across both campuses and more than 10 UFSS staff members, the population of this module is approximately 110 in total. The intent of implementing a full population survey was to mitigate probability within the data, which also lessens biases. However, a "non-response error" was encountered during the recruitment of Phase 3 (Okafor, 2010: 91). This means that although the survey link was sent to all 110 participants, along with two additional reminders, it ended with a subset of 45 respondents. This counters the initial intent of the full population survey. The non-response error also changed the data collected from a probability to a non-probability outcome, which could effect some

potential biases (Okafor, 2010:92). Fortunately, the response rate was still high enough to employ the triangulation strategy within Phase 3 by creating three groups, as mentioned in the demographics section below.

3.3.1 PARTICIPANT DEMOGRAPHICS FOR PHASE 1

In this section, the demographics of the TAs will be presented. It is important to note that this study looks at effective pedagogical practices enacted by TAs. The demographics considered relevant were the campus on which they were working as a TA, their degree programme, their teaching and tutoring experiences, and the number of years they had been working as a UFSS TA.

Observations across campuses:

Illustrated in Figure 6 below are the TAs observed across the two campuses of the University of the Free State.

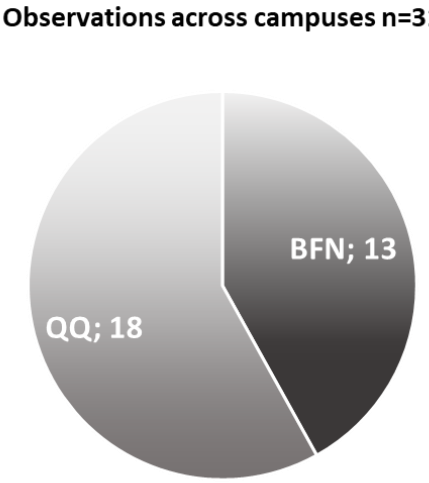

Figure 6: Observations across campuses

Since the main campus, BFN, employs more TAs than its sister campus, QQ, the initial plan was to observe 20 BFN TAs and 10 QQ TAs. However, logistical constraints resulted in 13 and 18 observations at the BFN and QQ campuses, respectively (see Figure 12).

Degree Programme of Observed Teaching Assistants:

One of the prerequisites of being a TA is that they must be a final year or postgraduate student. Therefore, the number of programmes below in Table 4 will correspond with the number of TAs observed. This table is distributed according to the faculty and

degree programme, with the level of study on the right, i.e., postgraduate or undergraduate level.

Table 4: Degree programmes of observed teaching assistants

Degree programmes of Observed Teaching Assistants n=31		
Nr	**Faculty of Education n=13**	**Level of Studies**
1	Master of Education with specialisation in Education Management and Leadership	Postgraduate
2	Master of Education with specialisation in Curriculum Studies	Postgraduate
3	Postgraduate Certificate in Education in Senior Phase and Further Training	Postgraduate
4	Bachelor of Education Honours with specialisation in Early Childhood Development	Postgraduate
5	Bachelor of Education (Life Sciences and Technology)	Undergraduate
6	Bachelor of Education degree	Undergraduate
7	Bachelor of Education with Specialisation in Life Skills and Social Sciences	Undergraduate
8	Bachelor of Education Honours in Curriculum Studies	Postgraduate
9	Bachelor of Education Honours in Curriculum Studies	Postgraduate
10	Bachelor of Education Honours in Curriculum Studies	Postgraduate
11	Bachelor of Education Honours	Postgraduate
12	Postgraduate Certificate in Education	Postgraduate
13	Bachelor of Education with socialisation in Business Studies and English	Undergraduate
Nr	**Faculty of Humanities n=7**	**Level of Studies**
1	Bachelor of Honours in Communication Science and Strategic Marketing and Organisational Communications	Postgraduate
2	Master of Sociology with Specialisation in Political Philosophy of Education	Postgraduate
3	Master of Arts in Classical Studies	Postgraduate
4	Master of Arts in Drama and Theatre Arts	Postgraduate
5	Bachelor of Social Science	Undergraduate
6	Bachelor of Arts	Undergraduate
7	Bachelor of Arts Honours with specialisation in History	Postgraduate
Nr	**Faculty of Economics and Management Sciences n=5**	**Level of Studies**
1	Bachelor of Commerce Honours with specialisation in Industrial Psychology	Postgraduate
2	Bachelor of Administration	Undergraduate
3	Bachelor of Administration	Undergraduate
4	Bachelor of Commerce Honours in Accounting	Postgraduate
5	Bachelor of Commerce	Undergraduate

Nr	Faculty of Natural and Agricultural Sciences n=5	Level of Studies
1	Master of Health Science in Biomedical Technology	Postgraduate
2	Master of Sustainable Agriculture	Postgraduate
3	Master of Science (majoring in Botany)	Postgraduate
4	Bachelor of Science Honours, Plant Breeding	Postgraduate
5	Master of Science majoring in Botany	Postgraduate
Nr	**Faculty of Law n=1**	**Level of Studies**
1	Master of Law with specialisation in Private Law	Postgraduate

The TAs are students in various degree programmes, some of which are in the same programme. As seen in Figure 7 below, of the 31 TAs who were observed, the majority of TAs were not education students. Most observed TAs were at the postgraduate level of studies, with 10 at the Master's level, nine at Honours, and two busy with their Post-graduate Certificate in Education.

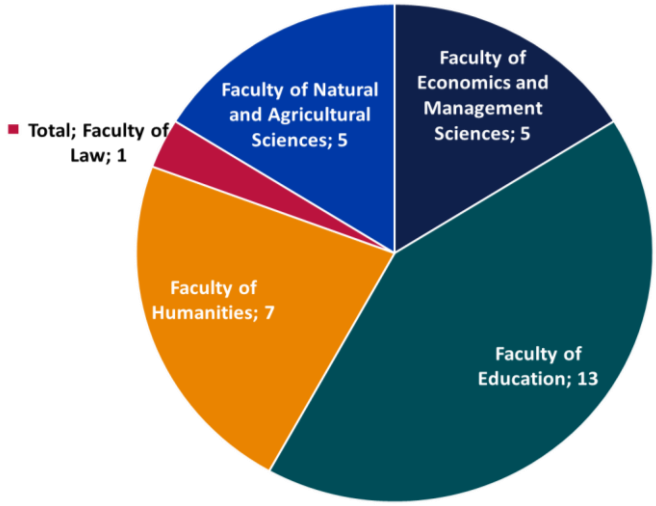

Figure 7: TAs' demographics per UFS faculty

Years of teaching/tutoring experience:

Figure 8 below illustrates the distribution of observed TAs based on their teaching and tutoring experiences in years. It is clear from the statistics that the largest group of TAs, consisting of nine, belongs to the 1st- and 4th- years categories. This suggests that the observed sample consists of a large number of new and experienced TAs. There are seven and six TAs in the 2nd- and 3rd-year categories, respectively. With a

noticeable concentration from very experienced to recently hired teaching assistants, this distribution sheds light on the sample's range of teaching backgrounds.

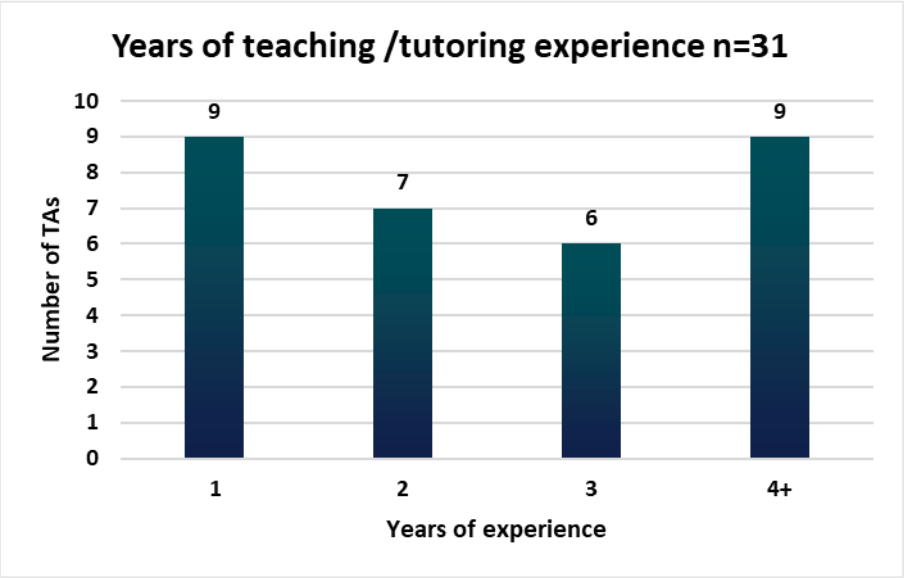

Figure 8: Years of teaching/tutoring experience chart

Years of working at a UFSS TA:

The distribution of TAs according to how long they have worked as UFSS TAs is shown in Figure 9 below. Different levels of TA work experience are represented on the x-axis. The number of teaching assistants falling under each experience category is shown on the y-axis. It is clear from the statistics that the largest group of TAs, consisting of 10, belongs to the category *0 (I just started this semester)*, implying a sizable number of recently hired teaching assistants. With 11 and 6 TAs in the *0-1 year* and *1-2 years* categories, respectively, it is clear that there is a disproportionately high presence of TAs who have been in their positions for only a year or less. Four TAs fall into the *2+ years* group, indicating a less prevalent but still significant number of more seasoned TAs who have held their positions for a considerable amount of time. The temporal dynamics of TA appointments within the studied population are better understood thanks to this distribution. The different backgrounds of TAs across experience categories might be a factor in any discrepancies concerning how well-versed they are in the pedagogy, technology, and teaching methods employed by the UFSS module office.

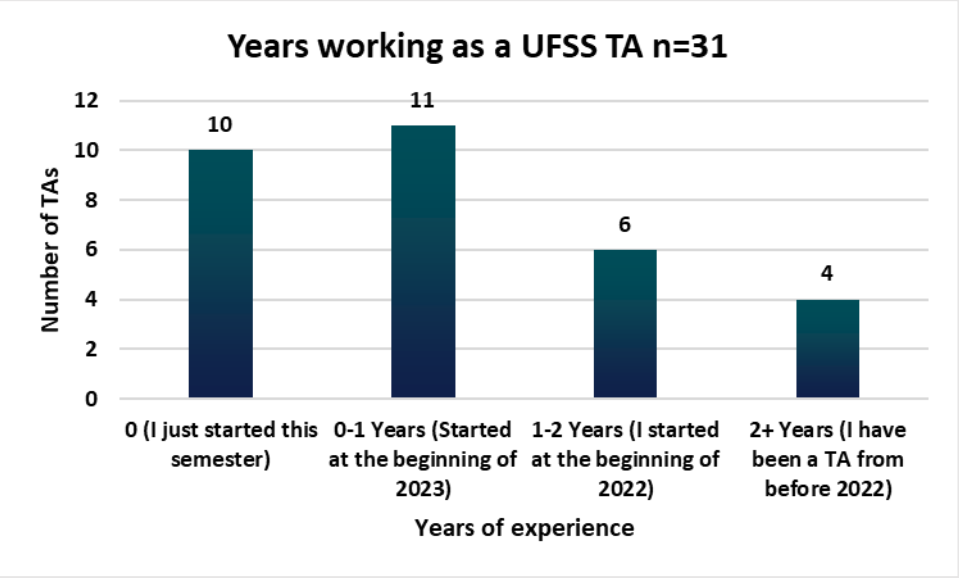

Figure 9: Years working as a UFSS TA chart

Hybrid mode:

The distribution of TAs teaching in hybrid mode, which incorporates both F2F and online educational approaches, is shown visually in Figure 10 below. According to the data, 16 of the 31 TAs taught in F2F classes and 15 in online classes. This is a strength, given the nature of this phase that observed hybrid teaching modes.

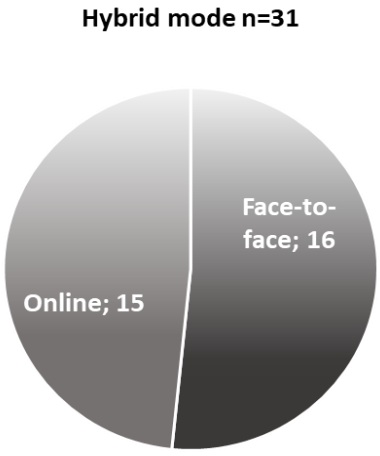

Figure 10: Phase 1 Online vs F2F Observations

3.3.2 PARTICIPANT DEMOGRAPHICS FOR PHASE 2

The exemplary TAs to be interviewed were chosen specifically from their performance during Phase 1's observations. Those that scored the highest were purposively selected and recruited to participate in the interviews. However, as indicated previously (see 1.9.2), one interviewee was recruited for the specific reason of being

one of the best presenters of 2022 for UFSS1504/1522. No personal information was collected from these participants except for their names, which were removed from the analysis process. It is also important to note that the top performers were chosen from the hybrid modes, i.e., two top performers from online (one per campus) and two from F2F (one per campus). In total, four were chosen from Phase 1 and one from the previous year.

Furthermore, there was one participant from Phase 1 (BFN) who was excellent in enacting the CoI framework online, but they were not able to participate in the interview. Another top performer from the observed online classes who could avail themselves of the time, was chosen instead.

In no particular order, Table 5 below illustrates the demographics of the exemplary TAs taken from Phase 1's data. It should be noted that the fifth interviewee from the previous year was not observed in Phase 1; thus, there is no data on the years of tutoring experience and the years of being a TA. This interviewee graduated with her Master's degree in Education and stopped working as a TA at the end of 2022 and was awarded by the UFSS Module Office the "TA Presenter of the Year". Based on this premise, this TA was recruited to be part of the interview phase.

Table 5: Phase 2 Participant demographics

Degree programme	Years of Tutoring Experience	Years of being a UFSS TA
Postgraduate Certificate in Education in Senior Phase and Further Training	Two years	Started second semester of 2023
Bachelor of Arts Honours with specialisation in History	One year	Started the beginning of 2022
Master of Arts in Classical Studies	Four or more years	Started second semester of 2023
Bachelor of Education Honours in Curriculum Studies	One year	Started at the beginning of 2022

3.3.3 PARTICIPANT DEMOGRAPHICS FOR PHASE 3

Figure 11 below illustrates the respondents of Phase 3. The survey link was sent out to all TAs and UFSS staff members at both campuses – BFN and QQ. All TAs and UFSS staff members were encouraged to participate in the survey, i.e., a full

population survey (Scofield, 2006:27). The reason for using this sampling technique was not only to provide a comprehensive study but also to be able to triangulate the data within Phase 3. This is indicated in Figure 11 as groups 1, 2 and 3. Of all the TAs (32) and staff members (13) who received the survey link, 45 completed it. Of these respondents, 25 (56%) were from the BFN campus, and 20 (44%) were from the QQ campus. Of the 25 BFN respondents, 14 (31%) were TAs, and 11 (24%) were staff members, while 18 (40%) were TAs and only two (4%) were staff members at the QQ campus. From these respondents, three groups were categorised. 'Group 2 – UFSS Staff' is the combination of all the staff members who took part in the survey. In groups 1 and 3, the respondents were specifically split into their respective labels. Of the 31 TAs that were observed in Phase 1, 15 took part in the survey and were added to 'Group 1 – Observed TAs'. The remainder of TAs that were not observed during Phase 1 were added to 'Group 3 – Remainder TAs'. Since Phase 3's goal is to determine what improvements can be made to enhance the effectiveness of the TAs, these three groups' responses will be triangulated to not only bring in reliability but also comparability amongst the three groups.

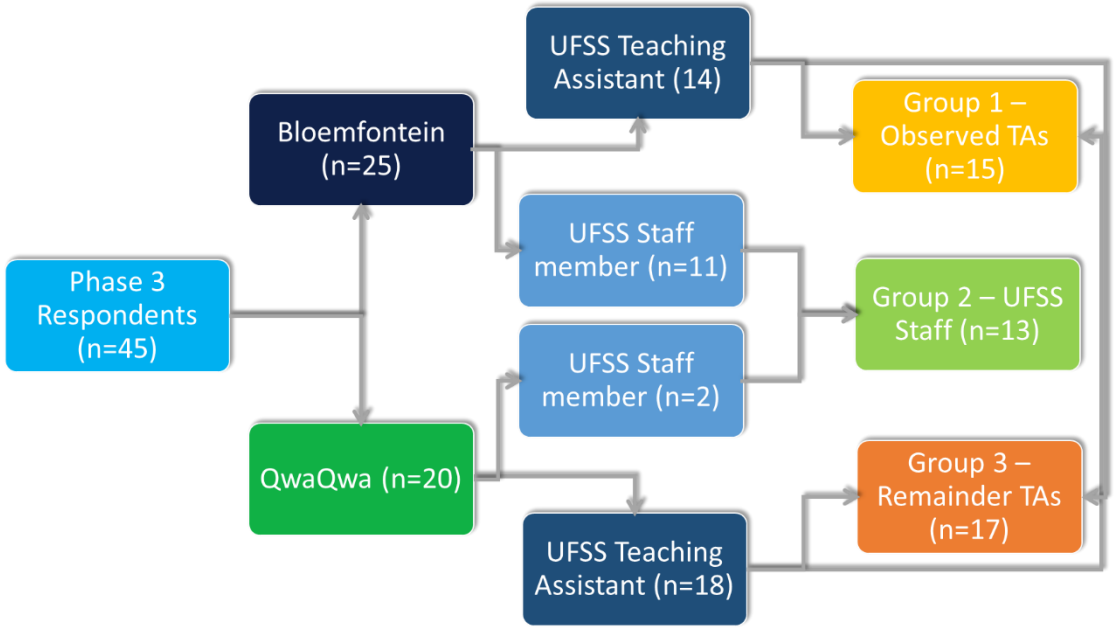

Figure 11: Phase 3 Respondent demographics

3.4 DATA COLLECTION METHODS

The data collection is directly aligned with the three empirical research questions and set out in phases.

Observational data gathered in accordance with the CoI framework makes up Phase 1. Observations, which involve routinely watching and documenting the phenomena as they take place, are a crucial component of many empirical research projects (Huang, Erduran, Zhang, Luo and Li, 2022:578). The majority of the observation criteria were inspired and further contextualised for this thesis using an instrument from an article named *Developing a Community of inquiry instrument: Testing a measure of the Community* (Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, and Swan, 2008:135). A strategy used further to enhance the credibility and reliability of Phase 1 was to consult the UFSS module office surrounding the process and the objective of these observations. This also assisted in their better understanding the CoI framework and assisting with observations if needed.

Microsoft Forms and a paper-based template were used to gather the data for Phase 1. Automatic data capture and straightforward analysis are just two advantages of using online platforms, such as Microsoft Forms, for data collecting. The hard copy's design was done in Microsoft Word, and it was formatted as a PDF, that acted as a backup in case there were internet interruptions. Each CoI presence had several criteria that guided observation: TP and SP had 9 criteria and CP had 11 (see Appendices 3.1 and 3.2).

The originally planned number of TA observations was altered due to logistical limitations, and additional help was used to complete 31 observations in total. In the

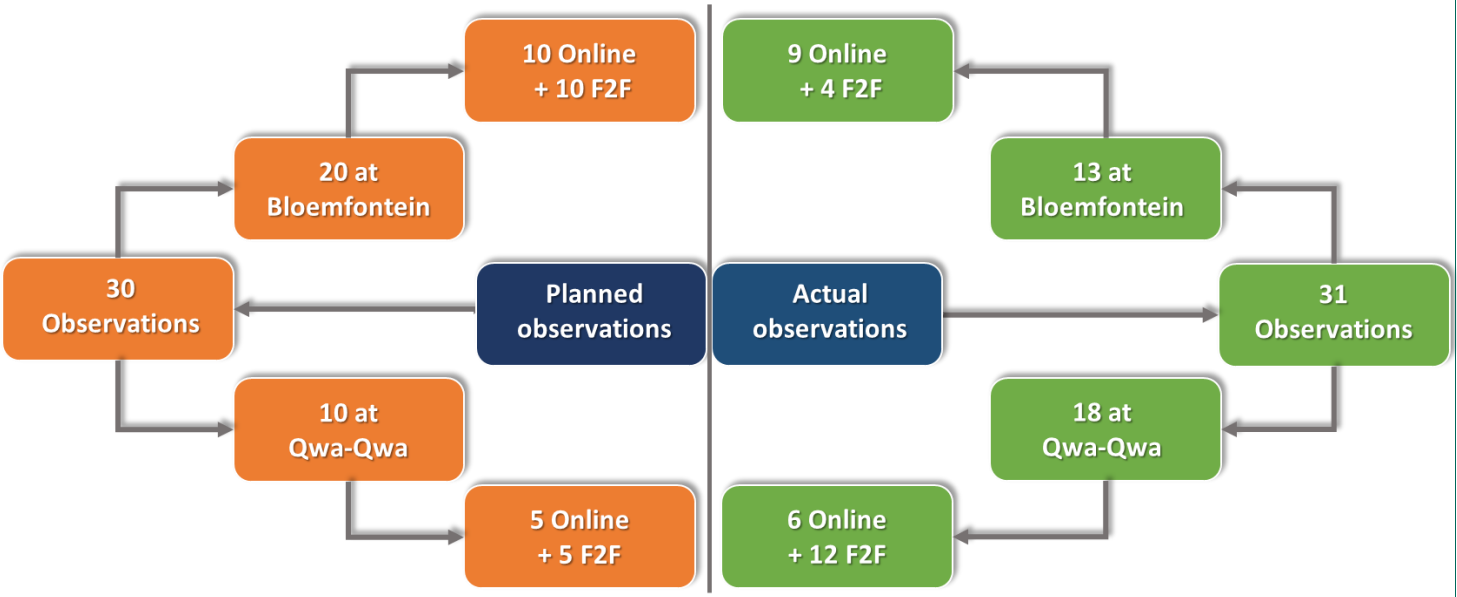

Figure 12: Planned vs Actual number of observations

end, there were 18 TAs from QwaQwa (12 F2F and six online), and 13 TAs from Bloemfontein (4 F2F and nine online), as seen in Figure 12 above.

The gathering of qualitative data through interviews was Phase 2. The exemplary TAs were chosen for in-depth, semi-structured interviews during the initial round (see Appendix 3.3 to view the interview questions). These questions were divided into three sections. The first section were two questions that aimed to make the TA comfortable. The second section focused on the CoI model, and the last section referred to the training provided to TAs. All interviews were done through Microsoft Teams that inherently assisted with recording and transcribing the interviews. However, the transcriptions were used only as a guideline and were corrected where needed, since they did not provide an exact verbatim transcription of the interviews. These interviews ranged from 35 to 45 minutes in length and each TA was interviewed once. The opportunity to thoroughly examine these TAs' pedagogical practices enacted during the winter school is provided through qualitative interviews (Heim and Holt, 2019: 2-3).

All UFSS module office personnel and TAs participated in a survey used for data gathering in the final stage, with a total of about 45 respondents (see Appendix 3.4 to view the survey questions). The survey had three sections each with a set of statements, except the last section that asked an open-ended question. The first section had 21 statements corresponding to the CoI model. The second section had 13 statements on the TA training, and the last section asked for suggestions to improve the TA programme. Surveys are a useful method for gathering quantitative data because they enable the collection of information from large populations and improve the generalisability of results (Ball, 2019:414). To enable data triangulation, they were divided into three batches: staff members, interviewed TAs, and the remaining TAs (Bans-Akutey and Tiimib, 2021:1).

3.5 DATA ANALYSIS

The data analysis in this study utilises both quantitative and qualitative methods of analysis, and the approach corresponds with the three-phase data-gathering methodology.

Excel was used to analyse the first and third phases. For the management and analysis of the data, Excel was used, as it is a flexible tool that is frequently employed in research studies. Descriptive analysis was applied to the quantitative data from the observations and surveys. According to Lee and Wong (2001:107), descriptive analysis entails the summarising of data in a relevant fashion, which may include frequency measurements, averages, ranges, or graphical representations. This made it possible to comprehend and understand the data fully. See Appendix 6.1 to view some samples of the analysis methods used.

The second phase of the study involved a qualitative thematic and narrative analysis of the interview data. Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data (Braun and Clarke, 2018:107). The identified themes were presented as headings in section 5.3.2. The narrative analysis was integrated into the discussion given in this section by using the exact words of the participants in quotation marks to support the arguments made. The analysis in this phase employed both deductive and inductive coding. Deductive coding starts with pre-existing ideas or themes and applies them to the data. In contrast, inductive coding starts with the data and develops themes based on what is found (Braun and Clarke, 2018:83). The deductive codes are derived directly from the CoI framework and the literature review, while the inductive codes are derived from recurring themes across the transcripts. This dual approach enabled a deep and detailed understanding of the TAs' practices within the CoI framework.

3.6 TRUSTWORTHINESS

A study's credibility and integrity are established through the concept of trustworthiness, which is crucial in any qualitative research study (Aguilar Solano, 2020:32). This idea is comparable to the traditional measurements of "validity" and "reliability" in quantitative research, but it converts them for the special characteristics of qualitative inquiry. Credibility, transferability, dependability, and confirmability are the four components of trustworthiness (Aguilar Solano, 2020:37; Korstjens and Moser, 2018:121). Moreover, internal consistency and the use of different evaluators are also part of the trustworthiness of the study and will be expounded below.

3.6.1 CREDIBILITY AND RELIABILITY

Similar to the idea of internal validity in quantitative research, credibility refers to the plausibility or truth value of the findings (Korstjens and Moser, 2018:121). It ensures that the phenomena being studied are being accurately represented. Using proven data-gathering techniques and triangulation, a way of using several methodologies or data sources to generate a thorough understanding of phenomena, helped this study gain credibility (Korstjens and Moser, 2018:121). Through the integration of quantitative (observations and surveys) and qualitative (interviews) data, the triangulation in this study was achieved, allowing for a thorough analysis of the pedagogical practices of TAs in a hybrid teaching and learning environment.

3.6.2 TRANSFERABILITY

Transferability, which is similar to external validity in quantitative research, describes how well the results of a study can be applied or adapted to different situations or contexts (Korstjens and Moser, 2018:121). Despite the fact that this study is set in a particular environment, the thorough description of the research context, participants, data collecting, and analysis methods utilised, will enable others to assess the likelihood of findings being applied to their situation.

3.6.3 DEPENDABILITY

The consistency and repetition of the results are at the heart of dependability, which is analogous to the idea of reliability in quantitative research (Korstjens and Moser, 2018:121). In other words, comparable outcomes would be anticipated if the study were to be repeated with the same subjects in the same setting. The multi-phase sampling strategy and thorough description of the research design, data collection, and analytic procedures increase this study's dependability.

3.6.4 CONFIRMABILITY

According to Korstjens and Moser (2018:121), confirmability refers to the objectivity or neutrality of the findings, guaranteeing that the study's conclusions are a product of the participants and the context, rather than the researcher's prejudices or presumptions. A thorough audit trail was kept, recording every step of the research process to increase the study's confirmability. This openness enables readers to follow

the progression of the study step by step, validating the methodology employed and confirming the findings.

3.6.5 INTERNAL CONSISTENCY

For evaluating the internal consistency and reliability of Phase 3's survey, Cronbach's Alpha, a reputable statistical technique, was used (Barbera, Naibert, Komperda and Pentecost, 2020:257). High reliability is often indicated by a metric that is close to 1.0, which guarantees the consistency and coherence of the chosen variables within the survey. Usually, anything above 0.7 is considered acceptable (Barbera et al., 2020: 258). According to Ekolu and Quainoo (2019:25), a low-scoring alpha value may be because of a small sample size, heterogeneity of criteria, or "poorly interrelated items".

Cronbach's Alpha was carefully applied to the survey instruments in Phase 3 of this study, with a focus on teaching assistants and module staff, thus ensuring the coherence and reliability of the CoI sections within the survey. This assisted the instrument in its robustness and the credibility of the study's conclusions on pedagogical practices in hybrid teaching environments.

Figure 13 below illustrates the formula that was used to calculate the Cronbach's Alpha test of Phase 3's collective results, as well as the three distinct groups of Phase 3. See Addendum Xs to view some data sets that used the formula below to work out the internal consistencies of various datasets.

$$a = \left(\frac{\mathrm{k}}{k-1}\right)\left(\frac{S_y^2 - \sum s_i^2}{s_y^2}\right)$$

Figure 13: Cronbach's Alpha Equation used by O'Loughlin (2020) in his YouTube video.

3.7 ETHICAL CONSIDERATIONS

As it increases credibility and validity, maintaining ethical considerations throughout the research process is not only a professional obligation but also a crucial component of every research effort (Hasan, Rana, Chowdhury, Dola and Rony, 2021:1). Numerous crucial ethical issues, including participant protection, informed permission, and confidentiality, were discussed in the context of this investigation.

3.7.1 PROTECTING THE PARTICIPANT

The protection of participants from harm is one of the fundamental tenets of research ethics (Hasan, Rana, Chowdhury, Dola and Rony, 2021:1). Although there were no physical dangers in this study, proper precautions were followed to avoid any potential psychological injury, such as stress or discomfort from the interview or observation process. The TAs were reassured that the observations were being made for research purposes only and not for a performance evaluation that would affect their employment.

3.7.2 INFORMED CONSENT

Another fundamental tenet of research ethics is informed consent, which ensures that participants are fully aware of the goals, methods, dangers, and rewards of the research and that their participation is voluntary (Pietrzykowski and Smilowska, 2021: 1). A permission form outlining the nature and goals of the study, the TAs' participation in it, and their rights—including the freedom to leave the study at any time without repercussions—was given to them before each observation and interview. To take part in the study, each subject gave written consent.

3.7.3 CONFIDENTIALITY

According to Kamanzi and Romania (2019:745), confidentiality relates to participant privacy and the non-disclosure of their personally identifiable information without their permission. All data gathered for this study were made anonymous to maintain confidentiality. Any information that may be used to identify participants was removed or concealed, and participant names were substituted with pseudonyms.

3.7.4 DATA STORAGE AND MANAGEMENT

A key ethical duty is the administration and safekeeping of research data. All files and data relating to this study are stored on a password-protected device that can be accessed only through a sign-in prompt on OneDrive. Access was also given to the supervisor of this study. In keeping with the typical research policy, the data will be deleted after five years.

3.7.5 ETHICAL APPROVAL

This study was presented in front of the Committee of Title Registration (CTR) and was approved by the research committee of the UFS. Furthermore, this study applied for ethical clearance (UFS-HSD2023/0504) using the Research Information Management System (RIMS) and received an official approval letter (see Appendix 1.2) from the University's ethical review committee. No amendments were required for this study's ethical clearance, further proving that the study is ethically sound and that all necessary protection for participants was in place.

3.8 LIMITATIONS AND DELIMITATIONS

3.8.1 LIMITATIONS

This study relied on multiple observers during Phase 1's fieldwork, which could lead to potential bias and variability in the observational data, as people may evaluate situations differently (Patton, 2014:661). Five observations were conducted by one of my supervisor's Master's students. My supervisor, an NRF-rated researcher who is familiar with the CoI framework, completed two observations. Lastly, a UFSS staff member who is responsible for coordinating all QQ TAs assisted with five observations and is well acquainted with TA evaluations. The remaining 21 observations were conducted by myself. To mitigate any potential bias or variability, the observers who assisted with Phase 1 went through training before any observations were conducted. Furthermore, reflections were conducted with the researcher after observations to adapt and fix any scores deemed through this reflection process, to be inconsistent with other scorers' standards—enhanced validity and reliability.

Another limitation from Phase 1 relates to the number of TAs observed per campus. The initial goal for Phase 1 was to observe 20 BFN TAs and 10 QQ TAs (see Figure 12). However, due to logistical constraints, BFN, with the most employed TAs of the two campuses, had one day allotted to do F2F observations. Thus, the results could be different when this study is repeated to include more F2F observations from BFN. Since the numbers were lower at the BFN campus, the QQ campus set out to have more observations. Needless to say, with the assistance of the extra observers, this study still reached its goal of 30 observations; 15 F2F and 16 online, is adequate for a study that focuses on hybrid pedagogical practices.

The QQ campus is situated in the poorest area of the Free State province (Mukwada and Mutana, 2023:80). Consequently, this area suffers from frequent power outages, i.e., load-shedding. In Phase 2, during both interviews, there were some internet connection issues, resulting in one question not fully responded to. Fortunately, the participants in the second interview, albeit encountering internet connection issues, were able to answer each question fully.

Lastly, Phase 3 also encountered a limitation regarding response rates. The intended approach for Phase 3 was to have all TAs complete the survey, i.e., a full population survey. In reality, just over a third of the TAs completed the survey, and this is termed a “non-response error” (Okafor, 2010:91). Fortunately, all UFSS staff members completed the survey. Although Phase 3’s initial intent was a non-probability approach, the final outcome was a subset of the total number of TAs, which resulted in a probability outcome.

3.8.2 DELIMITATIONS

Aligned with the rationale, this study intentionally aimed to explore the pedagogical practices of the TAs employed by the UFSS module office, at both BFN and QQ campuses. The delimitations of this study will be presented below:

The UFSS1504/1522 module: This study specifically tailored itself to the TAs who teach the UFSS module. Although certain insights may be transferable to other institutions, their immediate generalisability to this module might be limited.

Pedagogical practices of TAs: As intended by the aim of Chapter 1, the predominant focus of this study was to explore the pedagogical practices of the TAs, specifically the TAs of the UFSS module. Thus, other educators, such as learning facilitators, tutors, or lecturers, were not studied, since this module does not employ these roles.

CoI framework: using the CoI framework ensured that the pedagogical practices were evaluated through a theoretical lens. However, this implies that other possible theoretical frameworks would have offered alternative perspectives, different results, and insights.

Teaching windows: There are multiple time frames where teaching takes place within this module. Summer school is usually in February, and winter school in July.

Furthermore, there are also catch-up Fridays for students who registered late or could not attend one of the schools. This study pre-emptively aimed to study only the winter school, due to it being a one-year degree, and various administrative processes had to take place before any fieldwork could be completed. Thus, the winter school was the best choice for this study.

3.8.3 GENERALISABILITY

Despite this study's distinctive features, its findings can provide insightful information about effective teaching assistant pedagogical practices, particularly in the setting of hybrid teaching and learning. One advantage this study presents is that the findings should not be considered exclusive to the UFSS1504/1522 module or the UFS. The study examines effective pedagogical practices used by TAs in hybrid modes. Even though it focused solely on TAs, hybrid education is becoming more popular, which suggests a broad relevance and potential applicability to TAs in different educational situations, therefore improving the generalisability of the results, which allow other universities or studies to recreate or use the findings presented here. In addition, with the popularity of hybrid education, some of the insights could be of value to other institutions, even if they do not use TAs.

3.9 SUMMARY OF CHAPTER

To thoroughly examine effective pedagogical practices of teaching assistants in hybrid teaching and learning, this study utilised a pragmatic paradigm and a mixed-methods approach founded on the multi-level triangulation (quantitative-qualitative-quantitative) design. The three empirical research questions that served as the study's guiding principles were addressed in large part, by the design decision in the form of phases.

The study used a three-phased methodology that included both quantitative and qualitative data in the research design section. Phase 1 utilised quantitative observations, phase 2 conducted interviews, and Phase 3 reverted to the quantitative through surveys. This multi-methods approach made it easier to conduct a thorough, triangulated analysis of the in-question, effective pedagogical practices of TAs.

Microsoft Forms and Excel were used for quantitative data gathering and analysis in phases 1 and 3, according to the section on data collection methods. Phase 2's

qualitative data collection process involved interviewing the best TAs from Phase 1. Thematic analysis using both inductive and deductive coding was used to analyse the qualitative data.

The sampling strategy employed a multi-phase strategy that directly aligned with the three phases of this study. Convenience sampling was utilised in Phase 1, purposive sampling in Phase 2, and a full population survey approach in Phase 3.

Excel was used for quantitative analysis in stages 1 and 3, according to the Data Analysis section, while descriptive analysis allowed for the creation of tables and graphs. Phase 2's qualitative data were analysed thematically, using both inductive and deductive coding.

The study's credibility, reliability, transferability, and dependability were discussed in the section on trustworthiness, which also confirmed that the requirement to assure the validity of the research findings, informed the methodological choices.

The Ethical Considerations section describes the steps taken to ensure that participants' rights and well-being are protected. These steps included obtaining informed consent, maintaining anonymity, and guaranteeing participants' right to withdraw from the study.

Finally, the section titled Limitations and Delimitations acknowledged the temporal limitations faced during the study but also noted that, despite these difficulties, the research could go beyond its initial goal. Furthermore, it was mentioned that even though the study was carried out at the University of the Free State, the conclusions about effective pedagogical practices could still be generalised and utilised outside of the context of the UFSS1504/1522 module.

In conclusion, this methodology chapter provided a thorough explanation of the study's design, data collecting, analysis, ethical considerations, and limitations. The investigation was carried out in accordance with strict and ethical research procedures.

4. CHAPTER 4: UFSS1504/1522 MODULE

4.1 INTRODUCTION

Since it was established as a pilot programme in 2011, the UFS101 module offered by the Centre for Teaching and Learning (CTL) at the University of the Free State (UFS), has been on a transformative journey. Over time, this module has undergone several changes by responding to student needs and by adopting new teaching methods, as well as a change in the name to UFSS1504/1522. The development of this module, implementation and structure, purpose, pedagogical practices, latest units, and other pertinent aspects will be explored in this chapter. The primary purpose of this chapter is to provide background information before providing the findings and discussion collected from the teaching practices of the teaching assistants (TAs).

First, drawing from the available reports from the UFSS Module Office dating from 2011 to 2019, it is possible to examine the nascent stages of the UFSS module; from the pilot phase in 2011, to the subsequent full-scale stage in 2012, to the transition stage of changing the core content in 2015. Second, by delving into the UFSS Module Office, its structure and implementation will be uncovered. Lastly, the current pedagogical practices will be explored.

4.2 ORIGIN OF THE MODULE

4.2.1 UFS101 IN 2011

UFS101 started as a pilot initiative in 2011 with around 200 students, with the purpose of implementing a comprehensive evaluation framework to assess its effectiveness. The evaluation framework included multiple data sources; direct observation; student assessment; student feedback; online evaluations, and social networking sites, as well as input from the lecturers; learning facilitators, and the implementation team. After the review of the module, based on the evaluations, the results were successful, which led to the groundwork for the following years (Centre for Teaching and Learning, 2011).

4.2.2 UFS101 2012-2019

Following a blended learning (see 2.5) strategy, the UFS101 module was launched as a required core curriculum module for around 2000 first-year students in 2012 (Centre

for Teaching and Learning, 2012). This grew rapidly in 2013, with around 3,500 students, and the pilot at the QQ campus, with around 150 students. With the success at the QQ campus in 2014, the numbers reached over 5,000 across the BFN and QQ campuses. This was also the year that the method of instruction changed to a flipped classroom style, in which students study in advance and write quizzes before attending the learning experiences (Centre for Teaching and Learning, 2014). The module's curriculum was revised in 2015 to include academic success skills and to conform to a first-year seminar format. The focus was on teaching students academic skills in the first semester, and multidisciplinary viewpoints in the second (Centre for Teaching and Learning, 2017). In order to extend the viewpoints of the students and add decolonised curricular components, the second semester's content was improved in 2016 and 2017. These revisions included relevant case studies and African sources (Centre for Teaching and Learning, 2017). Annual adjustments and enhancements in the module's content and delivery strategies were made as a result of ongoing evaluation and feedback gathered from students and teaching assistants. The adjustments were made due to the #FeesMustFall movement, which allowed the government to support students through NSFAS bursaries, resulting in an influx of students, many of whom came from disadvantaged backgrounds (see 2.9.1). The problem that emerged with this opportunity for these disadvantaged students, was that many of them had never worked on a computer previously, and did not have the academic study skills to pass modules (Centre for Teaching and Learning, 2017). Given this situation, UFSS revised their curriculum to support these students, so that they could develop the skills necessary to transition from secondary school to tertiary studies successfully and obtain their degrees. Thus, the adjustments made were to not only make it easier for the students to complete the course but also to teach them how to use digital systems, such as Blackboard, so as to be equipped for the rest of their undergraduate studies.

The module relied on a group of learning facilitators from 2011-2014 and teaching assistants from 2015 onwards. These assistants' roles and responsibilities ranged from facilitating classes, marking assignments, ushering, and supporting students (Centre for Teaching and Learning, 2017; Centre for Teaching and Learning, 2019). The attendance of this module was compulsory, where students had to have 70% or higher to pass the module, regardless of whether they had an overall mark of 50% or

higher. To track the students accurately, biometric scanners were used from 2012 to 2016 but changed to barcode scanners. The reason for this was that students could not access campus without their student cards due to protests, and using barcode scanners proved to be more accurate and more cost-effective (Centre for Teaching and Learning, 2017).

Lastly, a pilot was introduced in 2019 to fast-track students who did not have the time to attend weekly classes and learning experiences throughout the year, due to clashes with other modules' classes (Centre for Teaching and Learning, 2019). These students were mostly medical students, and they were introduced to a summer school pilot that condensed the entire module's content into five days. Once they had attended the summer school, the assessments, such as the weekly quizzes and assignments, were released as usual, alongside the normal class schedules. It was a major success and has been the standard method of teaching since 2020. This was also implemented for the second-semester content, through a winter school approach, with the same logistical implementations as the summer school.

4.2.3 UFSS1504/1522

The UFS101 module's name changed to UFSS1504/1522 to be consistent with the UFS policy on modules' naming conventions. The letters stand for University of the Free State Skills. The module codes refer to the study level, timeframe, national qualifications framework level (NQF), and credit load. In other words, 1 – first year, 0 – year module, 5 – NQF level 5, and 2 – credit load, which is calculated by multiplying it by 4, equating to 16 credits. As of 2023, there are no reports of the latest developments of the UFSS modules. However, since I was an employee at the UFSS module office, the information given below is derived from work experience.

4.3 THE UFSS MODULE OFFICE

Unlike other modules taught at the UFS, with student numbers ranging from as low as 20 students to as high as 1,500 students, the UFSS module reaches around 9000 students annually. Therefore, one lecturer cannot teach all the students, cater for all student needs, and do all the marking; thus it is the reason why the UFSS Module Office exists. It has employed various positions, and portfolios have changed, merged or split across the years of its existence. The current employment of the UFSS Module

Office is summarised in Table 6 below. It should be noted that this table is limited to the year 2023, and the position might be subject to change in the future.

Table 6: The UFSS Module Office Portfolios

UFSS Module Coordinator					
The UFSS Module Coordinator is the person responsible for managing all of the portfolios across the Bloemfontein and QwaQwa campuses.					
Main Campus (6000+- Students)				**QwaQwa Campus (3000+- Students)**	
Communication	Logistics	TA Coordinator	Content Creator	Communication, Data management	TA Coordinator
Responsible for communication via emails, as well as student consultations.	Responsible for all logistics pertaining to the module.	Responsible for managing all Bloemfontein teaching assistants.	Responsible for keeping the UFSS module content up to date.	Assist with emails and work with data, such as grades and attendance for both campuses.	Responsible for managing all QwaQwa teaching assistants.
In some portfolios, additional assistance is required, and this is done through student assistants and research assistants.					
Student Assistant		Student Assistant		Research Assistants (x2)	
Assists with the large number of student emails.		Assists with duties under the TA Coordinator.		Assist with data capturing, cleaning, and organisation, among many other tasks.	

The TAs of the UFSS module do not just teach summer or winter school. They have other responsibilities, such as marking, facilitation and ushering. Refer to Chapter 2.10 to view the list of roles and responsibilities of these TAs in detail.

4.4 PURPOSE OF THE MODULE

Within the UFS academic system, the UFSS module fulfils a defined function. It is an essential component of easing first-year students' transition from high school to university and setting them up for academic success because it is a one-year-long, credit-bearing requirement for all first-year students. UFSS' overarching goal has

several facets; it seeks to give students the academic skills and resources they need to navigate the university environment successfully. Fostering critical thinking, problem-solving skills, and cross-disciplinary viewpoints are part of this. Second, UFSS promotes students' overall development as active and accountable citizens by cultivating in them qualities of leadership, social justice, entrepreneurship, and employability. The blended flipped classroom, now the hybrid method, active learning techniques, and thematic emphasis of the module all help to improve students' engagement, comprehension, and application of knowledge. UFSS aims to offer a supportive and transformative learning experience that equips students to succeed academically and beyond, by incorporating cutting-edge pedagogical approaches and continuously updating the module's content.

4.5 PEDAGOGICAL PRACTICES OF THE MODULE

Between 2011 and 2013, a blended classroom approach was used within the learning experiences (2011), where students participated in various activities in different contexts. For instance, online discussion groups, F2F tutorial groups, and off-campus visits were supplemental learning experiences. Between 2014 and 2019, the blended approach was combined with a flipped classroom approach. Between 2020 and 2021, the approach changed to an online-only approach due to the outbreak of the COVID-19 pandemic and the national lockdowns that were enforced (Sahni, 2019:5). In 2022, a hybrid model was implemented where students could choose to attend classes online or to come to the F2F classes. The advantage of the hybrid model is that it can still apply the flipped classroom approach and blended learning elements, which is why it was considered a success and continues to be used in 2023, as of this study. This strategy combines the convenience and accessibility of online learning with participatory F2F discussions, collaboration, and participation.

4.5.1 SUMMER/WINTER SCHOOL STRUCTURE:

The development of the module underwent some modification in 2021 with the introduction of a shorter summer school model. All of the material for one semester was condensed from a 5-day into a 2.5-day summer school - or winter school for the second semester. Students were either put in predetermined groups by their faculties or given the option to select the sessions aligned with their timetables. Quizzes and

assignments relating to each topic were made available after the summer/winter school ended in order to gauge the students' comprehension. The typical structure of these schools can be seen in Table 7:

Table 7: Typical structure of UFSS winter/summer school

<table>
<tr><th colspan="2">Summer/Winter School Structure</th></tr>
<tr><td colspan="2">1. Five sessions = One cycle.
2. Up to six cycles per week.
o The five sessions are spread out over 2.5 days.
o More venues = more cycles to be taught in one week.
3. Each session consists of two or more classes teaching units.
4. One session per day (9h-12h) except on Wednesday, where one cycle ends in the morning, and the other starts in the afternoon.
5. This continues for two weeks. All TAs are utilised during this teaching period to teach as many cycles as possible.</td></tr>
<tr><th>Face-to-Face</th><th>Online</th></tr>
<tr><td>1. Up to four TAs per class, depending on campus.
a. One main presenter
b. One backup presenter
c. Up to two ushers
2. Up to four classes running concurrently, depending on the campus.</td><td>3. Usually two TAs, but there can be more on the BFN campus.
a. One main presenter
b. One assisting
4. Up to six classes running concurrently, depending on the campus.</td></tr>
<tr><th colspan="2">Hybrid model</th></tr>
<tr><td colspan="2">Both F2F and online classes run at the same time during the two-week time period.</td></tr>
</table>

Figure 15 and Figure 14 below provide screenshots of 2023's winter school structure for F2F and online at the QQ campus. It should be noted that all TA names were removed from the Excel sheet.

	A	B	C	D	E	F	G	H
1	UFSS1504/1522 - WINTER SCHOOL CLASSES -FACE-TO-FACE ONLY Monday - Wednesday							
2	Date	Day	Time	Unit	Venue	Attendance	Teaching Assitant	Role of TA
3	17-Jul-23	Monday	08:10 - 12:00	Orientation Strategies for success 2.0	Media Lab			Present, Usher, Assist on the floor
4								Present, Usher, Assist on the floor
5					New Media Lab			Present, Usher, Assist on the floor
6								Present, Usher, Assist on the floor
7								Present, Usher, Assist on the floor
8								Present, Usher, Assist on the floor
9					EDU IT Lab			Present, Usher, Assist on the floor
10								Present, Usher, Assist on the floor
11								
12	18-Jul-23	Tuesday	08:10-12:00	Clearest and Muddiest Entrpreneurial mindset Digital era	Media Lab			Present, Usher, Assist on the floor
13								Present, Usher, Assist on the floor
14					New Media Lab			Present, Usher, Assist on the floor
15								Present, Usher, Assist on the floor
16								Present, Usher, Assist on the floor
17								Present, Usher, Assist on the floor
18					EDU IT Lab			Present, Usher, Assist on the floor
19								Present, Usher, Assist on the floor
20								
21	19-Jul-23	Wednesday	08:10-12:00	Clearest and Muddiest Building my future UFS Graduate attributes Clearest and Muddiest	Media Lab			Present, Usher, Assist on the floor
22								Present, Usher, Assist on the floor
23					New Media Lab			Present, Usher, Assist on the floor
24								Present, Usher, Assist on the floor
25								Present, Usher, Assist on the floor
26								Present, Usher, Assist on the floor
27					EDU IT Lab			Present, Usher, Assist on the floor

17 - 19 July - MON - WED F2F | 19 - 21 July - WED - FRI F2F | 17 - 19 July MON - WED Online | 19 - 21 July - WED - FRI Online

Figure 15: Winter School F2F Structure of the QQ Campus

	A	B	C	D	E	F	G	H
1	UFSS1504 WINTER SCHOOL CLASSES (ONLINE) Monday - Wednesday							
2	Date	Day	Time	Unit		Attendance	Teaching Assitant	Role of TA
3	17-Jul-23	Monday	08:10 - 11:00	Orientation Strategies for success 2.0	BB Collab: UFSS1504 Group A Link 1			Present & Assist
4								Present & Assist
5					BB Collab: UFSS1504 Group A Link 2			Present & Assist
6								Present & Assist
7					BB Collab: UFSS1504 Group B Link 1			Present & Assist
8								Present & Assist
9					BB Collab: UFSS1504 Group B Link 2			Present & Assist
10								Present & Assist
11	18-Jul-23	Tuesday	08:10-12:00	Entrepreneural mindset Digital Era	BB Collab: UFSS1504 Group A Link 1			Present & Assist
12								Present & Assist
13					BB Collab: UFSS1504 Group A Link 2			Present & Assist
14								Present & Assist
15					BB Collab: UFSS1504 Group B Link 1			Present & Assist
16								Present & Assist
17					BB Collab: UFSS1504 Group B Link 2			Present & Assist
18								Present & Assist
19	19-Jul-23	Wednesday	08:10-12:00	Building my future Graduate Attributes	BB Collab: UFSS1504 Group A Link 1			Present & Assist
20								Present & Assist
21					BB Collab: UFSS1504 Group A Link 2			Present & Assist
22								Present & Assist
23					BB Collab: UFSS1504 Group B Link 1			Present & Assist
24								Present & Assist
25					BB Collab: UFSS1504 Group B Link 2			Present & Assist
26								Present & Assist
27								
28	Date	Day	Time	Unit		Attendance		Role of TA
29	17-Jul-23	Monday	08:10 - 11:00	Orientation Strategies for success 2.0	BB Collab: UFSS1522 Group A			Present & Assist
30								Present & Assist
31					BB Collab: UFSS1522 Group B			Present & Assist
32								Present & Assist

17 - 19 July - MON - WED F2F | 19 - 21 July - WED - FRI F2F | 17 - 19 July MON - WED Online | 19 - 21 July - WED - FRI Online

Figure 14: Winter School Online Structure of the QQ Campus

4.5.2 STUDY GUIDE

The study guide of the UFSS module plays a crucial role in delivering the content. It is not like the usual lectures that have PowerPoint slides; the study guide itself is the ‘slides’. In other words, during a session taught by TAs, they will move page by page through each unit of the study guide. Teaching it in this way confirms its being in the form of a semi-scripted lesson (see 2.3). The study guide is also designed in such a way that it lessens the cognitive load by providing many visuals, illustrations, figures, links, videos, books, and addendums, instead of simply offering the text only (Cavanagh and Kiersch, 2023:1037) (see Appendix 7.3 to view a sample of the study guide).

4.5.3 TA TEACHING MANUAL

The TA teaching manual is another crucial part of the enactment of the pedagogical practices of the UFSS module. This document, sent to all TAs before the summer or winter school commences, offers a guideline on how to teach the sessions. Since there are nearly 100 TAs annually, it would be nearly impossible to standardise them when there are only two to three weeks of teaching in the first semester and two weeks in the second semester. Thus, the TA teaching manual is aligned with the semi-scripted approach based on the study guide content, ensuring that all TAs will offer the same teaching layout to all students. Otherwise, the argument can be made that if TAs can teach as they want to, then some student cohorts will receive good sessions, while others will receive inadequate sessions. The TA teaching manual allows TAs to use their own examples and to enact their creativity in class (see Appendix 7.4 to view a sample of the TA manual). It is also important to note that the TA teaching manual does mention what to do in an online class and what to do in a F2F class, but the instruction is mostly the same for both modes.

4.5.4 ASSESSMENT METHODS:

The UFSS module also includes three reflection tasks in the first semester; one summative assignment in the second semester; quizzes in both semesters, and homework tasks in the second semester. These assessments give students the opportunity to critically evaluate their educational experiences, use learnt skills, and show that they understand the module's material.

4.5.5 CATCH-UP CLASSES AND ASYNCHRONOUS ATTENDANCE:

Catch-up classes are made available to help students who registered after the deadline or missed the summer or winter session. These classes usually start a week or two weeks after the summer or winter schools conclude, occurring on three Fridays, and consisting of each of the three sessions that were taught in the summer or winter schools. This allows every student the chance to attend and catch up on anything they missed, which is an effective strategy to ensure that no student is left behind. In addition, video recordings of each lesson are made available to increase the flexibility of the classes. These videos can be viewed asynchronously by students, so that they can make up for missed classes and increase asynchronous attendance. With these three main pedagogical approaches, this UFSS module is moving to a hyflex-pedagogical (Miller, Risser, and Griffiths, 2013:9) approach, allowing greater flexibility for students to choose their preferred class attendance mode.

4.6 CONCLUSION OF CHAPTER 4

The UFS101, now UFSS1504/1522 module, has evolved over the years in its purpose, curricula, portfolios, and pedagogical practices. The purpose of this chapter was to provide essential background information on the TAs involved in this study, and the specific module they taught. This fundamental understanding is required to comprehend the analysis offered in Chapter 5, the insights in Chapter 6, and the conclusion in Chapter 7. This was done by examining all the available reports from the UFSS Module Office to provide the context, from the nascent stages to the current development. The UFSS Module Office's structure was also summarised, along with its purpose. Lastly, the pedagogical practices currently employed were discussed.

5. CHAPTER 5: PRESENTATION OF FINDINGS

5.1 INTRODUCTION

Chapter 3 provided in-depth details of this study's research methodology, which presented a detailed overview of the mixed-methods research design, data collection procedures, data analysis strategies, and a multi-phase sampling approach. According to the three-phase study design, as aligned with the three empirical research questions, the focus of this chapter is on the analysis and presentation of the findings.

Driven by the three empirical research questions, each linked to a distinct phase of the study with different data collection methods, they served as the basis for this chapter. In the study's first phase, observations were conducted on the teaching assistants (TAs) of the UFSS1504/1522 module during their winter school class sessions. These observations were analysed in Excel to understand how these TAs implemented the three components of the Community of Inquiry (CoI) framework in their pedagogical practices. These were, Teaching Presence (TP); Cognitive Presence (CP); and Social Presence (SP), each interlinked to measure the educational experience (Shea, Richardson, and Swan, 2022:158).

Exemplary TAs were identified from the first phase of the study, which were the focus in the second phase and were qualitative in nature. Rich, detailed information about these TAs' enactment of the CoI framework was provided via their interviews, and the data collected were analysed through narrative and thematic analysis.

The third phase reverted back to quantitative techniques, using a survey that was sent out to all of the TAs and the UFSS Module Office staff. The data from the survey, analysed in Excel, revealed potential areas for improvement of these TAs and further highlighted the effective pedagogical practices enacted in the previous phases of the study.

In this chapter, the data analysis and findings are presented in the sequence in which they were gathered: First, the observations (Phase 1); then the semi-structured interviews (Phase 2); the surveys (Phase 3); and finally, the correlation between Phase 2 and 3's suggestions. Each section will present thorough findings and an analysis of the relevant subsidiary empirical research questions. These three empirical

research questions aligned with the three phases will offer three layers of triangulation of the findings. The first is the inherent qualities of using a mixed-methods approach by answering the scaffolded subsidiary research questions. The second was the use of each phase's findings to build and adjust the following phase's instrument. In other words, Phase 1's observations allowed additional questions to be asked during Phase 2's interviews, while the interviews had a section of questions that assisted in designing the survey for Phase 3. Lastly, triangulation occurs within Phase 3, where the results will be split into three groups. The first will be of the TAs observed and interviewed (Group 1), the UFSS module staff (Group 2), and then the remainder of the TAs (Group 3) in the last section. This study seeks to provide comprehensive knowledge surrounding the effective pedagogical practices of TAs in a hybrid teaching and learning environment.

5.2 PHASE 1: OBSERVATIONS

5.2.1 INTRODUCTION

The analysis and presentation of the research study's Phase 1 data are covered in detail in this chapter. Additional data can be viewed in Appendices on page 170. In Phase 1, TAs are observed in their various classroom settings, both online and in person. This phase's main objective was to investigate *how* TAs enacted the three components of the CoI framework in their pedagogical practices, which is directly aligned with the first empirical research question. The data from the observations were collected using Microsoft Forms and a printed supplementary offline version, allowing for flexibility when recording observations.

The analysis was conducted using Microsoft Excel from the data gathered during Phase 1. Quantitative analysis through descriptive statistics was appropriate because the data retrieved from Microsoft Forms were in the form of an Excel file. The details of the data analysis process, including how the data were organised, categorised, and evaluated using different statistical measures, such as average scores and frequency counts, will be covered in this chapter.

Social, cognitive, and teaching presences, the three components of the CoI framework, will be used to organise the results. The frequency and occurrence patterns for each factor in online and in-person contexts will be discussed. To identify

each environment's differences, similarities, and distinctive characteristics, the chapter will also compare the data from the two campuses, Bloemfontein (BFN) and QwaQwa (QQ), respectively.

The exemplary TAs are identified using this methodical analysis and presentation of the Phase 1 data, which prepares the ground for the qualitative investigation in Phase 2. The results from this stage will help address the initial empirical research question and lay the groundwork for the study's successive stages.

5.2.2 ENACTMENT OF THE COI FRAMEWORK DURING OBSERVATIONS

An in-depth analysis of TAs' implementation of the CoI framework on the campuses of BFN and QQ is the emphasis of this section, which delves into the study's Phase 1 core. This analysis seeks to reveal the dynamic interconnectedness of TP, CP, and SP, within the learning environment using semi-scripted lessons, as seen by careful observation. The varied set of criteria, each assessed using a nuanced Likert scale, offers a multifaceted view of how TAs interact with students, promote discussion, and design an inclusive and fulfilling learning environment. See Appendix 3.1 to view the observation forms.

This section thoroughly examines the interactions, plans, and teaching methods the teaching assistants use, via the prism of the three CoI presences. In addition to the Likert scale, which accommodates different frequencies of enactment, group comments provide a context for the observed teaching approaches. These observations, gleaned from TAs' experiences on both campuses, add to one's knowledge of the complex differences between online and in-person instruction.

This will first be unfolded by presenting the collective hybrid results of both BFN and QQ campuses. Once the combined results are presented, the F2F and online results of the two campuses will be compared.

5.2.3 BOTH CAMPUSES' COMBINED RESULTS

Figure 16 below illustrates the collective hybrid averages for both campuses of the three presences of the CoI framework. This provides an overview of what paves the way for the detailed analysis of Phase 1.

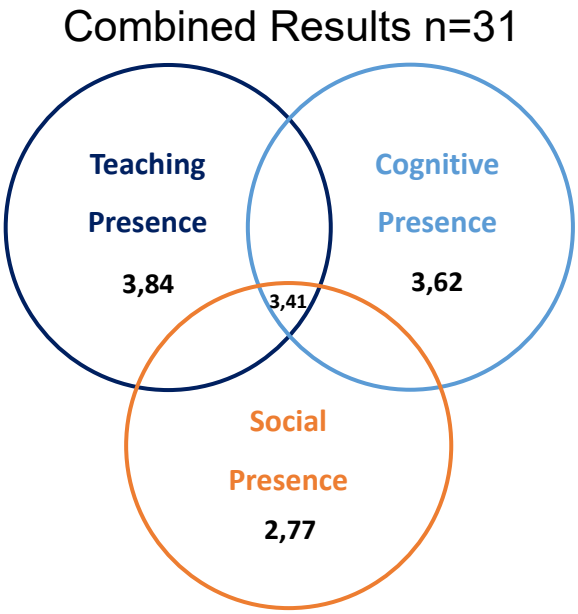

Figure 16: Combined averages of the CoI (Hybrid)

The analysis of the three presences—TP, CP, and SP—for both the combined results of the two campuses (BFN and QQ) and the combined results of the hybrid modes (online and F2F), offer insightful information about effective pedagogical practices that promote student engagement and learning. Across the different presences and criteria within these presences, there were variations in how well TAs enacted the critical aspects of each presence. TP scored an average of 3.84, the highest of the three presences. Among the many effectively enacted criteria, it was observed that TAs were not as effective in encouraging students to ask questions, which was the lowest scoring criterion of TP. This can be improved in the TA training programme. CP scored an average of 3.62, which is second of the three. The analysis of CP indicated that TAs usually assisted students in reflecting, making connections between concepts, and exercising critical thinking and problem solving; nevertheless, there were several areas in which students' engagement with higher-level thinking might be strengthened. It should also be noted that the study guide greatly assisted CP in terms of providing real-world examples aligned with the content. Regarding SP, TAs made an effort to

interact with students on both campuses, with the QQ campus placing a more significant emphasis on developing relationships. However, social presence scored the lowest average overall, 2.77, mainly due to TAs failing to create opportunities for students to collaborate, such as working in pairs or groups. These results point to the need for more deliberate approaches to encouraging critical thinking, creating a positive learning environment, and assisting students in connecting the course material with their personal and professional lives.

With an overall understanding of the trends in the combined results above, the next section will address the detailed comparison between the two campuses – BFN and QQ – and the comparison between the two modes of teaching – F2F and online. This analysis will offer a nuanced perspective of how various elements, including campus dynamics and instructional formats, influence the effectiveness of pedagogical practices. Analysing these comparisons can assist in uncovering valuable insights that will answer the empirical research question aligned with Phase 1.

Supplementary – see Appendix on page 170 to view the tables detailing the above.

5.2.4 BFN AND QQ RESULTS AND COMPARISON

This section of Phase 1 will delve deeper and break down the previous section to allow for comparative analysis. This will be executed by comparing the two campuses – BFN and QQ – and a further breakdown of comparing the instructional modes – F2F and online. This will first be illustrated using Figure 17 that will elicit the average scores of the breakdown parts; thereafter, it will present and interpret Phase 1's data in detail through tables. Figure 17 below illustrate the averages of the three presences for both campuses and F2F and online separately.

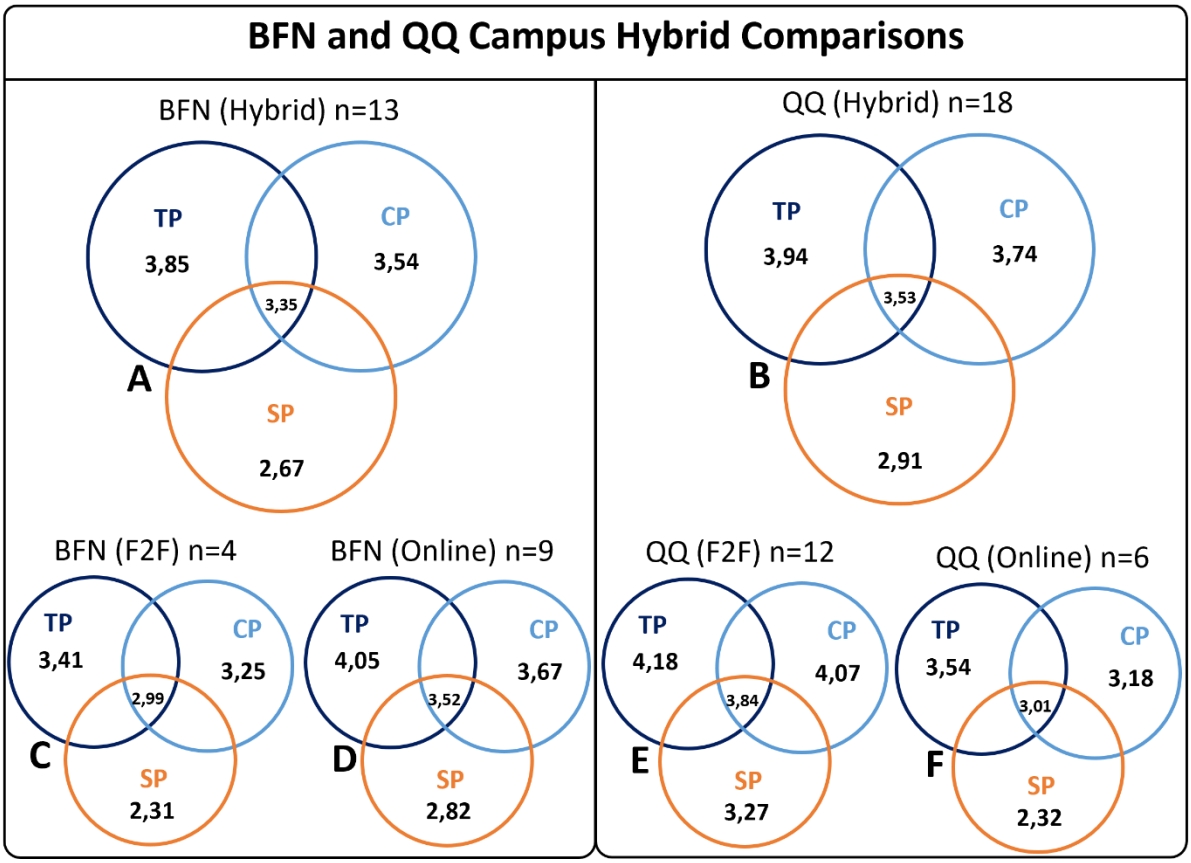

Figure 17: BFN and QQ Campus Hybrid Comparisons

Table 8: BFN and QQ Results and Comparison for Phase 1

<table>
<tr><th colspan="2">BFN (Hybrid) n=13:</th><th colspan="2">QQ (Hybrid) n=18:</th></tr>
<tr><td colspan="2">TP (3.85) is the highest score for BFN, indicating that the TAs, on average, often enacted the criteria for TP. CP scored 3.54 between ‘sometime’ and often in enacting the criteria. However, SP scored 2.67, indicating that TAs were between ‘rarely’ and sometimes, enacting the criteria of this CoI presence.</td><td colspan="2">QQ’s TP (3.94) is higher than BFN’s, indicating the TAs often enacted the criteria on average during their lessons. CP (3.74) also scored higher than BFN, indicating that TAs were averaging nearly on an often basis enacting the CoI presence. Lastly, also higher than BFN, SP scored 2.91, the second-highest SP score of all the figures. However, it is still low in frequency, averaging below sometimes.</td></tr>
<tr><th>BFN (F2F) n=4</th><th>BFN (Online) n=9</th><th>QQ (F2F) n=12</th><th>QQ (Online) n=6</th></tr>
<tr><td>The small sample size of four may be a limitation because of</td><td>The averages for the online mode of BFN scored considerably</td><td>Firstly, QQs F2F overall score (3.84) is the highest among the</td><td>The total average for QQs online mode (3,01) is similar to BFN’s F2F</td></tr>
</table>

logistical constraints encountered at the start of the fieldwork. With the lowest total average out of the four modalities (2,99), it is suggested that there is room for improvement. TP at 3,41 and CP at 3,25, indicate that their enactment averaged between *sometimes* and *often*. SP's score (2,31) was the lowest of the four, averaging just above 'rarely' is indicative of room for improvement in the enactment of the interactive and collaborative classroom environment.	higher than the F2F for teaching practice (4.05). This means that the instructive abilities of the TAs were quite *often* effectively enacted in the classroom for this CoI presence. CP scored 3,67 – between *sometimes* and *often* – leaving some room for improvement. At the same time, SP (2.82) scored below *sometimes* but still higher than the F2F score of the same campus. This means that even with online modes, further training is needed to enact SP in the online environment effectively.	two campuses and modes, indicating that the TAs almost *often* enacted all the criteria, on average, across the three presences. TP at 4,18 and CP at 4,07, indicated that the enactment of these two presences was effective. Even though SP (3,27) was lower, it was still higher than CP at BFN's F2F and is also the highest of all SPs. This means that the TAs at QQ were able to incorporate interpersonal and interactive activities that encouraged collaboration.	mode (2,99), which is an interesting discovery, indicating the two campuses' results are reversed, where BFN did well online, and QQ did well F2F. TP (3,54) scored between *sometimes* and *often,* which is relatively good. CP (3,18) scored just above *sometimes,* which means that the understanding of the content might not have received the same experiences in class as F2F. SP (2,32), which is nearly identical to BFN's F2F (2,31), which scored between 'rarely' and *sometimes*, suggests room for further training regarding enacting this presence.

The comparison of the overall averages of the CoI presences across the two campuses and the two modes reveals variations between the three presences. TP was consistently the highest-scored presence, where TAs illustrated that their facilitation skills were quite effective between *sometimes* and *often*. Cognitive was the second highest, indicating that the content was taught in such a way that it promoted critical thinking amongst the students, albeit only with some instructional modes and/or

campuses. SP is the lowest score across the two campuses and instruction modes. However, QQ's F2F score was above *sometimes* and is the highest of all the SP averages across the comparisons.

In the next section, a deeper scrutiny of the details of how these averages are broken down will be looked at. It will illustrate the distribution of the Likert scale in a side-by-side analysis and comparison.

Supplementary – see Appendix on page 170 ***Error! Reference source not found.****to view the tables detailing the above.*

5.2.5 SUMMARY OF PHASE 1 RESULTS

Teaching Presence:

The analysis of TP across campuses and instructional modes reveals key insights regarding the efficacy of the TAs' pedagogical practices. Certain modalities stood out per campus – QQ F2F and BFN online – in providing an engaging and interactive learning environment through effective facilitation enactment. BFN F2F and QQ Online showed room for improvement, notably in terms of offering insightful feedback throughout class activities. This implies that TAs on all campuses might gain from improving their feedback techniques to encourage students' comprehension and engagement. Moreover, it is evident that TP can be effectively enacted regardless of the hybrid mode of delivery.

Cognitive Presence:

The analysis and presentation of CP show the efforts made by TAs to encourage reflection and critical thinking. QQ's F2F mode excelled at promoting a culture of metacognition and making connections between the course material and concepts from the outside world. Both campuses, especially BFN's F2F mode, have room for improvement with reference to inspiring students to reflect on their learning strategies and pinpoint areas for development. Both face-to-face and online learning environments were unable to effectively offer opportunities for students to participate in higher-order cognitive activities.

Social Presence:

The potential of TAs to foster a collaborative and inclusive learning environment is shown through SP analysis. In particular, QQ's F2F campuses excelled in creating a welcoming environment where students felt comfortable participating. They were successful in establishing connections and fostering a strong sense of community. BFN campus demonstrated the potential to develop relationships and foster an inclusive learning atmosphere, specifically in online classes. The results could differ when using a larger sample for BFN F2F. On the other hand, QQ online struggled with enacting SP with no visible collaborative activities during the observations. In summary, this study reveals that there are still some gaps across the two campuses and hybrid modes regarding the use of collaborative activities. However, the TAs were able to foster a welcoming educational experience successfully.

To conclude, QQ F2F and BFN Online consistently did well in enacting the presences across the criteria from the observation forms, with a few minor criteria that could still be improved. This means that it is possible for the effective enactment of the CoI framework presences in both hybrid modes. Overall, TP was enacted the best according to the distribution of scores, with CP second and SP last. There is room for improvement regarding the three presences, but this is noticeably more obvious in SP.

5.2.6 EXEMPLARY TAS

Having concluded Phase 1's findings, which involved meticulously observing 31 TAs assessed against the CoI framework, we turned our attention to Phase 2. This involved a more in-depth investigation of the TAs who scored well in Phase 1. Figure 19 provides a baseline for the overall average of Phase 1's score, while Figure 18 delineates the scores of the exemplary TAs who were interviewed in Phase 2.

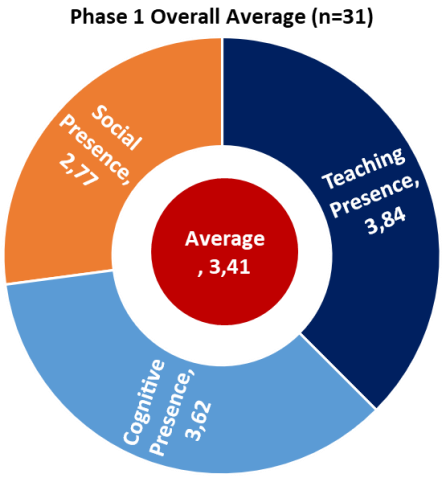

Figure 19: Phase 1 Overall Average

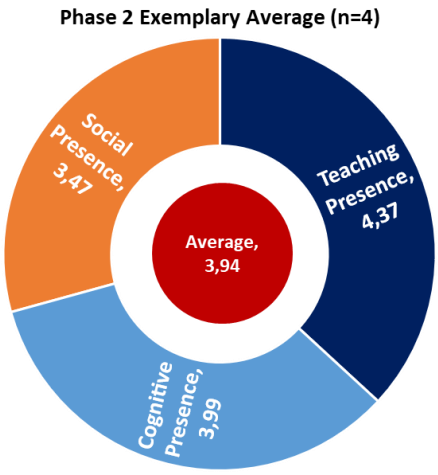

Figure 18: Phase 2 Exemplary Average

Two outstanding TAs were chosen from each campus, BFN and QQ, to represent F2F and online, hybrid modalities to provide a balanced perspective (as seen in Table 5). This revealed a comprehensive understanding of the various educational styles and situations. A TA who won the title of "Presenter of the Year" in 2022 was also interviewed in order to gain information from their TA experiences. This enriched the study with a deeper, more comprehensive understanding of effective pedagogical practices and examples from an award-winning, accomplished TA.

Phase 2's targeted interviews with TAs who excelled in enacting the CoI presences were designed to delve deeper into their complex experiences, coping mechanisms, and perspectives. The conversations drawn from these TAs will be explored in the next section, Phase 2: Semi-structured interviews.

5.3 PHASE 2: SEMI-STRUCTURED INTERVIEWS

5.3.1 INTRODUCTION

To examine and comprehend the experiences and viewpoints of the TAs in the context of online and F2F teaching modes, the individual interview findings and the cross-case analysis of the interviews are presented in this chapter. To provide a thorough understanding of the research findings, this analysis aims to identify significant themes, patterns, and overarching trends that arose through a thematic analysis of the interviews. These themes, patterns, and overarching trends are illustrated through the bold subsidiary beneath each question asked. Inductive coding is visible through the three CoI elements – teaching, cognitive, and SP – and deductive coding from themes

derived from the collected responses. All quotations used in this section are the direct words from the interviewees, used narratively to collectively support the themes.

To fully capture each participant's distinctive opinions and experiences, the findings will mention the interviewee's number in each statement. In addition, the interviewees' perspectives were from their respective campuses. Interviewee 1 was from the BFN campus and was a TA in 2022, as one of the best presenters. Interviewees 2 and 5 were from BFN, and interviewees 3 and 4 were from QQ. These latter four interviewees are current TAs and taught in the recent winter school in 2023.

See Appendix 3.3 to view the semi-structured interview questions.

5.3.2 FINDINGS OF INTERVIEWS

In this section, the results of the interviews will be presented for the 11 questions asked in the main section of the interview. The last six questions will be shown in the next section – suggestions from interviewees.

1. Can you describe how you interact with students during online and face-to-face teaching modes?

Engaging students in online and face-to-face instruction modalities remains a multidimensional endeavour. Interviewees described numerous strategies for increasing student interaction and participation. Notably, their tactics coincide with the CoI framework's CP, SP, and educational presence parts.

Teaching presence

Interviewees 1, 2, and 4 actively participated in facilitating dialogue. Interviewee 1 interacted with students via online tools, such as the "chat box" and "polls". This allowed them to "engage more with the students" effectively, extending TP to the online mode of delivery. Interviewee 3 mentioned that "we have shy learners" and was able to take the shy student's response and share it with the rest of the class, ensuring that no student's voice is left out. Interviewee 4's technique of rewarding engagement by bringing "sweets to the class" was seemingly informal, and initiative enhanced TP by encouraging students to participate in class actively. Interviewee 5 mentioned that they "don't like…lecture style tutorials or sessions"; they emphasised that a more active teaching style is better and more "meaningful" for students.

Cognitive presence

Only interviewee 4 specifically referred to aspects related to CP. “I try to break the content up into simple everyday life things that we see”, was said. This is consistent with CP because it promotes a greater understanding of the content. The use of relatable examples linked to their academic studies encouraged students to ask questions to assist them in overcoming the cognitive load associated with intense courses.

Social presence

Creating a warm and inclusive environment is critical for establishing SP. Interviewee 1 stated that building relationships with students is vital because students should know that it “is not just a teacher in front of…” them, but “…someone that actually cares about” them. Interviewee 2 made students feel comfortable by starting with introductions with the intent “so that there’s a sort of relationship or…connection between me and my students”. Interviewee 3 emphasised the significance of establishing “ground rules” that “accommodate all of us” to create a more interactive classroom, where everyone feels respected. Interviewee 5 did not apply group activities in their online classes as they did “prefer not to” because of its challenges. Furthermore, this interviewee specifically stated, “I honestly prefer face-to-face…I think it’s a bit easier to form meaningful connections with your students”. In their F2F classes, they liked using “debates” and “U-shape” groupings for students to “interact with each other”. This allowed them to build relationships and enact SP, specifically for F2F.

2. What are some effective teaching strategies for online and face-to-face teaching modes?

Something that stood out from interviewees 1 and 2 is the emphasis on preparedness as an effective teaching strategy. “So, I feel effective teaching strategy is to still prepare very well” – interviewee 1; “I am well prepared for the class. I know my content”. Even though the other TAs did not mention this in their interviews, it was implied through their responses that they were also well prepared.

Effective pedagogical practices for online teaching:

Interviewee 1 mentioned that it is important to "use your video in your camera and look at your screen for more engagement" when you teach online, since it will not just be a voice speaking through a computer on the student's side. In addition, this TA mentioned that online teaching was the easiest for them, since they could use a "second screen" to have notes and the TA teaching manual open, so as to be much more effective with the instructional sequence of class. However, this cannot be a required standard strategy for all other TAs, since having an extra screen will come from their personal finances. All the interviewees mentioned using polls because it allows the TA to gauge the interaction in their classrooms.

Effective pedagogical practices for F2F teaching:

The use of "icebreakers" was also implemented by all interviewees, mainly in the form of getting to know one another and building rapport. This helps to create a conducive classroom environment for students to be more comfortable and engage more often (Mepieza, 2023). By doing this, the use of icebreakers and creating a conducive classroom, is in line with the enactment of SP. Walking around in the classroom was mentioned by multiple interviewees to be a good practice, not only for "getting to know students" but also for the TA to be more engaging with the students in terms of content delivery. Presenting content effectively when walking around and being more active, creates a learning experience wherein students encounter all three CoI presences. Interviewee 3 liked to "pair them up" and to work together and answer any questions throughout the session. The interviewee said this assisted in guiding shy or quiet students to engage in the classroom. Interviewee 5 found "music to work very well, even if it is just at the beginning of your session", and "it really gets them in the mood". Making a class more relevant by "keeping things relatable" through music really worked for this interviewee and encouraged students to feel comfortable.

3. How do you create a sense of community among your students in both online and face-to-face classes?

Personal engagement and relatability:

Interviewees 1 and 5 acknowledged the inherent difficulties in developing a sense of community in the online setting by stating, "I feel that's very difficult to do in an online

environment” – interviewee 1, and “it’s quite a difficult question to answer for online” – interviewee 5. They emphasised the necessity of encouraging students to use their cameras during online sessions in order to boost engagement and create a more intimate connection. Interviewee 2 emphasised the importance of sharing personal stories as a way for students to relate to one another and the TA. A more relevant and open atmosphere is created by “introducing themselves”, “sharing experiences”, and encouraging others to do the same, thus establishing a sense of belonging.

Pairing and Group activities:

In both online and face-to-face situations, interviewee 3 advocated that students “pair themselves up or to form small groups on their own” for group activities. These activities provided a bridge for students who may not have known one another previously, thus encouraging teamwork and interaction. Students were encouraged to collaborate, whether through partnered talks or small group projects, which contributed to a shared sense of responsibility and community. However, other interviewees mentioned the difficulties of using online groups, that it might not be as effective, and that the “use of emojis or speak to each other in the chat box” works well. This can be confirmed from the observations that TAs did not entertain the idea of group activities during the observations in Phase 1.

Music and personal questions:

Interviewee 5 discussed an uncommon yet effective method of using music as an icebreaker in face-to-face sessions. Music was discovered to promote a pleasant and welcoming environment, and it was further mentioned that “I feel like that [music] brings people together in general to make them feel like they belong”. Furthermore, in both online and face-to-face settings, asking “personal questions every now and then” about students' backgrounds, studies, or interests was regarded as beneficial in developing a deeper connection with the students and for nurturing a sense of belonging.

4. Can you describe any specific challenges you face in teaching online or face-to-face, and how do you address these challenges?

Online challenges:

Interviewee 1 emphasised the challenges of “loadshedding” and students “reconnecting” in online classes. They dealt with this issue by ensuring they had adequate data to “hotspot from my cell phone” and by being aware of the “loadshedding schedule” so they could plan accordingly. When connectivity was inconsistent, it was required to relocate to a more reliable site, but when students were experiencing connection issues, it was out of their control. Loadshedding and connectivity issues were more prevalent at QQ mentioned by both QQ TAs (interviewees 3 and 4) as a problem. In fact, while conducting the two QQ interviews, I lost both TAs for a few minutes due to connectivity issues.

Keeping students engaged in online classes might be difficult because they are quickly sidetracked. Interviewees 1 and 5 emphasised the need to ensure “student engagement” is being actively practised to overcome this challenge. They also recommended having teaching assistants prompt pupils or take over classes as necessary.

The interviewees further mentioned students' unwillingness to participate in online sessions actively. They believe that students “log into class…walk away…to watch TV or do something…” else. Another stated that they think there are students that “just log in and then they don’t participate”. To address this obstacle, they asked other TAs within the session to provide examples and create interaction, thereby breaking down perceived barriers between students and TAs.

According to interviewee 4, network issues are a big challenge “in this area” (QQ) for online teaching. They said that network outages sometimes affect the flow of online lessons in their location, which is out of their hands. Ironically, during the interviews of both QQ TAs, they lost internet connection, and it caused some issues about conducting the interviews effectively.

F2F Challenges:

Interviewee 1 emphasised the logistical difficulties of face-to-face instruction, such as “set everything up”; testing the “projectors”, and “then also managing a large group of

people (students)". To manage these hurdles, being well-prepared and coming early to the venue to set up, works well to mitigate any issues that might arise.

Interviewee 3 discussed interruptions in the classroom caused by a few students trying "to be the funny guy". They addressed this issue directly, ensuring that the learning atmosphere remained conducive for all students. This proactive strategy sought to reduce distractions and preserve focus.

Language hurdles were mentioned by interviewee 4 as a challenge, particularly for students "new from the varsity" and struggling to "adapt to the English language". Language limitations might make it challenging to communicate and participate effectively, and most students at university have English as a second language.

Interviewee 5 discussed a unique challenge that they experienced with the university's pronoun policy, which required a shift in how they addressed students. They indicated "that took a bit of a workaround" to adjust to this policy by addressing pupils by "name basis" or "giving them a nickname" when they preferred it.

Teaching assistants navigate these issues using technological solutions, interpersonal skills, adaptability, and proactive techniques to guarantee a productive and inclusive learning environment, whether in online or face-to-face sessions.

5. How do you evaluate student learning in both online and face-to-face teaching modes?

Application in Scenarios: To assess students' capacity to apply knowledge, Interviewee 1 suggested "asking them how you would apply this in a scenario in your example at home" during the class, allowing the TA to gauge their understanding. This method promotes critical thinking and practical application for online and F2F classes.

Interviewee 3 provided a structured technique in their approach to evaluating student learning by asking them questions or checking in with the students "after…subtopic[s]". This TA experienced this to work well in gauging the learning from their students in each class; this was used and mentioned to work in both hybrid modes.

Interviewee 4 mentioned that they "tend to create questions that will bring me back to the content we were learning about" to work well. Similarly, interviewee 5 stated, "I like to use probing questions a lot". These two techniques align with interviewee 3's response but are less structured and more informal and applied in both modalities.

However, an added technique that interviewee 5 mentioned was quite clever. This TA instructed students “to explain the concept to a classmate”. By doing this, students were able to learn and teach the concept at the same time. The latter technique was mentioned to be “easier” F2F, but “can definitely work with it in online”.

Using the chat box in the online space was also helpful to the TAs in reading student responses, allowing the TAs to evaluate whether the students were giving correct or incorrect answers. Interviewee 4 gave a simplistic yet effective response to this question, stating that “if students are able to answer the questions, then it means I’ve done my work”.

These methods of testing comprehension, critical thinking, and the practical application of course material are used in both online and face-to-face situations. They allow TAs to modify their teaching tactics in response to students' performance and comprehension, resulting in a more effective learning environment.

6. How do you ensure that students are actively engaged in the learning process in both online and face-to-face teaching modes?

Interviewee 1 emphasised the significance of developing interactive content that goes beyond standard lectures, “[s]o, as I've mentioned, nobody's going to be actively involved with that and feel like this is meaningful to them”. This statement accurately portrays the TAs rationale regarding their teaching philosophy, to encourage students to participate in discussions and activities actively and to ensure that the students can take something away from the session. This TA additionally stated that the TA should make the “content interactive” and not use “a lecturing mode” suggesting that TAs should employ the “inquiry method”. This refers to the inquiry-based learning approach using probing and prompting to encourage participation.

Interviewee 2 applied a technique that was implemented in both modalities by requesting short responses from the students, such as “Give me an indication in the chat box” and “Do you guys understand?”. These quick prompts expected from students allow them to see the ease of participating, even if they do not answer a question regarding the content specifically. At the same time, they assist the TA to evaluate student learning progress in real time, through short responses.

As mentioned previously, interviewee 4 applied a unique approach by bringing incentives to class in the form of sweets. Naturally, handing out sweets was applied only in F2F classes; that while the TAs "ask questions, if they [the students] participate, and then I rewarded those…and that keeps on growing in the class". This means the more students see that, regardless of whether they were able to answer the question effectively or not, they will still get a reward for participation, and the more they will engage.

"Pop culture references everywhere", the use of humour, or "make a reference to a song" was mentioned by interviewee 5 to work well to gauge student engagement in her F2F classes. This interviewee believed this approach to be the easiest way to "find out if they engaged with the content" and by making "things relevant and recent, has worked for me both online and face-to-face".

Fostering student involvement in online and face-to-face situations necessitates a combination of interactive teaching approaches, fast feedback mechanisms, and creating a classroom environment where students feel comfortable contributing and sharing their opinions. These tactics contribute to creating an engaging learning environment that encourages active student participation.

7. How do you adapt your teaching approach to suit the different teaching modes of online and face-to-face?

Interviewee 1 mentioned that the two modalities require different preparation methods. With F2F, "it feels like I'm going to do an oral", but with online, the TA mentioned that it is only to ensure that "your laptop is working…WI-FI is fine" and that "technology is the most important". This is indicative of the two teaching platforms being similar in content but dissimilar in delivering the content.

Similarly, interviewee 2 mentioned that regarding the "online classes…to make sure I sign in 15 minutes before the class begins". This means that regardless of the platform, TAs must arrive or log in early to test all the equipment or tools to teach.

Interviewee 4 stated that "when it comes to online", you should know "how the Blackboard works. [Y]ou need to know how to mute someone's mic" because it can be distracting, as well as disruptive if a student accidentally leaves their microphone on.

It is clear that with online, it was acknowledged that there are differences in delivering the content and that one should be adaptable per mode of delivery. It is also noteworthy that it may require more effort to present in F2F effectively, since it requires the TA to use body language, move around, and use different tactics to get hold of the students' attention. When online, it is difficult to fully gauge whether students are following, since there are no faces, only names, which requires different tactics to ensure students are attentive during class.

8. How do you facilitate student collaboration and discussion in both online and face-to-face teaching modes?

All of the interviewees suggested group work as the method for student collaboration in both modalities. However, two interviewees mentioned that with online, it is "difficult" to facilitate "breakout groups". The reasons were that, as the TA, one must intrude into the different groups to ensure that the students engage and follow through on the activity. Furthermore, technical errors occur when students are not in groups, and the TA should manually add them to different groups. Interviewee 5 specifically mentioned that they "don't really like the breakout rooms" because they always encountered problematic issues. Thus, they rely on using the chat box for discussions. This was a common trend in Phase 1, where TAs in online classes relied on the chat box with no breakout rooms observed; hence, the lower score of SP.

In terms of F2F classes, group work was mentioned by all the interviewees, while pair work was mentioned by interviewee 5. Interviewee 2 used a group technique by grouping students according to the class rows. This allowed the TA to allocate questions from activities per row. For instance, row one would discuss question 1, etc. All five interviewees mentioned that they actively walk around when presenting the content and facilitating activities, ensuring that hands-on involvement is practised.

9. Can you share an example of a successful online or face-to-face teaching experience you had with your students?

There was a general consensus regarding what all the interviewees considered successful in both hybrid modes. It was when they had a class where the majority of the class participated actively, contributed to the session, and when they connected with students on a more personal level. Interviewee 2 mentioned that when students recognised the TA outside of the class on campus and greeted and thanked them for the good sessions, it also contributed to the success of their classes.

10. Can you reflect and share an experience that was not as successful as you had hoped and what you would do in the future to avoid it?

The interviewees all gave similar answers regarding unsuccessful experiences which caused low participation from students. This further indicated that online classes were the most unsuccessful platform. An interviewee stated that “I cannot see them” and “I would just stick to the polls” since it is an easier method for students to participate in an online class than to ask them to raise their hands and speak using their microphone. This illustrates a disconnect between the TA and the students in the online class. Thus, strategies must be incorporated to ensure that online classes do not lose one of the core elements of the CoI, which is SP.

Interviewee 5 mentioned one session where a “colleague didn’t pitch” because they “were confused by the schedule”. This resulted in the TA jumping in and ensuring that the class was salvaged. The same interviewee mentioned that they presented online once, had “technical difficulties”, and had to reconnect multiple times. The interviewee was frustrated by these online difficulties because their prepared content could not be presented to the students.

11. How do you ensure that students are motivated to learn in both online and face-to-face teaching modes?

“I feel like the content is the most important part of motivating students” was mentioned by interviewee 1; “the importance of the module” – interviewee 2; “to show…enthusiasm” and not “show up bored” – interviewee 3; “I tell them about my experiences” – interviewee 4; and “to share my own experiences of my own studies” – interviewee 5. The various responses of the interviewees indicate that there are multiple methods to motivate students during their classes. Interviewees 1 and 2 mostly had similar responses regarding the relevance of the content and the module. In contrast, interviewee 3 focused more on delivering the content, by ensuring that they were not seen as boring. Interviewees 4 and 5 gave the same responses by sharing their personal student journey and indicated that this worked well. It is interesting to note that the collective answers of these five interviewees cover the essence of the CoI elements. The responses of interviewees 1 and 2 can be grouped under CP; interviewee 3 under TP, and interviewees 4 and 5 can be grouped under SP.

5.3.2.1 SUMMARY:

TAs presented effective techniques to deliver successful online and face-to-face instruction. They emphasised the importance of content relevance, ensuring that what is taught is appropriate for students' interests and needs. The TAs used interactive strategies, such as group discussions, real-world case studies, and application questions to achieve active participation. Motivation appeared as a major priority, with TAs emphasising the benefits of the modules they teach and infusing excitement into their lessons, as well as taking inspiration from their own educational paths to motivate students. Another important factor was adaptability, with TAs adapting their teaching methods to the two hybrid modes, notably addressing the unique issues given by online learning. A common focus was on student-centred instruction, which included probing questions, regular feedback, and encouraging active engagement. Reflective practice was critical in developing teaching approaches, while technological proficiency in online platforms ensured consistent and effective learning experiences. TAs emphasised the importance of connecting with students on a personal level by sharing relatable stories and experiences, which contributes to a helpful and engaging learning environment. Overall, their findings emphasised the significance of student involvement, motivation, and adaptation in effective teaching across multiple forms of education.

5.3.3 SUMMARY OF PHASE 2 RESULTS

TAs were interviewed about their roles and experiences in both online and face-to-face teaching approaches. One recurring issue was the significance of student participation and interaction. The importance of developing a collaborative learning environment, both online and in person, was emphasised by interviewees. Group work, peer interaction, and leveraging technology, such as breakout rooms in online meetings were among the strategies used.

Motivating students was also a widespread concern. To keep students engaged and invested in their studies, interviewees emphasised the importance of relatable examples, active engagement through discussions, and sharing personal learning experiences.

Interviewees provided insightful information about TA training and assistance. They evaluated the training programmes to be generally beneficial, particularly when they incorporated content-related instruction and practical demonstrations. There were differing views on the appropriate training period, with one TA preferring shorter, more intense sessions, while others preferring longer, more in-depth instruction.

Smaller group training, mock presentations during interviews to test presentation abilities, increased TA coordinator support, and an emphasis on accountability and continuing evaluations, were suggested as ways to improve the training programmes. Interviewees also suggested measures to promote student involvement and transparency in administrative procedures.

Finally, the interviews emphasised the necessity for active student participation, motivation, and comprehensive TA training programmes. These findings can help to improve the effectiveness and student-centredness of teaching and support experiences, both online and in F2F classroom environments.

5.4 PHASE 3: SURVEYS

5.4.1 INTRODUCTION

The analysis and presentation of data in this section are centred on the findings of this study's third phase. With the aim of finding areas for development for the TAs within the CoI framework, the third phase switches back to quantitative data gathering with the deployment of a survey instrument. The survey questions were designed based on the observations and the responses in the interviews. The survey for Phase 3 was designed with 35 criteria, 34 of which were Likert scale statements exploring the CoI presences and the TA training programme. There was one open-ended question at the end of the survey requesting any suggestions, which will be analysed in the next section.

The survey was sent to all the UFSS TAs and UFSS staff members. These combined results will be presented first, and then be split into three groups for triangulation purposes. Using the demographics from Phase 1, TAs were grouped into ‘Group 1 – Observed TAs’; all the UFSS staff members were added to ‘Group 2 – UFSS Staff

members'; and lastly, the remainder of the TAs were added to 'Group 3 – Remainder TAs'. The survey's goal was to fully represent the range of viewpoints held by these groups, thereby enhancing the datas' comprehensiveness, as well as triangulating the findings of the three groups. The third and final empirical research question is based in part on the survey data, which also helps in the triangulation of the data, strengthening the study's reliability and validity. Another factor which added reliability and consistency was to use the Cronbach's Alpha (CA) reliability test for the surveys, allowing the results to be thoroughly tested for variances (Barbera, Naibert, Komperda and Pentecost, 2020:257). See the overall consistency scores in Table 9 below of the CA's test.

Table 9: Phase 3: Cronbach Alpha Scores

Teaching Presence	Cognitive Presence	Social Presence	TA Training Programme	Overall Score
0,99	**0,98**	**0,97**	**0,99**	**0,99**

Owing to its relevance for processing quantitative data, Microsoft Excel was used as the software program for the data analysis as in Phase 1. The methods of data organisation, the statistical measurements used for interpretation, such as averages, and the graphical display of the results will all be covered in this chapter.

The outcomes will then be presented systematically. First, the results from all the groups will be combined and presented. Then, the various groups will be given separately to highlight any differences and similarities, followed by the analysis of the suggestions given by all the respondents on what they think could be improved for the TA training programme.

In conclusion, this chapter aims to comprehensively analyse and present the results from Phase 3's data. It also assists in answering the last empirical research question, as well as assisting in the triangulation and validation of the overall research study.

5.4.2 PHASE 3 – COMBINED RESULTS

Four sections—TP, CP, SP, and the Teaching Assistant Training Programme, will be covered as the combined results will be explored. Each segment includes a stacked graph from the responses, as well as the analysis drawn from the survey's results,

giving a broad picture of how well the training matched the Community of Inquiry framework's components.

5.4.2.1 TEACHING PRESENCE: COMBINED RESULTS

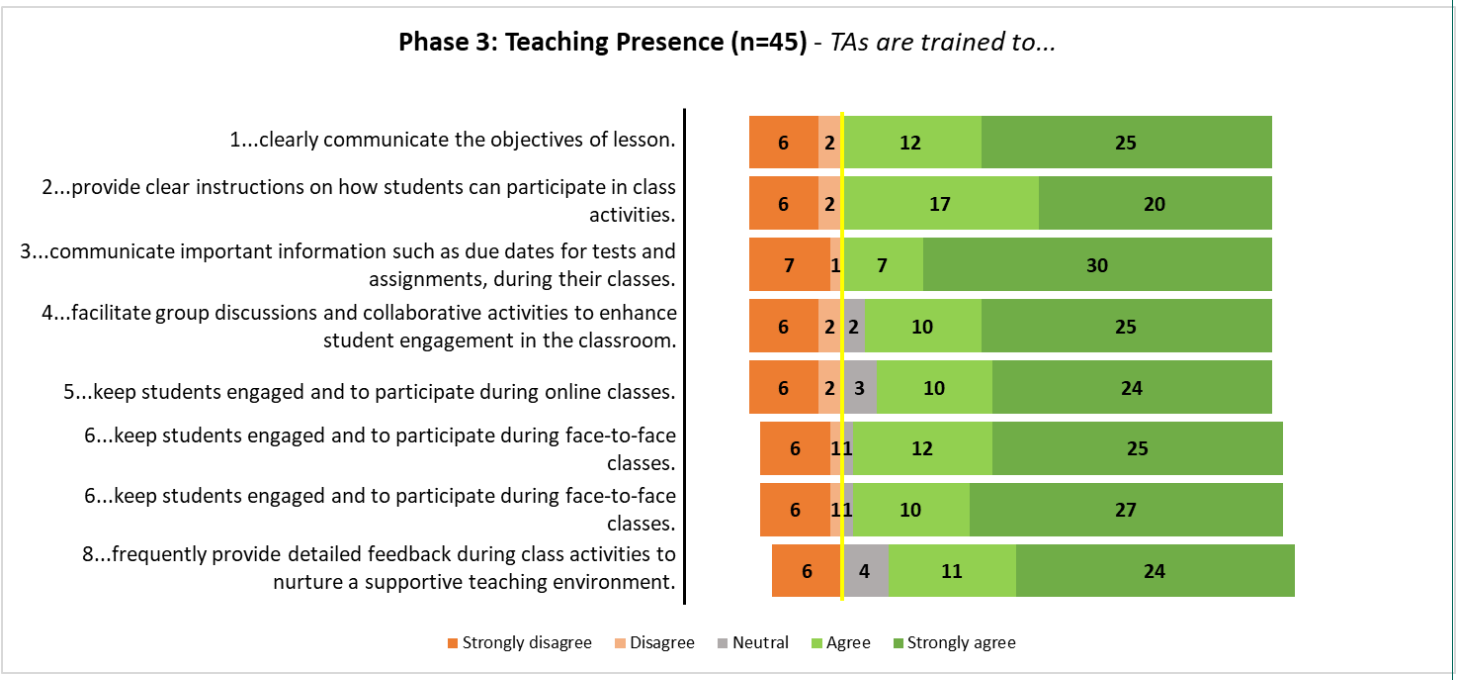

Figure 20: Phase 3 Teaching Presence - Combined Results

An obvious underlying pattern that highlights a positive evaluation of TA preparedness can be seen when studying the aggregated responses to TP within the CoI framework. In particular, the responses repeatedly show that a substantial number of respondents either *strongly agree* or *agree* with the premise that TAs are effectively trained across the criteria of teaching, ranging from communicating objectives to encouraging engagement in both online and face-to-face settings. For instance, the data indicate that TAs' competence to explain instructional objectives is overwhelmingly affirmed, with 37 out of 45 respondents either *strongly agreeing* or *agreeing*. Similar to this, there is a resounding consensus in favour of TAs on providing clear instructions, conveying important information, promoting discussions, and establishing helpful learning environments. Nevertheless, an undercurrent of dissonance becomes apparent, with an average of six respondents *strongly disagreeing* across the criteria. This dissension could possibly indicate some gaps within the TA training programme. Notably, while the data primarily show agreement on the TAs' abilities to facilitate group discussions, observational data from Phase 1 differentiates slightly on this by pointing out practical difficulties, supporting the idea that there may be a gap between

training and real-world enactment. The survey's results highlight the TA training process's strengths, while also highlighting shortcomings, which provide opportunities for reflection and improvement in order to strengthen the TP component of the CoI.

5.4.2.2 COGNITIVE PRESENCE: COMBINED RESULTS

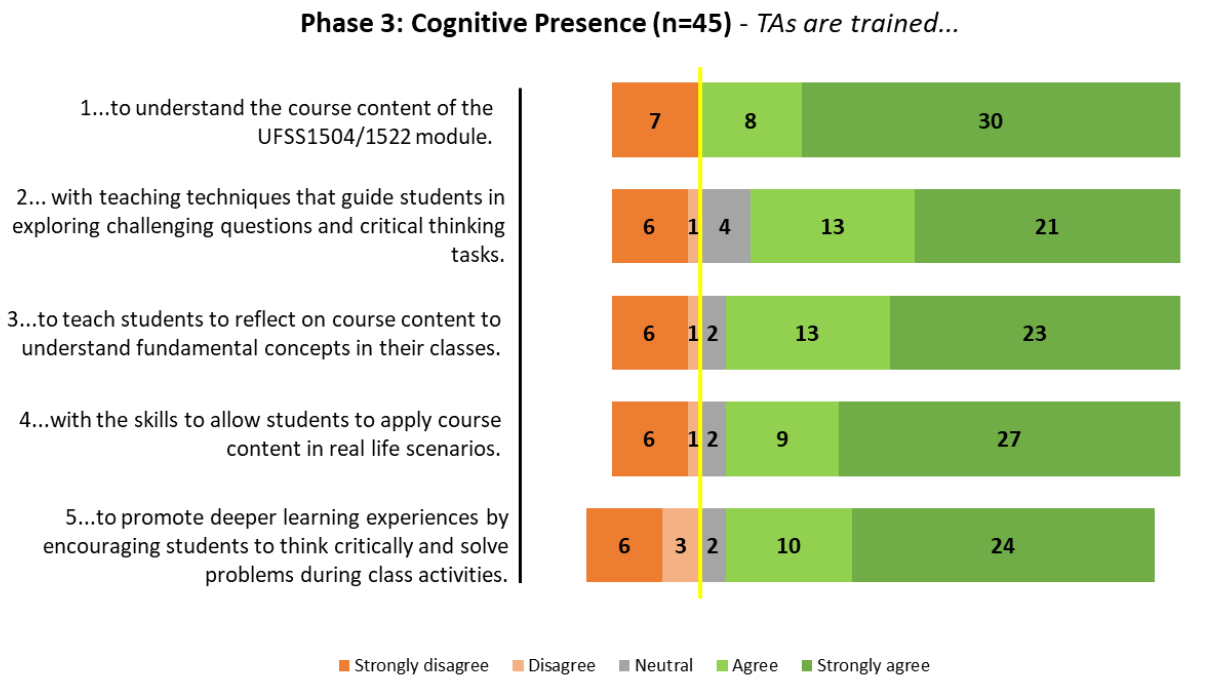

Figure 21: Phase 3 Cognitive Presence - Combined Results

Figure 21 emphasises that the TAs were able to enact CP effectively. However, as mentioned in my field notes, the study guide's content was able to endorse CP in the classes. Primarily, the majority of respondents either *strongly agreed* or *agreed* across every criterion that the TAs were properly trained. For instance, there is a strong consensus, as indicated by 38 out of 45 respondents, that TAs should have a thorough understanding of the material in the UFSS1504/1522 module. This emphasises the significance of TAs' having a solid content foundation before taking on teaching responsibilities during the summer or winter schools. Fewer than half of all respondents agreed with the majority's statement that TAs are trained to use pedagogical strategies that encourage students to explore difficult problems and develop critical thinking. This highlights the possibility of a perception or experience gap regarding TAs' ability to facilitate critical thinking activities.

Interestingly, the criteria regarding TAs' training to aid students in reflective practices on fundamental concepts and the application of course material in real-world contexts,

showed comparable tendencies. While there is a general consensus that TAs may help students have remarkable learning experiences, there is a persistent undercurrent of dissent. In particular, on average, six respondents *strongly disagreed* with each of the statements, matching patterns shown in the TP section. This constancy in disagreement, which spans both cognitive and TPs, draws attention to potential systemic inconsistencies or places where the TA training programme might be strengthened.

In summary, while the overall narrative affirms the training of TAs in the area of CP, some signals point to the need for reflection and possible recalibration of some aspects of the training programme, to achieve a more universally positive perception.

5.4.2.3 SOCIAL PRESENCE: COMBINED RESULTS

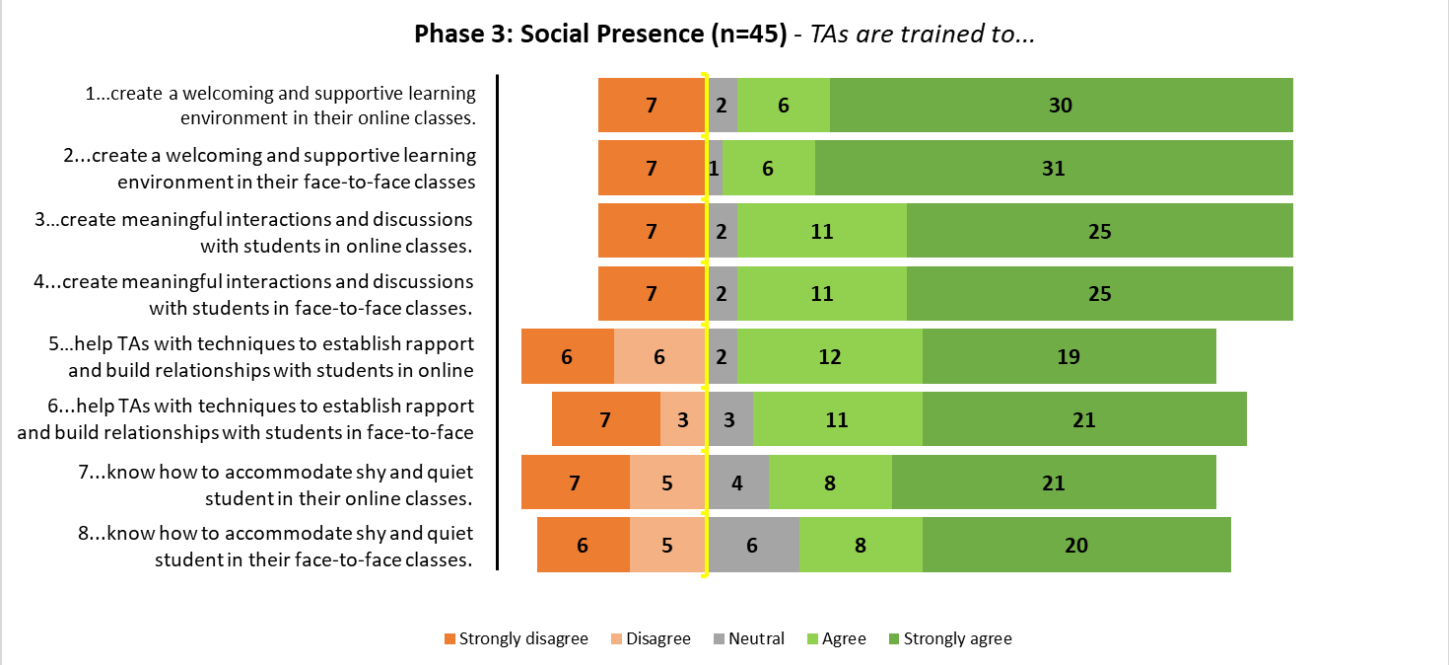

Figure 22: Phase 3 Social Presence - Combined Results

According to Figure 22 above, the respondents' opinions of TAs training to foster SP are divided. The first four criteria (1-4) illustrate an overall strong agreement on TAs' training to foster welcoming and helpful learning environments, focusing on online and face-to-face modalities. Over 36 respondents (on average) *strongly agreed* or *agreed* on TA training to develop such environments, regardless of the hybrid mode. This is

consistent with the notion that fundamental classroom management and student engagement skills are essential across online and F2F platforms.

However, in the latter set of claims (5-8), the unanimity begins to decrease, pointing to probable shortcomings in TA training. Notably, fewer than half of the respondents indicated that TAs were well-trained in strategies to build rapport and strong student relationships, which was evident in both online and F2F settings. Such contrasting perspectives highlight the inherent complexity of building true human bonds in educational environments.

Furthermore, the training of TAs to accommodate *shy* or *quiet* students became a point of contention. While a slight majority were of the opinion that TAs were prepared to assist such students, a sizable number disagreed, emphasising that roughly one-third of respondents believed that training was insufficient in this area. Such findings highlight the importance of personalised instructional approaches to accommodate varied student personalities.

In summary, while TAs appear to be well-prepared to establish the basis for a positive learning environment, the data reveal potential gaps in their training related to developing deeper interpersonal ties and addressing specific student needs. As a result, the findings argue for a more holistic approach in future TA training sessions, with a particular emphasis on developing interpersonal ties and inclusively accommodating students' learning experiences.

5.4.2.4 TA TRAINING PROGRAMME: COMBINED RESULTS

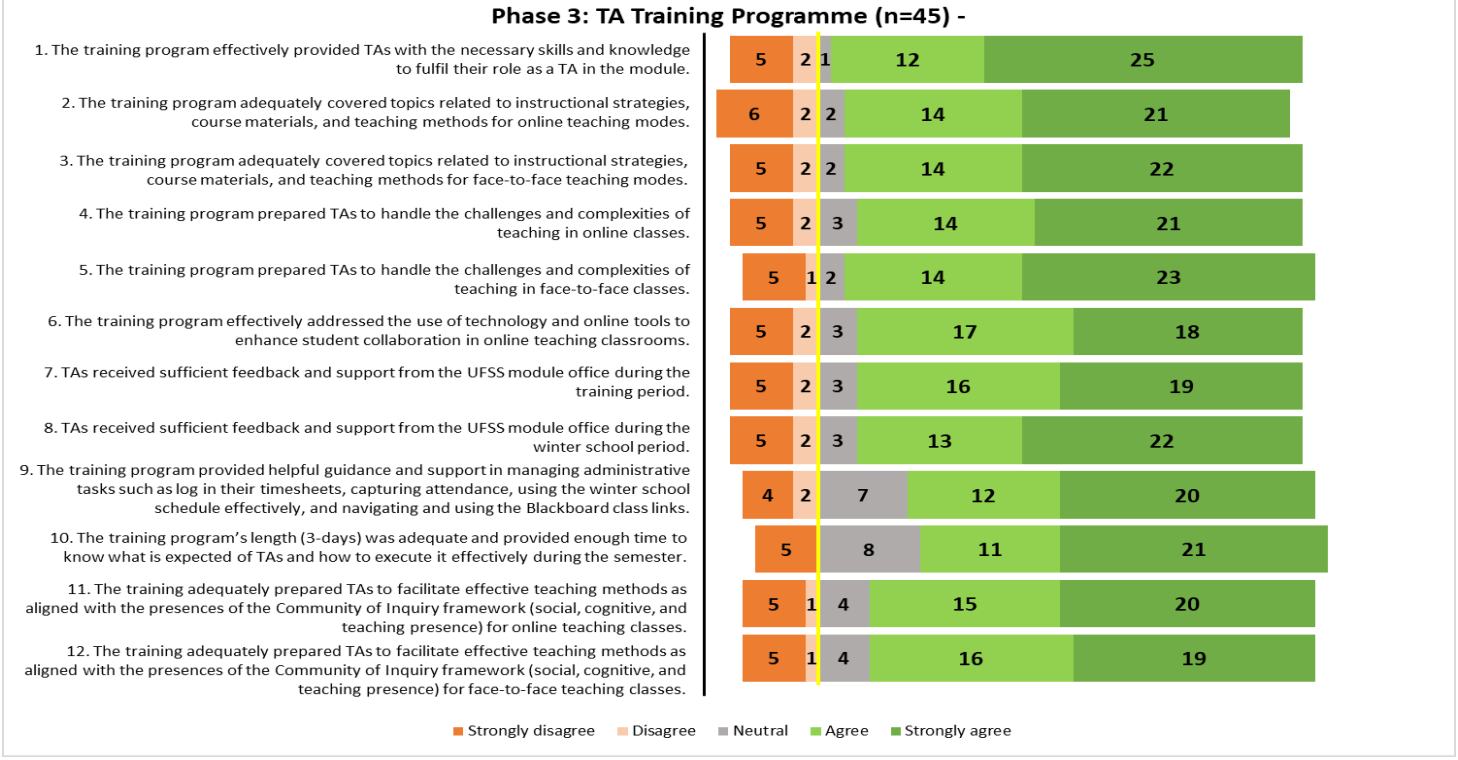

Figure 23: Phase 3 TA Training Programme - Combined Results

A significant number of the participants indicated a positive view towards the comprehensiveness and effectiveness of the TA Training Programme. In particular, the majority *strongly agree* with the first eight criteria, with an agreement percentage ranging from 78 to 82%. This demonstrates how well the programme has equipped TAs with the abilities and information needed to carry out their responsibilities in the module, whether it be managing the subtleties and complexity of both F2F and online teaching environments or developing instructional techniques.

However, subtle differences become apparent when the later part of the criteria (9–12) is examined. Although the majority still feels that the training is beneficial, the data highlight some areas that may need further development. This is especially evident, since more respondents indicated *neutral* at criterion 9, indicating that there is a need for administrative training.

In addition, there appears to be a lack of agreement over how long the training programme should be, in order to provide a more thorough and all-encompassing

training experience. This was also something that the interviewees suggested in Phase 2 (see 5.5.1.2).

The most intriguing finding is that despite the training's alignment with the CoI's core elements – TP, CP, and SP – both online and F2F modes received mostly positive feedback. However, there is still a need for additional emphasis and enhancement, especially in the area of SP. This was evident in Phase 1's observations.

To summarise, although the existing design of the TA Training Programme has a great deal of support, the data highlight some areas that require improvement. The insights suggest a two-pronged strategy to ensure a more comprehensive training experience for TAs: strengthening the administrative component of the training and extending its alignment with the CoI framework. Both these suggestions were also mentioned during Phase 2's interviews (see pages 5.5.1.2 and 5.5.1.3).

5.4.3 TRIANGULATED RESULTS:

In this section of Phase 3's results, the three groups – observed TAs, UFSS staff members, and the remainder of TAs – will be compared. First, an overarching table will be shown of all the totals and averages of the survey for every category. Then, each of the categories will be presented in a stacked graph, with group indicators and a description. A summary of the results will be given at the end of all the graphs and descriptions. Lastly, the qualitative results of the survey's open question will be analysed and presented.

Table 10 below provides a broad overview of the results from all three groups. Each of the following sections – TP, CP, SP, and the TA Training Programme – within the survey had varied numbers of criteria. For instance, TP had eight criteria, while CP had 5. This results in a higher number of totals and grand totals within the table and should not be confused with higher agreement or disagreement rates. Thus, there is the use of an extra column that presents the averages to illustrate the collective result. The last section, *Overall satisfaction of the TA programme*, had only one criterion, which was a rating scale; hence, the much lower number of totals (see Appendix 3.4 to view Phase 3's instrument).

Table 10: Phase 3: Summarised Results of the three groups

Teaching Presence n=45						
Groups	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Average**
Group 1 - Phase 1 & 2 TAs (n=15)	16	4	7	36	57	**3,95**
Group 2 - UFSS Module Staff (n=13)	1	6	4	30	63	**4,42**
Group 3 - Remainder TAs (n=17)	32	1		23	80	**3,87**
Grand total	**49**	**11**	**11**	**89**	**200**	**4,08**
Cognitive Presence n=45						
Groups	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Average**
Group 1 - Phase 1 & 2 TAs (n=15)	10	1	7	18	39	**4,00**
Group 2 - UFSS Module Staff (n=13)	1	4	2	27	31	**4,28**
Group 3 - Remainder TAs (n=17)	20	1	1	8	55	**3,91**
Grand total	**31**	**6**	**10**	**53**	**125**	**4,06**
Social Presence n=45						
Groups	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Average**
Group 1 - Phase 1 & 2 TAs (n=15)	21	9	10	34	46	**3,63**
Group 2 - UFSS Module Staff (n=13)	4	7	8	26	59	**4,24**
Group 3 - Remainder TAs (n=17)	29	3	4	13	87	**3,93**
Grand total	**54**	**19**	**22**	**73**	**192**	**3,93**
TA Training Programme n=45						
Groups	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Average**
Group 1 - Phase 1 & 2 TAs (n=15)	25	11	22	52	70	**3,73**
Group 2 - UFSS Module Staff (n=13)			13	74	69	**4,36**
Group 3 - Remainder TAs (n=17)	35	8	7	42	112	**3,92**
Grand total	**60**	**19**	**42**	**168**	**251**	**4,00**
Overall satisfaction with the TA programme n=45						
Groups	**Poor**	**Fair**	**Satisfactory**	**Good**	**Excellent**	**Average**
Group 1 - Phase 1 & 2 TAs (n=15)		3	2	3	7	**3,93**
Group 2 - UFSS Module Staff (n=13)			2	9	2	**4,00**
Group 3 - Remainder TAs (n=17)			2	5	10	**4,47**
Grand total	**0**	**3**	**6**	**17**	**19**	**4,13**

5.4.3.1 TEACHING PRESENCE: COMPARISON

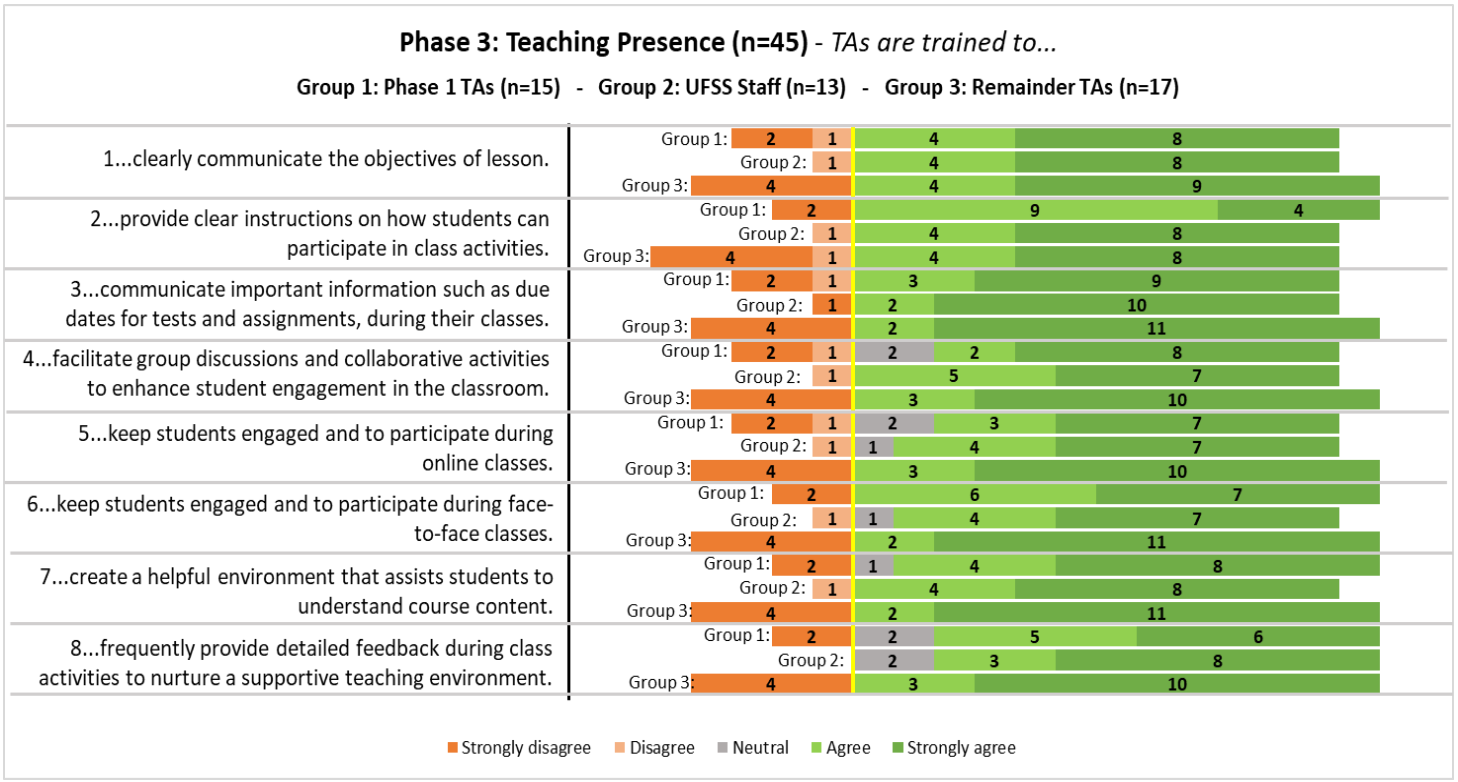

Figure 24: Phase 3: Teaching Presence - Comparison

Looking at the triangulated results of TP, the observed TAs (group 1) generally had an agreement scale of 10-13 TAs (67-87%), with two to three disagreements (13-20%) across the statements. The UFSS Staff (group 2) mostly agreed (92%), with one participant disagreeing (8%) across the statements, except for statement 8. The remainder of the TAs (group 3) had an agreement scale of 12-13 (70-76%), with four to five (24-29%) TAs in disagreement with the statements.

5.4.3.2 COGNITIVE PRESENCE: COMPARISON

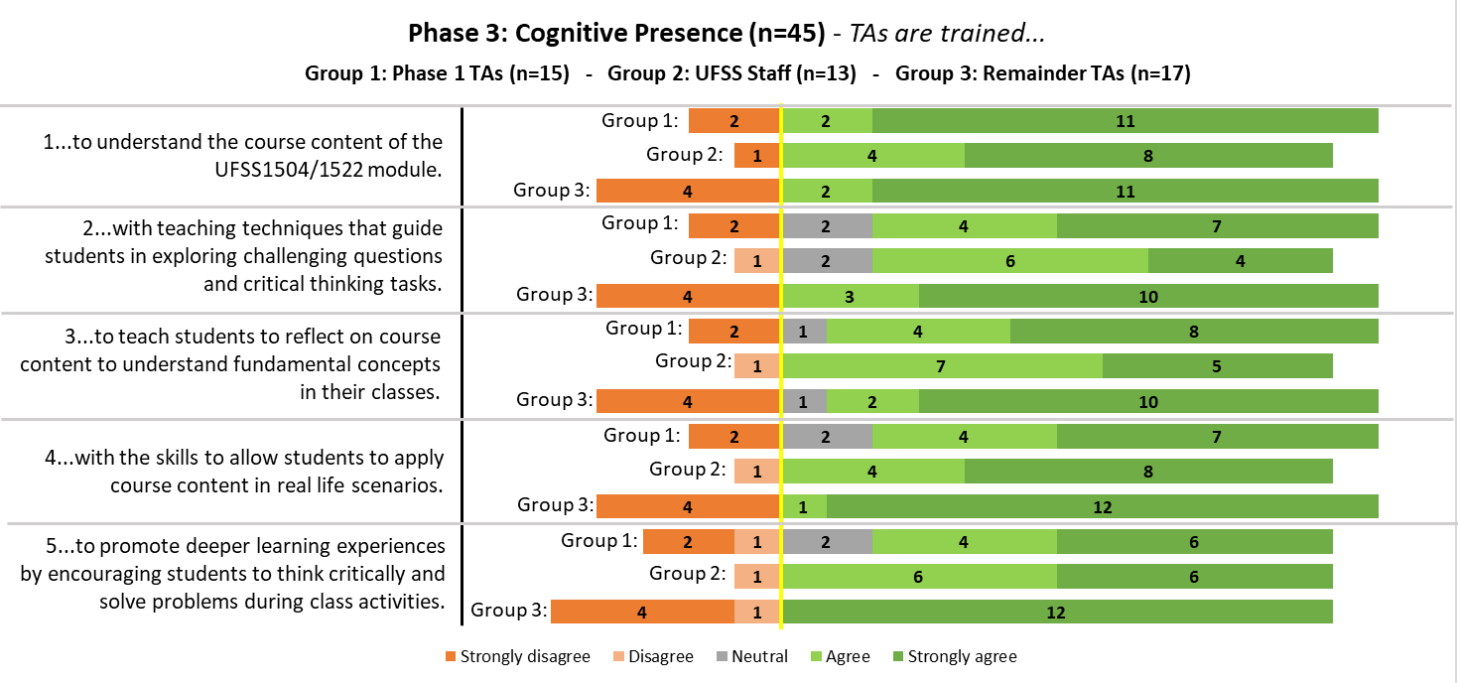

Figure 25: Phase 3: Cognitive Presence - Comparison

Similar to TP, the results of CP, the observed TAs (group 1), generally had an agreement scale of 10-13 TAs (67-87%), with two to three disagreements (13-20%) across the statements. The UFSS Staff (group 2) mostly agreed on a scale of 10-12 (77-92%), with one participant disagreeing (8%) across the statements. The remainder of the TAs (group 3) had an agreement scale of 12-13 (70-76%), with four to five (24-29%) TAs in disagreement with the statements.

5.4.3.3 SOCIAL PRESENCE: COMPARISON

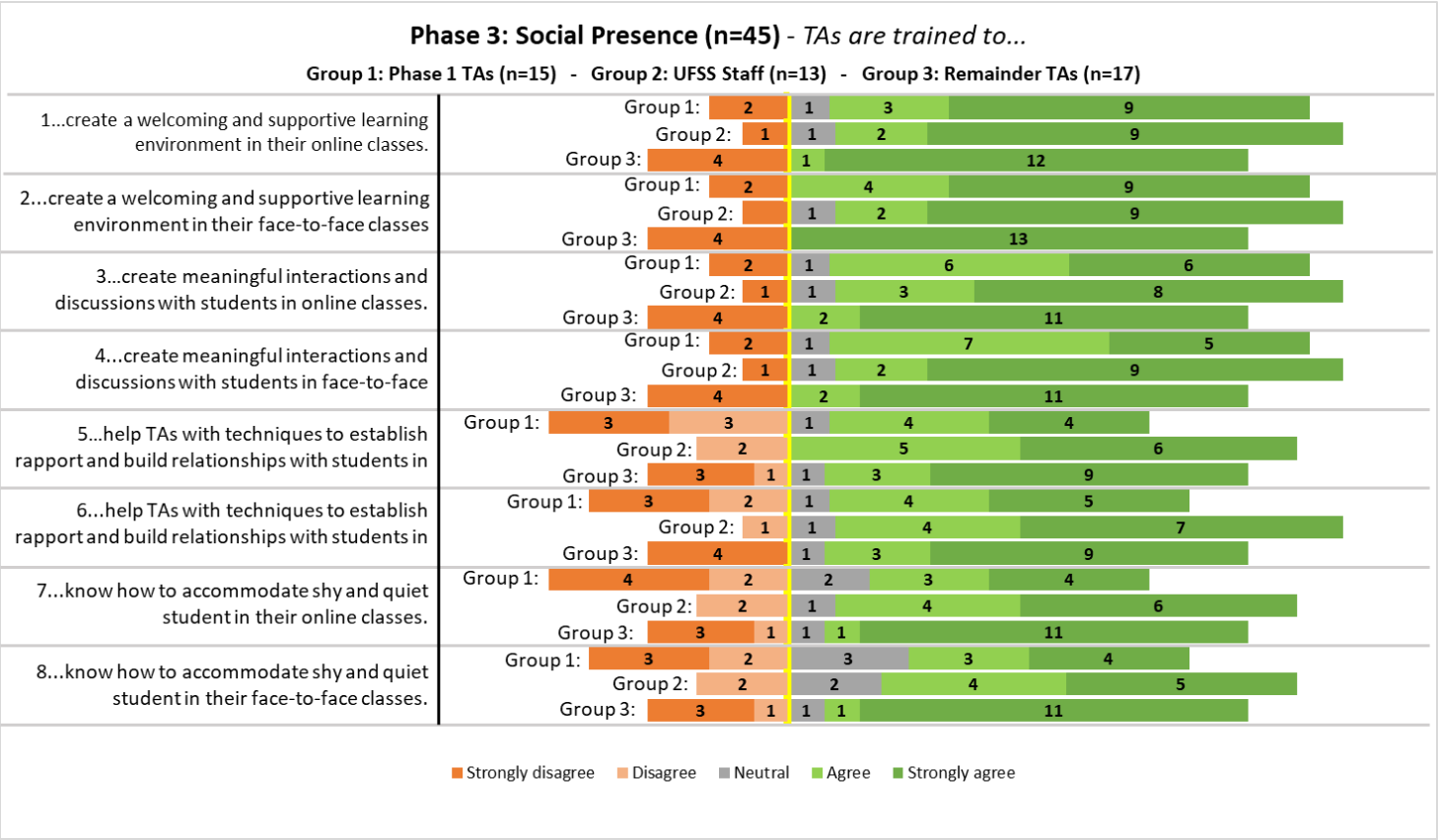

Figure 26: Phase 3: Social Presence - Comparison

Unlike TP and CP, the results of SP, the observed TAs (group 1), generally had an agreement scale of 7-12 TAs (47-80%), with two to six disagreements (13-40%) across the statements. The UFSS Staff (group 2) mostly agreed on a scale of 9-11 (70-85%), with one to two participants disagreeing (8-15%) across the statements. The remainder of the TAs (group 3) had an agreement scale of 12-13 (70-76%), with four (24%) TAs in disagreement with the statements.

5.4.3.4 TA TRAINING PROGRAMME: COMPARISON

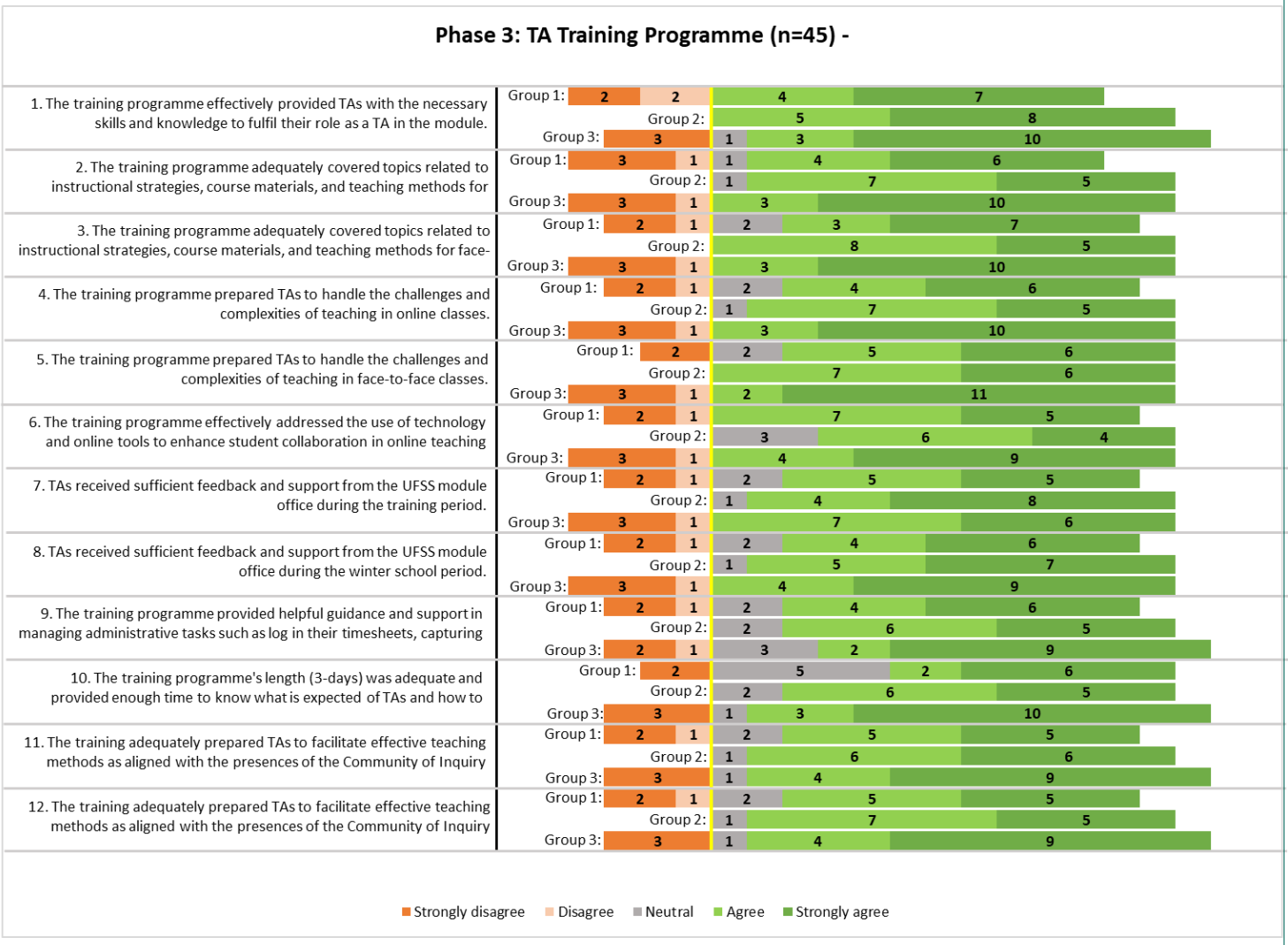

Figure 27: Phase 3: TA Training Programme - Comparison

The triangulated results of the TA training programme indicated that the observed TAs (group 1) generally had an agreement scale of 8-12 TAs (53-80%), with two to four disagreements (13-27%) across the statements. The UFSS Staff (group 2) had an agreement scale of 10-13 (77-100%), with no staff member disagreeing. The remainder of the TAs (group 3) had an agreement scale of 11-13 (65-76%), with three to four (18-24%) TAs in disagreement with the statements.

Summary:

The differences in agreement and disagreement rates across the three distinct groups — Observed TAs, UFSS Module Staff, and Remainder TAs — in the triangulated results reveal the complex dynamics within the studied training programme. These variations imply various perspectives and experiences on the training's efficacy. The higher rate of agreement among UFSS Staff suggests that they had a favourable opinion of the way the training was planned and delivered. In contrast, because they participated in various stages of the study, Observed TAs and Remainder TAs might have unique opinions. This difference highlights the training programme's complex effects on the diverse participant groups. The differences also show how important it is to take into account various roles, expectations, and previous teaching experiences in the training situation. Exploring these differences can provide valuable information for improving the training programme by closing perception gaps and developing training methods that are specifically suited to the requirements of certain TA cohorts. To clarify the underlying causes of these different viewpoints and to guide targeted improvements to the training programme, more qualitative research is advised.

5.4.4 SUMMARY OF PHASE 3 RESULTS

In Phase 3 of the study, data from surveys of three groups—observed TA, UFSS Module Staff, and remaining TAs—were evaluated to understand better how TAs might be trained more successfully for various teaching modes using the CoI framework. On a 5-point Likert scale, responses were gathered regarding the TP, CP, SP, and the TA Training Programme. Key findings showed that staff members had a higher favourable opinion of the TA training than the TAs. The data emphasised the necessity for social presence instruction; effective time management; longer programme duration; early access to course materials, and reliable feedback methods. By integrating the CoI framework into the TA training programme and preparing TAs for a variety of teaching settings, these insights seek to improve the TA training programme.

5.5 SUGGESTIONS FROM PHASES 2 AND 3

This section will present the findings from the last few questions conducted during the interviews and the last open-ended questions in the survey. Both of these questions focused on the suggestions improving the TA programme. The purpose of these questions was to garner feedback from the exemplary TAs for suggestions on improving the TA training programme and triangulate it with the responses received from the survey. Thus, these two sets of suggestions from both Phase 2 and 3 will be presented below. First, the suggestions from the exemplary TAs from Phase 2, followed by the suggestions from all the respondents of Phase 3. The data in some sections might correlate across the two phases, but this is what strengthens the data through triangulation.

5.5.1 PHASE 2 SUGGESTIONS:

5.5.1.1 TRAINING AND SUPPORT:

All respondents emphasised the importance of training in preparing TAs for their duties and responsibilities. Interviewee 1 found it beneficial to witness "some of the team members (UFSS staff) …presenting the content…" that they (the TAs) would later teach the following week. Similarly, interviewees 3, 4 and 5 mentioned the same answers that: "the training helped us so much because it prepared us to be able to facilitate the students" – interviewee 3. Interviewee 4 stated "they (UFSS staff) were teaching us how to deliver the content". Interviewee 5 mentioned, "every day…they went through the content". These responses highlight how the training they received specifically assisted them in terms of their facilitation skills.

Interviewee 2 focused on the administrative side of "how we can go about being a TA…what it is expected from us", as well as "the importance of taking our jobs seriously". Building on interviewee 2's response, interviewee 3 mentioned that TAs are trained to "navigate through Blackboard… do marking…and deal with problems". This illustrates that the TAs are not simply trained solely on the content of the module but also on how to use the learning management system and what is expected from them regarding their duties.

In short, the hands-on components of the training aided TAs in gaining practical experience and a better understanding of what was expected from them.

5.5.1.2 TRAINING DURATION:

Interviewees 2 and 4 specifically mentioned that they would “mostly prefer the five-day training” option. The reasons were that the current three-day training “felt as if we are rushing to complete everything” – interviewee 2, while interviewee 4 mentioned that “we wanna have enough time to grasp the content”. Both these interviewees prefer longer days to have more time to understand the content.

In contrast, interviewee 1 mentioned that the training does not need to be shortened but that there must be time to go “home” and “reflect” and to “prepare”. However, interview 5 was able to mention a possible solution that builds on interviewee 1’s response. “I would prefer five days of training with shorter days”. In other words “it’s from 9 AM until 1 PM”, then “your attendees won’t be so tired”. The interviewee also mentioned that the orientation day was too long, and they “couldn’t understand for the life of me why it was taking so long to work through orientation!”. Both these interviewees emphasise two main important points, which are, to stretch the training strategically and perhaps shorten the orientation section.

In short, the majority of the interviewed TAs preferred to have a five-day training period over a three-day one.

5.5.1.3 SUGGESTIONS FOR IMPROVEMENT:

Suggestions for improvement: The interviewees provided several useful suggestions for improving the training programme.

Interviewee 1 outlined a couple of suggestions, such as “[S]maller group training”, where one staff member breaks away to discuss certain topics, and could generate more dynamic and engaging interactions among TAs. This could also possibly build rapport between the UFSS staff and TAs. They also proposed including “a 10- or 15-minute presentation” as part of the interview process to evaluate prospective TAs' presentation abilities and content delivery readiness. In addition, Interviewee 1 suggested increased TA coordinator support, perhaps through the hiring of a full-time assistant to streamline administrative tasks and improve TA support.

Interviewee 2 proposed an interesting idea, which is “to cancel” the summer and winter school format because they believed the previous format encouraged more attendance. This was due to the rule that a certain percentage of attendance missed would result in a failure of the module. “So, I’m assuming that a student would be more eager to attend and participate,” commented interviewee 2.

Interviewee 3 mentioned the importance of improved access to course materials on platforms, such as Blackboard for new TAs. Their concern was that most newly appointed TAs were “not…able to access our UFSS in the Blackboard yet”. This created obstacles in terms of logistics for F2F classes and access to online classes. They also suggested that course materials be uploaded ahead of time or before training starts, allowing all TAs to follow the content actively during the training. This would allow TAs to participate and learn more actively.

The same sentiment as interviewee 1 was shared by interviewee 4, whereby they believed that the UFSS staff must “get the correct people (TAs)”. The reason was that this interviewee was observing that other TAs were not up to standard in terms of teaching abilities. Thus, the suggestion from interviewee 1 that prospective TAs should be able to showcase their presentation skills during the interview could assist with this.

Interviewee 4 and 5 mentioned again in their last response that they really believed that if the training were extended, it would benefit all TAs’ understanding of the content.

There was a specific concern mentioned by interviewee 5 that the UFSS module should be transparent “when it comes to administration and what your duties will be”. This is not to be confused with Blackboard and marking administrative duties. This TA specifically mentioned that they would have appreciated knowing, that as part of being a TA, one must enrol for an additional module. Interviewee 5 mentioned that they were more concerned about the lack of facilitation skills of the TAs, than focusing on an additional module that all TAs must complete.

5.5.1.4 FACILITATION SKILLS:

Interviewees 1, 4 and 5 specifically spoke on the need for facilitation skills of TAs. They reflected on instances where they were observing other TAs and believed that some of them were too shy; too soft; read from the screen; or were lacking overall in presentation skills. Thus, they suggested that there is a need to add a section in the

training specifically catering for teaching or improving on TAs' facilitation skills for these classes.

In conclusion, the respondents' different viewpoints and suggestions highlighted the significance of adapting training programmes to meet the particular requirements and preferences of TAs. Practical experience; clarity of tasks; opportunity for feedback, and ongoing support are critical components of effective instruction to ensure that TAs are well-equipped to support students' learning experiences.

5.5.2 PHASE 3 SUGGESTIONS:

The responses below are categorised in their respective groups, with the key points summarised respectively.

5.5.2.1 GROUP 1: OBSERVED TAS' SUGGESTIONS

The recommendations made by the observed TAs reveal both constructive criticism and room for development. Many responders stressed the importance of in-depth case study discussions, focusing on the effective feedback that TAs might offer to students during winter school sessions. To help TAs manage difficulties in online classes, one TA suggested including realistic scenarios, when a presenter experiences any issues and how to work around these issues. The majority of TAs indicated that they prefer the training to be extended from the current three days to five days. The reasons indicated are (1) to create more opportunities for TAs to practise their facilitation skills; (2) to receive detailed and valuable feedback after practising teaching; (3) more time to go through the content; (4) more time to learn logistical tasks for the semester; and (5) it was mentioned that TAs feel exhausted if it is a full-day training, and would prefer five-half day training sessions. There was one outlier response that is worth noting: the TA mentioned that senior TAs do not have to sit through four hours of orientation, and that they should have the freedom to skip this first day or do only a 30-minute orientation and progress straight into the important matters of the training. Another outlier suggestion was for TAs to receive the module's study guide during the training and not the day before they had to present, so that they would have ample time to prepare. A similar notion was mentioned in other administrative tasks and documents that TAs receive these documents, such as the TA teaching manual timeously, instead

of the day before they need to teach, which caused them to feel anxious and ill-prepared.

5.5.2.2 GROUP 2: UFSS MODULE STAFF SUGGESTIONS

The UFSS Module Staff members offered suggestions for enhancing engagement; fostering relationships; including practical role-play, and marking sessions into the TA training programme. Similar to Group 1's suggestions, Group 2 advised extending the training sessions to cover additional ground, practise presentations and foster camaraderie among TAs. Even if it lengthens the training period, reflective teaching and showing examples of teaching reflection should be encouraged. The need for early inclusion of the facilitation and marking components was emphasised, highlighting these crucial duties. For improved Blackboard use, one staff member mentioned including online training and navigational instructions, as well as allowing TAs to practise presenting F2F online during training, followed by immediate feedback. Overall, emphasis was placed on the necessity of involvement, pragmatism, and recognition of growth through feedback.

5.5.2.3 GROUP 3: REMAINDER TAS' SUGGESTIONS

The suggestion that was mostly mentioned, similar to Groups 1 and 2, was the suggestion of extending the training to five days, in order to experience a more comprehensive training. Another similar suggestion was to relate module content to real-life scenarios, which would enhance the students' real-world exposure through the content. A few responses discussed the value of tactful student engagement strategies for shy and quiet students, and this was also seen in the results (see Figure 22). A few TAs also indicated accommodating reflective activities and highlighting the importance of health in the workplace. There were a few TAs who expressed their satisfaction with the current programme and therefore, did not provide any suggestions.

In conclusion, the suggestions made by the three groups collectively, underscore the reasons for extending the TA training programme that balances content acquisition, engagement, and more facilitation opportunities for online and F2F reflective practices. Other recommendations were to facilitate hands-on scenarios, the integration of technology, and foster closer bonds among TAs. These insightful suggestions offer

guidelines for increasing the overall training experience for future TA cohorts and improving the UFSS TA programme.

5.6 CONCLUSION OF CHAPTER 5

Chapter 5's purpose was to present the findings in response to the three empirical research questions, which each responded to one research phase. Phase 1 and 2 aimed at presenting the data from the observations and the interviews of the pedagogical practices of TAs, while Phase 3 aimed at presenting data from both TAs and UFSS staff members who took part in the survey regarding the TA training programme.

In Phase 1, it was apparent that the UFSS TAs were using semi-scripted lessons to teach their classes during the winter school. These scripts were presumed largely to account for the generally high, and fairly consistent, teaching and cognitive presences (TP and CP) measured across modes and campuses. In the case of CP, however, little evidence was found for the facilitation of higher-order thinking activities. Social presence (SP) was the weakest of the three. This could be due to the nature of using scripted lessons that overall, curtail spontaneous interactions between the TA and the students. The campus effect was discovered demonstrating that the CoI presences were enacted better F2F than online at the QQ rural campus, whereas the opposite was found for the urban BFN campus.

In Phase 2 the exemplary TAs were interviewed from Phase 1 to obtain a more nuanced understanding of pedagogical practices in hybrid teaching modes, along with the CoI framework. These TAs shared challenges, examples, adaptability, and most importantly, effective strategies for hybrid modes.

The survey's findings revealed a positive perception of the TA training programme, emphasising strengths in the CoI presences. However, areas that need attention were identified, such as accommodating shy and quiet students; rapport-building with students; hybrid adjustments, and the extension of the training programme. Furthermore, the diverse perceptions of the three triangulated groups indicate the necessity for a more adapted and comprehensive approach to training the TAs.

Lastly, suggestions for improving the TA programme from both Phases 2 and 3 were presented. The overlap between the data of both phases adds credibility and triangulation to the data.

The interpretations and implications of the data presented within this chapter, will be elaborated in Chapter 6.

6. CHAPTER 6: ANALYSIS AND INTERPRETATIONS

6.1 INTRODUCTION

The primary purpose of Chapter 6 is to answer the main research question:

What pedagogical practices are effective for teaching assistants of a large-enrolment, general-skill university module to use in a hybrid teaching and learning environment?

The three subsidiary empirical research questions will be unfolded below using the data from Chapter 5 in support of answering the main research question. For each empirical research question – which correlated directly with their respective Phases – assertions will be presented based on the fieldwork experiences and the data collected. Arguments will be provided in support of each assertion made.

6.1.1 BACKGROUND

In Chapter 2, the following topics were discussed that will play a crucial role in the discussions of the results: (1) Pedagogical practices (see 2.2.3) and (2) the theoretical framework CoI (see 2.11). Interrelated to these topics, two more topics from Chapter 4 will also be discussed within the results of this chapter, namely: The use of the (1) UFSS module study guide (see 4.5.2 and 7.3), and (2) TA teaching manual (see 4.5.3 and 7.4). Lastly, Chapter 5's results will be discussed sequentially in the three phases.

6.2 PHASE 1 – OBSERVATIONS

Empirical research question 1:

How do the current teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes?

6.2.1 ASSERTION 1.1:

The study guide for the UFSS module and the TA teaching manual, collectively used as semi-scripted lessons, played a crucial role in determining how the CoI framework's elements were implemented. The scripts aided teaching and lower-order cognitive presences. However, time constraints precluded the enactment of the scripted versions of social presence, making spontaneous social interaction the only feasible enactment of social presence. Such enactment is more naturally enacted face-to-face than online. In addition, skill constraints hindered the enactment of higher-order cognitive presence.

6.2.2 THE STUDY GUIDE AND TA TEACHING MANUAL ARE USED AS SCRIPTS:

As mentioned previously in Chapter 2 (see 2.3), some controversies surround the use of scripted lessons in education, such as stifling teacher creativity, and it is more challenging to practise inclusivity (Eisenbach, 2012:153). However, there are instances where teachers, despite being unqualified, are placed in positions to teach. This is where scripted lessons are highly effective, especially when coordinating many unqualified teachers or, in this case, non-specialised TAs within the UFSS module. During the empirical observation Phase 1 of this study, the winter school was allotted two weeks of teaching. In these two weeks of teaching, the logistics of coordinating TAs were crucial to ensure effective, consistent, and standardised teaching methods across both online and F2F classes. These classes, as observed during fieldwork, can run up to nine concurrent classes at each given moment per campus, from 9 am to 4 pm. It would be nearly impossible to expect each non-specialised TA to effectively create their own slides and present them to their students. This could disadvantage those students allocated an underperforming TA (Adzima, 2020:477). Thus, the standardised approach the UFSS module implements for each summer and winter school in using a scripted approach, appears advisable.

With this in mind, the UFSS module creatively designed the study guide, i.e., semi-scripted lessons, in such a way that laid down most of the groundwork in instructional design for TAs. At the same time, it also enhances the working memory and lowers the cognitive load for both TAs to teach and students to learn (Sweller, 1988:260; Plass and Kalyuga, 219:341). Both these inherent qualities of the study guide are considered effective pedagogical practices. In Chapter 2, I referred to effective pedagogical practices using the Cognitive Load Theory (CLT) and its three elements: intrinsic load, extraneous load, and germane load (Lai, Chen and Lee, 2019:235; Leahy and Sweller, 2016:108) (see 2.2.3). The UFSS study guide supports TA teaching and aids students' learning. This is because, in addition to text, it includes a variety of visuals, links, videos, activities, and other embedded materials that enhance the learning experience. This is consistent with the Theory of Multimedia learning, according to which learning is enhanced through the use of visuals in addition to text (Cavanagh and Kiersch, 2023:1037). This is because this enables the utilisation of

both (textual and image) channels of working memory, thus enhancing cognitive capacity. Even though the study guide is well-designed, for it to be effectively delivered depends on the TAs' understanding of the content, their preparation, and their facilitation skills (Martin, Ritzhaupt, Kumar and Budhrani, 2019:35).

Furthermore, from the field observations, it was evident that the observed TAs scored high for the Teaching Presence (TP) construct (3.84); based on this, it is reasonable to deduce that the script was pedagogically well-designed (see 4.5.2). Moreover, it was found that the script assisted with the enactment of Cognitive Presence (CP) (3.62) (see field notes on page 191). Therefore, the TAs teaching with the guidance of the script scored well in these two presences (see 5.2.3). However, the TAs scored an average of 2.77 for social presence, and since the three presences are interlinked (Akyol, Vaughan and Garrison, 2011:232), this is indicative of a gap in how the CoI was enacted. The argument can be made that scripted lessons aid in TP and CP but restrict the spontaneous enactment of SP. This makes sense, since scripted lessons are usually structured in such a way that they restrict authentic and spontaneous social encounters within the classroom (Ahmed, 2023:615). The study guide, therefore, was found, within these constraints, to enhance the TAs' teaching effectiveness. This is in line with Blaszcyk's PhD findings, with teachers stating that the semi-scripted lessons offered assistance with facilitation and were able to give them more control of their classes (Blaszcyk, 2021:11).

Unfortunately, despite the fact that the script has sections with collaborative activities and that the TA teaching manual indicates how to do the activity, most TAs continued with the activity with the class without incorporating any collaborative elements within these activities. This was the main reason for the low SP score (see Appendix 7.1 - Table 14).

6.2.3 THE SCRIPT-AIDED TEACHING PRESENCE

TP was the highest-scoring presence of the CoI and can be seen as a pivotal component since it significantly impacts the effectiveness of learning experiences. According to Hosler and Arend (2012:218) and Shea, Richardson and Swan (2022: 158), TP includes the ability to facilitate content presentation and meticulously integrate cognitive and social presence. Phase 1's findings indicated that TP was well-

enacted, with an overall average of 3,84 (see Figure 16). However, a closer examination showed complex issues, mostly pertaining to giving detailed feedback and fostering an environment that encourages student interaction (see Appendix 7.1 – Table 12).

The implications of these complex issues are nuanced. According to Nagel and Kotzé (2010:46), the lack of TP or the incompetence thereof, might cause a noticeable disconnect between students and TAs. This disconnect between the TAs and students was more apparent in online observations, suggesting students were reluctant to speak up during class discussions (see 5.2.5, Table 12 and Field notes in Supplementary Section on page 191). This may be because TAs are not sufficiently skilled to facilitate online class discussions effectively.

Although the observed enactment of TP is considered effective according to the overall average obtained, varying scores are visible in the hybrid modes, such as BFN online scoring 4,05 and QQ F2F scoring 3,97. This has been referred to under the next section, as the *campus effect*, highlighting the significance of a more contextual and adaptive teaching approach. These differences necessitate a closer look at the instructional methods and pedagogical approaches used in various learning contexts, ensuring a more adaptive approach aligned with the two hybrid modes.

A significant gap is illustrated in one of the criteria (see 5.2.5, Table 12 and Field notes in Supplementary Section on page 191), in terms of encouraging students to participate and ask questions, which can be attributed to SP, the lowest scoring presence. This does not, however, alleviate the necessity to address and resolve this issue within TP actively. There is thus a need to implement the following approaches to possibly improve the overall enactment of TP, which are proactive teaching strategies, improved training that emphasises detailed, constructive feedback, and developing a welcoming, receptive learning environment. According to Susilowati, Usmuriyanto and Abiprayu (2021:2014), these approaches may mitigate the current weakness, engage students in the learning process, and promote a more profound, more fulfilling learning experience.

The UFSS module staff members can enhance the learning experience by training TAs to address these gaps in the lower scores since it could overlap with other

presences, as seen from the findings. Lastly, the need to train equally in the hybrid modes in upcoming trainings will ensure that TAs are well equipped for both online and F2F facilitation, particularly in providing effective, detailed feedback during activities.

6.2.4 THE SCRIPT-AIDED COGNITIVE PRESENCE

CP, a crucial element emphasising critical thinking and deeper course material comprehension, was also well-enacted, with an overall average of 3,62. However, a more thorough examination finds important inadequacies that impact students' ability to reflect and create meaning. This was mainly seen in the last criterion (see Appendix 7.1 – Table 13). Chen, Lei and Cheng (2019:37) mention that the facilitation of reflective, in-depth discussions and high-level thinking activities are crucial to the effective enactment of CP. This aspect of cognitive presence is crucial for developing a nuanced understanding and critical viewpoint on the content (Hosler and Arend, 2012: 2019; Shea, Richardson and Swan, 2022:150).

A weakness in script reliance was revealed through the lack of any observation of TAs being able to effectively facilitate discussions involving higher-order thinking, despite the fact that the script did prompt these (see Appendices 7.3 and 7.4). A study done by McLoughlin and Mynard (2009:149) indicated that higher-order thinking discussions are less prevalent in online classes because brainstorming is more likely to occur in F2F classes when collaborating. In addition, there is a trigger phase when initiating a higher-order thinking discussion by the instructor to tackle a topic or activity (McLoughlin and Mynard, 2009:150). It was observed that the script did, in fact, trigger these discussions, but TAs struggled to effectively facilitate these discussions, which was noted during the observations (see field notes on page 191). Higher-order thinking discussions not only require the TA to be well-versed with the content but also to know how to facilitate these discussions. This raises the suggestion that the development of these skills be incorporated in the TAs future training to equip them to scaffold higher-order thinking activities which are otherwise too cognitively taxing for students to engage in, in a meaningful way (Santosa, Prabawanto and Marethi, 2019:38). While it is possible that the limitations of the enactment of CP can be attributed to the TAs

needing to be education specialists, this necessitates more in-depth training to facilitate higher-order thinking and reflective activities.

6.2.5 TIME CONSTRAINTS PRECLUDED SOCIAL PRESENCE

SP is the third crucial component of the CoI framework and acts as the connecting thread of the other two presences and humanises the classroom environment (Kozan and Richardson, 2014:69, 72). The TAs observed in Phase 1 experienced significant challenges projecting SP, specifically in online classes where it is thought to be essential to present oneself as an “actual person” (Natarajan and Joseph, 2012:43). Therefore, SP was quantified with the lowest score of the three elements, with an overall average score of 2,77 (See Figure 16), which is indicative of a sporadic enactment of this crucial CoI presence (see Appendix 7.1 and 7.2 – Table 14). However, a further look reveals consistency in scores and challenges across the two campuses, where QQ scored slightly higher than BFN (see Figure 17 – A & B). These findings suggest that the lack of humanising the classes was prevalent at both campuses. However, the difference between the two campuses' results of SP in different hybrid modes highlights that QQ F2F outperformed all other methods (see Figure 17 – E). Nevertheless, these differences between online and F2F modes imply that the mode of delivery can significantly impact the effectiveness of the SP enactment. Thus, it can be suggested that there is a need for further training on adapting instructional strategies and pedagogical practices for SP, but more specifically for online teaching.

According to the findings, there needs to be more collaborative activities (see Appendix 7.1 – Table 14), together with the need to implement strategies to enhance SP (as seen in field notes on page 192). It can be argued that the lack of human elements, such as collaborative activities, especially in online classes, can be comparable to asynchronous videos. In order for there to be value in students attending class, there would need to be online activities going beyond something equivalent to asynchronous videos. Although the script was intended to promote some social interaction and human connection at certain sections (see Appendix 7.4), the TAs' ineffective implementation suggests that the opportunity to fully use the script’s potential for more profound, more connected learning experiences was missed (see

field notes on page 192). Therefore, these findings suggest a need for the script to be more closely tailored to SP, in terms of the hybrid modalities and for TAs to be effectively trained to facilitate these added SP sections.

6.2.6 ASSERTION 1.2:

A phenomenon termed the "campus effect" demonstrated a distinct reversal of instructional effectiveness of the CoI presences between F2F and online classes across urban and rural campuses.

6.2.7 "CAMPUS EFFECT" PHENOMENON

After a thorough analysis of Phase 1's data, an interesting phenomenon was discovered when comparing the results of the two campuses (see Figure 17). I termed it the *Campus Effect*. As illustrated in Figure 28 below, the TAs at BFN scored higher in online classes (3.52) than in F2F classes (2.99). On the contrary, QQ's TAs scored higher in F2F classes (3.84) than online classes (3.01).

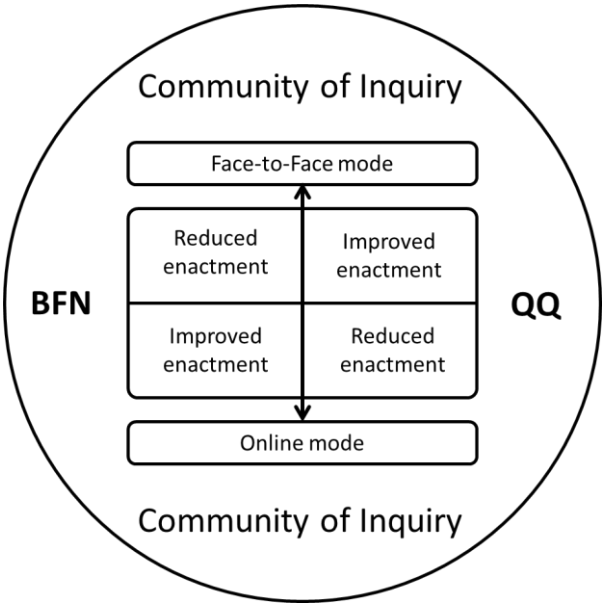

Figure 28: The Campus Effect

The possible reason for QQ's more robust ability to teach F2F is their setting. QQ's campus is situated in the poorest area of the Free State province (Mukwada and Mutana, 2023:80). Even though there are many endeavours to make QQ's campus fully sustainable in terms of power outages, during my observations these hindrances were still prevalent (Chapter 5.3.2 question 3). This could be why the QQ's TAs are better versed in handling traditional F2F classes than online classes. In contrast, BFN

TAs were less affected by power outages due to the presence of backup electricity supplies on the BFN campus. These removed disruptions caused by loadshedding for those TAs and students who were located on the BFN campus. Similar results in line with internet connection issues were found in a report done by Rush-Marlowe, who studied "Strengthening Rural Community Colleges" (Rush-Marlowe, 2021:2). However, the term *campus effect* is unique to this study, more specifically within the context of hybrid pedagogical practices and the CoI framework. No other studies were found within the same context. There were some similar studies on the effects between F2F, online, and hybrid, but in different contexts. For instance, Bailey's PhD study that compared learning outcomes and satisfaction in F2F, online, and hybrid courses within an urban campus yielded different results from my study. In fact, her verdict mentioned that there were no meaningful differences found between the teaching modes in terms of satisfaction and learning outcomes (Bailey, 2020:94).

While it was not the intention of this study to specifically compare the two campuses, it did naturally emerge from the data. No other studies could be found that collectively (1) compared urban with rural campuses, (2) compared hybrid teaching modalities between urban and rural campuses, and (3) compared CoI presences between urban and rural campuses. Therefore, this study could encourage future research endeavours to do an in-depth comparative analysis of the differences between urban and rural campuses in instructional methods but not necessarily using the same framework. It should be acknowledged that although the campus effect is derived from the data, a limitation could also be part of the effect. BFN's observations were logistically different from QQ's. As a single researcher, I could observe only four F2F TAs at BFN, since one day was available for F2F. At the same time, QQ had five days allotted for F2F observations. In other words, if more F2F classes were observed, the results might have differed.

6.2.8 SUMMARY

Phase 1's observation of the current enactment of the pedagogical components described by the CoI framework answers the research question with nuanced interplays between TP, CP, and SP, each contributing and providing challenges in the educational experience. TP and CP were well enacted by TAs; this was mainly

attributed to the creative design of the study guide used as a semi-scripted lesson. Noticeable shortcomings surfaced from the observations where TAs struggled to facilitate meaningful and reflective discussion effectively. The inherent rigidity of the semi-scripted lessons could be a factor that weakened the enactment of SP, since it required TAs to go beyond what was expected of them to enact SP effectively. The *campus effect* highlighted the diverse impacts of campus-specific elements, such as the setting, technological resources, and infrastructure. It can be deduced that when these multifaceted challenges are addressed, it could promote a balanced, comprehensive learning experience in both hybrid modes.

6.3 PHASE 2 – INTERVIEWS

Empirical research 2:

How do exemplary teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes?

6.3.1 ASSERTION 2.1

The TAs were able to facilitate the study guide, i.e., the semi-scripted lesson, effectively and were also able to bring in elements that were able to foster interpersonal connections and collaborative activities. This was done through a personalised pedagogical approach in their classrooms that produced effective results with visible CoI enactment.

6.3.2 INTRODUCTION

The results from the interview data revealed that the exemplary TAs cultivated not only the three CoI presences – TP, CP, and SP – but also surpassed what was expected of them. They demonstrated effective teaching abilities in their sessions in both online and F2F classes. It is essential to consider that even though these five TAs were interviewed, they were not the only ones who excelled. There were quite a few TAs that scored high in Phase 1, but the five who were interviewed were the ones that scored the highest and were available during the interview timeslots in Phase 2. The scores of the exemplary TAs can be found in Figure 18. This section will unveil how the TAs supplemented semi-scripts and were able to incorporate some of their pedagogical approaches deemed effective, into their teaching. This will be further

delineated by exploring each CoI presence in response to the research question above.

6.3.3 EFFECTIVE FACILITATION OF THE SCRIPT

TAs are instructed to use and adhere to the study guide and the TA teaching manual, i.e., the semi-scripts, as instructed by the UFSS module office. The verdict from the exemplary TAs was that they expanded beyond these two resources. They supplemented these resources with their additional pedagogical approaches in line with the CoI frameworks' elements, as well as adapting to the needs of the hybrid teaching modalities. These adaptable skills were related to being able to apply different teaching strategies per hybrid mode (see question 7). This is because the classrooms necessitate proactive thinking and being prepared to answer a wide range of student inquiries, in addition to the delivery of the content. According to the recent literature, effective teaching is characterised by adaptability and the capacity to incorporate unique strategies that are suited to particular teaching modalities (Bond, Buntins, Bedenlier, Zawacki-Richter and Kerres, 2020:13; Husni, 2020:45). Having these adaptable skills is particularly important in hybrid teaching because they combine traditional and digital classrooms, each with its own challenges. This adaptability is demonstrated by logging on early, testing the tools in online sessions (see question 7), and arriving early at the venue to test all the equipment in F2F classes (see question 4). This highlights TAs' understanding that they do not simply teach but need to create an effective learning environment. Thus, it is evident that to facilitate the classes successfully, a TA should be well-versed in the content and adapt to the two different hybrid modalities.

6.3.4 PERSONALISED PEDAGOGICAL APPROACHES THAT ENHANCED THE COI PRESENCES

6.3.4.1 APPLYING COGNITIVE PRESENCE

According to Kozan and Richardson (2014:69), there is a strong relation between SP and CP in terms of creating meaningful learning environments. This is because the moment a TA tries to create a meaningful learning environment, a deeper learning experience will follow suit. The findings from the exemplar correspond with Kozan and

Richardson's argument, since these TAs actively aimed to create a meaningful learning experience that facilitated deep and active learning (see questions 5 and 6; Husni, 2020:45). Although the study guide might provide the content, how TAs must present, discuss, and interact with it ultimately determines how much they have understood it. According to Kovarik, Robinson and Wenzel (2022:2), genuine learning necessitates active participation and discussions that challenge students to engage with complex concepts, connect them to prior knowledge, and develop their understanding. This also resonates with what the interviewees mentioned, using real-life, relevant examples in the student context to link the content to prior knowledge (see question 1).

The script consists of around 150 pages for the second semester, i.e., the winter school content, and must be delivered in two-and-a-half days. It is, therefore, an inherent cognitive demanding resource, which is in line with the intrinsic load of the CLT (Lai, Chen and Lee, 2019:235). Although the exemplary TAs cannot reduce the sheer volume of content, they were able to use pedagogical approaches that aligned with the CLT to manage the load of the content. This was done through reducing extraneous load, which already was greatly assisted by the script, as well as through scaffolding utilisation of the germane load, that of TAs facilitation (see question 1; Sweller, 2020:1; Orru and Longo, 2019:3). These factors were vital during the management of the cognitive load throughout the content-dense winter school classes.

6.3.4.2 ENHANCING SOCIAL PRESENCE

The value of building a strong social presence in an age where online learning environments can occasionally cause feelings of loneliness, cannot be overstated (Garrison et al., 2010:7). The interviews showed that TAs were aware of this and took appropriate action by fostering an *inclusive environment* and *building rapport* (see question 1). According to Garrison et al. (2010:7), creating human relationships and encouraging a feeling of community is crucial in online, blended, or hybrid settings. In addition to increasing student participation, these initiatives foster a supportive environment where all students, regardless of the teaching modality, feel the instructor makes an effort to include them.

Furthermore, the interviewed TAs were able to excel in promoting interaction and discourse within their classrooms. These are critical components of the combined use of social and cognitive presence (Moore and Miller, 2022:132; Peacock and Cowan, 2019:73). The use of Blackboard Breakout groups (online) (see question 8) and pair/group activities (F2F) (see question 3), as well as established a setting that encouraged collaborative problem-solving (see question 1). These collaborative practices promote the opportunity for social interactions, which is congruent with enacting SP (Moore and Miller, 2022:132). Collaboration can enable the sharing of working memory space, decreasing the cognitive load experienced by each student and thereby enhancing learning (Kirschner, Sweller, Kirschner and Zambrano R, 2018:221; Dickison, 2021:7). Interestingly, one of the TAs was not in favour of Blackboard Breakout groups due to the difficulties they faced using it (see question 8).

Another effective practice that the exemplary TAs enacted was the use of icebreakers at the beginning of their classes. Before each class, these TAs wanted to ensure that the students were comfortable because they knew that first-year students could feel overwhelmed and that the TAs were the first instructors they would encounter at the beginning of the semester (see question 2). To alleviate the discomfort, icebreakers were used before the lesson for students to learn each other's names, fields of study, or music interests (see question 2 and 3), thus creating a sense of relatedness and belonging within the classroom (Peacock and Cowan, 2019:68). Although these activities were not directly content related, they did present benefits in the classroom. The TAs reported that they tried to make students comfortable about participating during the rest of the class (see questions 1, 2 and 6). This is also a form of practising student-centredness in classrooms and can enable students to be more actively involved, than passively listening to the teaching (Omar, 2022:130).

6.3.4.3 THE ENACTMENT OF TEACHING PRESENCE

These exemplary TAs remarked that they were against just reading the script, teaching from behind the computer (both online and F2F), or following the TA teaching manual strictly (see questions 1 and 6). This suggests that these TAs' philosophies of learning go beyond the employment of the 'banking concept of education', which a simple reading of the script would do (see 2.2; Bybee, 2020:423). Instead, these TAs wanted to foster a vibrant online and F2F classroom environment for their students. They

seemed to promote an environment where students felt heard and valued (see question 6) by emphasising open communication, immediacy, and approachability (Nasir and Ngah, 2022:4).

Furthermore, in addition to the active involvement of walking around to monitor learning, in order to leave no student behind in the class (see questions 2, 4 and 8), some TAs employed unique strategies that captivated the students' attention. One TA brought in pop culture references to create a more fun and exciting classroom (see question 6). Another TA used sweets as incentives that they used to try to encourage participation (see question 1).

The pedagogical practices employed by the exemplary TAs contradict the standard practices seen in HE mentioned in a study by Sytnik and Stopochkin (2023:2). According to these authors, instructional practices in HE tend to promote passive rather than active student involvement which could affect the students' motivation to learn and participate in the classroom. However, with these exemplary TAs, they were always eager to try to see how they could encourage participation in their lessons.

6.3.5 SUMMARY

In summary, these exemplary TAs, without being aware of the theory of the CoI framework, were able to enact its presences effectively in their teaching. They were able to provide many examples and strategies that they employed within their classrooms, which they reported as being successful and which correspond to what is known, from the literature and theory, as effective teaching. The study guide and TA teaching manual collectively acted as the semi-script TAs used to teach their classes. These exemplary TAs were able to add personalised pedagogical practices to what was expected from the script, which aided their teaching practices; by doing so, they were enabled to score well in the enactment of the CoI presences.

6.4 PHASE 3 – SURVEY

Empirical research question 3:

How can teaching assistants be trained to be more effective in enhancing their proficiency in enacting the components of the Community of Inquiry framework for online and face-to-face teaching modes?

6.4.1 ASSERTION 3.1:

The staff members viewed the TAs' training programme as more effective than the TAs considered it.

6.4.2 TRAINING PERSPECTIVES BETWEEN TAS AND STAFF MEMBERS

The differences in how the UFSS staff members and the TAs perceived the TA training programme underscores the various perspectives among the three triangulated groups: observed TAs (15), UFSS staff (13), and the remainder of TAs (17). The UFSS staff, who typically design and implement the training programme, might have the tendency to focus on how well it aligns with their objectives, and not necessarily on how the TAs perceive the training. This could lead to a term called "automatic bias" of learning and instruction (Desimone, 2009:188), since the UFSS staff members could hold an inherently positive outlook on the training (Freeman and Dobbins, 2013:141-142; see 5.4.3). In fact, Desimone (2009:190) found similar results in the discordance of how principals' responses in an evaluation, were more positive than those of the teachers or students. This misalignment of top-down design, in contrast with bottom-up user feedback, is crucial to improving a programme's overall effectiveness, since it can provide multiple perspectives on how the training can be improved.

On the other hand, the TAs offered a pragmatic point of view based on how they could take what they have learnt and apply it in their classes. Comparisons between the staff and TA perspectives may therefore provide insight regarding the differences between the intended and enacted programmes; the two TA groups also had different perspectives. The remainder of TAs (group 3) generally had a higher agreement rate than the observed TAs (Group 1) (see 5.4.3). A possible reason for this is that there is a high chance that the majority of the remainder TAs were not the main presenters taught during the winter school (see 4.5.1). This could mean that the observed TAs

could reflect more on their practical experiences, in comparison to the remaining TAs who were assisting and ushering. Nevertheless, both these groups' agreement rates were lower in comparison to the UFSS staff members.

Working with and understanding these various perceptions about the training matters, because it can assist in directing attention to the gaps pointed out by the data. Furthermore, this can potentially create a feedback loop of revising the training each year for further improvements.

6.4.3 ASSERTION 3.2:

The TA training programme should provide more opportunities to assist TAs in enacting social presence.

6.4.4 PROVIDE MORE OPPORTUNITIES FOR SOCIAL PRESENCE

The overall TAs perspective of both observed TAs (Group 1) and the remainder of TAs (Group 3) showed that the TAs considered that their training prepared them well to teach this module, as measured against the components of the CoI framework. However, there were some discrepancies between the TAs and UFSS staff members regarding SP, specifically in terms of being taught techniques to establish rapport and how to accommodate shy and quiet students. Both these techniques were less agreed upon within the data, and this was the case for both hybrid teaching modes (see Figure 26). This suggests that there is a gap in the training of these criteria by the staff members for TAs to implement in their lessons. One possibility, according to Bardach, Klassen, Durksen, Rushby, Bostwick and Sheridan (2021:2), is to include scenario-based learning with scenarios specifically tailored for shy or quiet students, as well as rapport building. This could potentially upskill the TAs' abilities to be prepared when they encounter shy or unresponsive students in their classes. Another possibility, according to Peacock and Cowan (2019:71), can be to advocate for specialised pedagogical approaches which focus on a "sense of belonging". Using a specialised approach which incorporates a sense of belonging will benefit the training twofold. In other words, when the UFSS staff can model a sense of belonging during the training, the TAs will receive an appropriate example which they can apply in their teaching. This can be done by fostering a trusting environment; facilitating meaning-making; encouraging inclusivity and acceptance; promoting collaboration; personalised

feedback, and opportunities for social interaction (Peacock and Cowan, 2019:70-77). These specialised approaches, when applied in the training programme, could enhance the overall effectiveness of SP. Some of these approaches, such as facilitating meaning-making, promoting collaboration, and encouraging inclusivity, were enacted by the exemplary TAs (see questions 1, 3 and 6). With this in mind, using exemplary TAs in future training programmes could be appropriate for their providing examples and techniques from their experiences that worked. This could promote collaboration and a sense of belonging by empowering these exemplary TAs to assist with the training (Peacock and Cowan, 2019:71).

6.4.5 ASSERTION 3.3:

Enhancing the TA training programme's efficacy calls for optimising time efficiency, extending its duration, and ensuring early access to course material. This strategic alignment will empower the TAs to hone their facilitation skills, receive comprehensive feedback, and cultivate confidence before venturing into their instructional roles.

The second assertion was derived from the suggestions given by the TAs and UFSS staff members from the survey's open-ended question (see 5.5).

6.4.6 TIME EFFICIENCY, EXTENSION, AND EARLY ACCESS TO COURSE MATERIAL

The TAs highlighted time efficiency as something that needed improvement (see 5.5.2.1). In this context, some sections were too long or felt redundant for some TAs. For instance, it was suggested that the senior TAs should be exempted from the first day of training, since it repeats already acquired knowledge. In addition, the length of the training programme itself was also indicated to be too short to learn all the information (see 5.5.2.1). In other words, if TAs mentioned that some sections were redundant, while other TAs mentioned the training was too short, this could mean that there is a need for a more optimised training programme. According to Rodriguez and Walters (2017: 207), a training programme must be succinct in nature, maintain engagement and cover all objectives to be effective.

On the one hand, re-evaluating the training and working on optimising it could potentially improve its overall efficacy. However, on the other, just working on the optimisation within the three days might not be enough, since the majority of TAs, and even some staff members, suggested extending the training to a five-day programme (see 5.5.2.1, 5.5.2.2 and 5.5.2.3). The reasons were mostly in the context of being overwhelmed with information and not having enough time to internalise the content to be effectively learnt. This was also in line with what the exemplary TAs mentioned when interviewed (see 5.5.1.2). Therefore, the solution here is not simply to optimise the training programme for efficiency, but also to extend it to lessen the cognitive load of the TAs receiving the information. Furthermore, the suggestions from both Phases 2 and 3 proposed an approach that if the training is extended to five days, then its content could be given in half-day portions. This would manage the cognitive load of the TAs by not overloading their working memory, which would allow them to internalise the new information and prepare for the next training day (Castro-Alonso, de Koning, Fiorella and Paas, 2021:1380).

Furthermore, managing the cognitive load of the condensed training leads to the preparation highlighted by the TAs. The TAs suggested that they would like to have access to the course material before training starts (see 5.5.2.1). This is in line with the re-regulating learning theory (Min and Nasir, 2020:2), implying that TAs are willing to take the initiative to start preparing and familiarising themselves with the content (Scherer, Howard, Tondeur and Siddiq, 2021:12). This initiative when implemented, could effectively reduce the intrinsic cognitive load of the script (Castro-Alonso et al., 2021:1380). However, as indicated by the last question of the survey, the TAs mentioned that this was not the case, and they received the course material the night before they had to do their mock presentations the following day (see 5.5.2.1).

Having access to the content, pre-training could serve a tripartite function. The first is that TAs will be able to internalise the content, which aligns with the flipped-classroom approach model, also used by the module on the students (see 4.5; Cortese, Greif and Mora, 2022:2). The second is that having access to the course material in tandem with the training sessions would enhance the learning experience, provide immediate feedback when prompted, and foster deeper cognitive connections in real-time (Mintzes, 2020:127). Using the course material alongside the training process is

consistent with dual coding theory, according to which verbal information received from a presenter is synergised along with the visual information being followed, i.e., the content, effectively enhancing the understanding (Caviglioli, 2019:142, 168). Lastly, if the TAs have the course material beforehand, they could be instructed to complete certain activities during the afternoon. Doing this would allow the TAs to be in the students' position and bring any questions or concerns to the next day's training session. This would effectively assist in answering questions students might have, and prepare TAs to have their responses ready for their classes. This is consistent with the principles of constructivist learning, where knowledge is actively constructed through experience (Zayyad, 2020:14).

6.4.7 FACILITATION SKILLS AND COMPREHENSIVE FEEDBACK DURING TRAINING

In today's educational setting, which is highlighted by a shift towards hybrid learning models (see 2.8), TAs should be trained in both traditional and digital teaching environments, as advised by one of the UFSS staff members (see 5.5.2.2). Boettcher and Conrad (2021:75) advocate practising "in authentic contexts". In the TAs' case, this refers to the opportunity for TAs to give mock presentations during the training period, which would expose them to the specific pedagogical nuances and technological constraints of both hybrid modalities. TAs could thus be more suited to engage students, manage digital platforms, and promote interactive learning environments by developing these facilitation skills, regardless of the teaching modality. However, this would require that the TAs obtain the course material beforehand, as suggested in the previous section. Otherwise, the TAs would not have enough time to prepare and fully demonstrate their skills and understanding of the content within the mock presentations.

Many TAs and some staff members (Groups 1-3) mentioned in their suggestions that they would like TAs to have more opportunities to facilitate during training (see 5.5.2.1, 5.5.2.2 and 5.5.2.3). However, this might not be possible with the current three-day training period, since only a small portion of the training is allocated to mock presentations. Thus, the extension of the training would accommodate the suggestion of providing more opportunities to present. If one day is allotted for mock

presentations, then it could provide more TAs the opportunity to present. These mock presentations, which are an essential component of such training, serve as vital pedagogical simulations for developing facilitation skills. This said, the effectiveness of these presentations is dependent on receiving comprehensive and constructive feedback (Kryszajtys, Rudzinski, Chan Carusone, Guta, King and Strike, 2021:2). This was one of the suggestions provided by the TAs from the data (see 5.5.1.4). According to Wisniewski, Zierer and Hattie (2020:2), feedback must be specifically constructed and actionable, in order for educators to incorporate and implement critiques to their pedagogical practices effectively. The likelihood for growth in facilitation skills through these mock presentations during TA training is considerably reduced without this critical feedback component. Furthermore, Freeman and Dobbins (2013:144) argue that students would be more motivated to improve if they received constructive feedback during their training. Since TAs are also students, this motivation based on constructive feedback also applies to the TA training programme.

6.4.8 SUMMARY

Phase 3 focused on the analysis of the survey's data to gauge how the TA training programme can be improved. The analysis indicates that the training programme covers the CoI presences well, but there is a need for further developing the TAs' skills to enact SP. In addition, there is a need to optimise the training structure, extend the training to five days, and provide the course material to the TAs before training, thereby allowing TAs to be better prepared. In tandem with this, there is a need to provide comprehensive feedback after mock presentations, which would allow the improvement of facilitation skills. These suggestions could improve the overall efficacy of the TA training programme.

6.5 CONCLUSION OF CHAPTER 6

A comprehensive analysis was employed to answer the three empirical, subsidiary research questions that guided this study in answering the main research question. It was discovered that TAs are instructed to use the study guide as a semi-scripted lesson to guide their lessons during winter school. This would aid in standardising the large number of TAs across all the classes, online and F2F, running concurrently. All three phases were supported by the CoI theoretical framework and aimed to explore

the effective enactment of the CoI presences. In Phase 1, TP and CP scored high because of the nature of these scripted lessons. However, SP was the weakest score, due to a lack of collaborative activities in both hybrid modalities, as well as a lack of social interaction in online classes. In addition, Phase 1's analysis also discovered the *campus effect* that underscored how one modality outperformed the other between campuses. This reversed effect could be due to contextual influences that are linked to each campus. The exemplary TAs from Phase 1 were interviewed in Phase 2 and provided detailed accounts of how they employed effective pedagogical practices within the hybrid modes. These exemplary TAs were able to personalise their classes with unique strategies that worked well, in addition to their script-guided teaching. Finally, in Phase 3, TA training programme improvement was discussed based on the survey and interview results. These revealed the need to strengthen SP within the training programme, specifically to accommodate shy or quiet students and build rapport to foster an inclusive and engaging learning environment. Further suggestions from TAs and UFSS staff highlighted the need to optimise the training programme in terms of time efficiency; extend the training programme to five days; provide the course material to TAs before training commences; improve facilitation skills for both hybrid modes, and provide comprehensive feedback during mock presentations.

7. CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 INTRODUCTION

This study aimed to comprehensively explore effective hybrid pedagogical practices of teaching assistants (TAs) in a large module at tertiary level. The Community of Inquiry (CoI) framework was utilised to measure the TAs' practices in a hybrid setting. Thus, the focal of this study was an exploration of the TAs' enactment of the CoI's three presences: Teaching presence (TP), Cognitive Presence (CP), and Social Presence (SP). This included gauging teaching efficacy within the module based on the enactment and frequency of these presences and obtaining perspectives regarding this from exemplary TAs. The study was also driven by a rationale with the overarching aim to contribute to improving the teaching strategies of the module studied.

The following research questions guided this study:

Main research question

What pedagogical practices are effective for teaching assistants of a large-enrolment general-skill university module to use in a hybrid teaching and learning environment?

Subsidiary research questions

- *What are the local and global perspectives on the role of teaching assistants in higher education; what comprises their effectiveness, and how can this be measured?*
- *How do the current teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes?*
- *How do exemplary teaching assistants of this module enact each of the Community of Inquiry components in online and face-to-face teaching modes?*
- *How can teaching assistants be trained to be more effective in enhancing their proficiency in enacting the components of the Community of Inquiry framework for online and face-to-face teaching modes?*

The UFSS module studied is offered at tertiary level and across two campuses – one in Bloemfontein (BFN) and the other in QwaQwa (QQ). Annually, this module teaches

around 9000 students across the two respective campuses. The huge number of students present problems for a few staff members to coordinate this large module. Thus, around a hundred TAs are employed each year to assist with teaching summer and winter schools, as well as other administrative tasks, such as marking and completing professional development courses. It is important to note that this study did not evaluate the entirety of the module, but only the pedagogical practices enacted in the winter school period of two weeks of teaching. As a result, a pragmatic, multi-level triangulation mixed-method research design was implemented. The first subsidiary research question was answered through a literature review, while the latter three were empirical and were directly in line with a three-phase process. Phase 1 answered the second subsidiary research question that observed TAs' current enactment of the CoI. Phase 2 explored a nuanced understanding of the best TAs, selected from Phase 1 through semi-structured interviews. The last subsidiary research question was answered through Phase 3 and used a survey to gauge all TAs and UFSS Module Office staff's perspectives of the current TA training programme to provide future suggestions for improvement.

7.2 REFLECTING ON PEDAGOGICAL PRACTICES AND LOCAL AND GLOBAL PERSPECTIVES OF TEACHING ASSISTANTS

Chapter 2, the literature review, had a dual purpose. The first was to give context to the study, and the second was to answer the first subsidiary research question through the literature. The exploration began by defining pedagogical practices and examining through literature, what constitutes their efficacy. It was recognised that education is greatly affected by context. Thus, it was found that there is not a universal approach in pedagogy that can be applied in all scenarios that would equate with being 'effective' (Pashler McDaniel, Rohrer and Bjork, 2019:105). However, it was noteworthy that within higher education, pedagogical approaches, such as active learning and inquiry-based learning are deemed effective (see 2.2.3). While lecture-style teaching might be the easy route, studies point out its ineffectiveness (see 2.4). Another important approach, one that was used by the UFSS module, was the use of scripted lessons, specifically semi-scripted lessons. The use of scripted lessons, regardless of whether they are scripted or semi-scripted, might be controversial for some scholars. Despite the controversy, some clear advantages of using scripts enabled a standardised and

uniform approach (Fitz and Nikolaidis, 2020:196) with the disadvantage of restricting creativity and innovation in teachers (Parks and Bridges-Rhoads, 2012:310).

Furthermore, blended and hybrid teaching and learning were defined and compared. The study identifies the differences between these two terminologies and clarifies that these terms are still used interchangeably in some research, which should not be the case (Saichaie, 2020:95). In addition, hybrid education became more common after the global pandemic when students were allowed to return to campus during the year 2022.

The roles and responsibilities of TAs locally in South Africa and globally have similarities, such as facilitation, teaching, marking, and other administrative tasks. These roles and responsibilities were visible in primary, secondary, and tertiary-level TAs, with minor differences between these education institutions. These additional differences are as follows: for primary school TAs, one-on-one support and supervising learners during lunchtimes were mentioned (Sharma and Salend, 2016:118,121). For secondary school TAs, lesson planning, examination preparation, grading, and extracurricular activities involvement were mentioned (121). At tertiary level, TAs were mostly responsible for lecturing, tutoring, research supervision, or laboratory work. The UFSS TAs at the UFS institution are responsible for facilitation, teaching, marking, and other administrative tasks.

7.3 SUMMARY OF FINDINGS

The research unfolded in three empirical phases, each with notable findings presented as assertions below:

1. Phase 1:
    1.1. The study guide for the UFSS module and the TA teaching manual, collectively used as semi-scripted lessons, played a crucial role in determining how the CoI framework's elements were implemented. The scripts aided teaching and lower-order cognitive presences. However, time constraints precluded the enactment of the scripted versions of social presence, making spontaneous social interaction the only feasible enactment of social presence. Such enactment is more naturally enacted face-to-face than online. Moreover, skill constraints hindered the enactment of higher-order cognitive presence.

1.2. A phenomenon termed the “campus effect” demonstrated a distinct reversal of instructional effectiveness of the CoI presences between F2F and online classes across urban and rural campuses.

2. Phase 2:
   2.1. The TAs were able to facilitate the study guide, i.e., semi-scripted lesson, effectively and were also able to bring in elements that were able to foster interpersonal connections and collaborative activities. This was done through a personalised pedagogical approach in their classrooms that produced effective results with visible CoI enactment.
3. Phase 3:
   3.1. The staff members viewed the TAs’ training programme as more effective than the TAs considered it.
   3.2. The TA training programme should provide more opportunities to assist TAs in enacting social presence.
   3.3. Enhancing the TA training programme's efficacy calls for optimising time efficiency, extending its duration, and ensuring early access to course material. This strategic alignment will empower the TAs to hone their facilitation skills, receive comprehensive feedback, and cultivate confidence before venturing into their instructional roles.

7.4 THE IMPLICATIONS

Several significant implications emerged from examining the empirical evidence from each of the Phases of this study on pedagogical practices of TAs in hybrid teaching and learning.

Pros and cons of using semi-scripts:

This study provides support for using scripted lessons within the context of non-specialised instructors, large modules, many instructors, different educational settings, different teaching modes, and the attempt to standardise teaching. This study also acknowledges the limitations of using scripted lessons within these contexts while providing support and suggestions to mitigate them. The consistently high TP and CP scores observed provide support for these semi-scripted lessons. However, a more nuanced examination revealed critical areas of concern within CP, but more

specifically within SP. Although CP consistently scored high, one criterion scored below average, which is the facilitation of higher-order thinking activities and discussions. Even though the semi-scripted lesson was designed to endorse these higher-order thinking discussions, TAs struggled to facilitate them effectively. The reason for the low scores of SP was due to the absence of collaborative activities, especially in online classes. Another attribution for the lower scores of SP was the lack of spontaneity exerted by TAs who followed the script diligently.

Furthermore, although the TA teaching manual that is used in tandem with the study guide, i.e., the semi-script, provides some differentiation between online and F2F teaching, it does not adequately consider the different needs of the hybrid modes in terms of practice. Online and F2F teaching modes should not receive the same pedagogical approach due to the contextual differences related to each of these hybrid modes. Therefore, for the TA teaching manual to accurately differentiate the different hybrid modes, a possible redesign will not only enhance the efficacy of the teaching in these modes but potentially create a more engaging learning experience per mode.

Suggestions for exemplary practice:

Even if semi-scripts are adhered to, there is still the opportunity for some personalisation in teaching strategies. Table 11 below summarises some of these personalised strategies as well as good practices, mentioned by the exemplary TAs as effective, that went beyond the script.

Table 11: Summarised output from exemplary TAs

Instructional Sequence	Tips for F2F Mode	Tips for Online Mode	Additional Tips
Post-Training	Be well-prepared for the class, familiarise yourself with the content and anticipate questions.		Review the content and practise using your own methods.
Pre-class	Arrive 15 minutes early, switch on the venue's computer and projector and get all materials ready.	Log in 15 minutes to ensure a smooth tech setup and address any connectivity issues.	Playing music to create a welcoming atmosphere. Socialise and learn about your students.
Beginning of class	Build rapport to foster an inclusive environment.		Ice-breaker activities to engage students.
Middle of class	Engage students in active learning activities.	Use digital tools to facilitate interactive activities and monitor student engagement.	Conducting polls or check-in discussions to gauge understanding.

End of class	Summarise the lesson, provide immediate feedback and clarify any doubts.	Summarise the lesson and encourage students to ask questions using the chat box.	Pairing students to provide a summary F2F and the use of polls to test students' knowledge in online classes.
After class	Reflect on teaching practices.		Write notes on what went well, what went wrong, and how to improve for the next session.

The script offers the security of guiding the lesson without necessarily requiring much preparation of the content. However, being over-reliant by reading the script, could restrict the instructor's spontaneity. Preparing and familiarising oneself with the content mitigates this, and enables strategies, such as engagement with students, without needing to read the script. Arriving early or logging in early, albeit not part of the script, elicits good practice, since it demonstrates preparedness and can provide additional time if any issues are encountered in a venue or an online classroom. Creating a welcoming atmosphere can be achieved through various strategies, but essentially requires the instructor to interact with the students at the beginning of the class, e.g., through the use of fun icebreakers. The exemplary TAs reported that they found that using interactive activities throughout the class was essential for an effective session. It is possible that the scripts could be designed to better prompt such activities, e.g., to test students' understanding, with this being differentiated between F2F and online modes. The conclusion of a class might sometimes be neglected because of time constraints, but it offers the opportunity for instructors to evaluate the students' understanding of the lesson. This can be done through pair work where students can present sections they learnt during the lesson through prompts provided by the script or through the use of polls in online classrooms. Reflecting after each class on what went well and what can be improved in the next class, could also improve TAs' teaching practices.

Although not exhaustive or related to the script, the collective use of these teaching strategies presented in the table above proved to be effective for the exemplary TAs interviewed. These strategies can be used to supplement the linear instruction sequence expected of pedagogical settings, requiring the use of scripts in hybrid settings.

Implications for Training Programme Design:

The findings of Phase 2's suggestions and from Phase 3 imply that there is a need for the re-calibration of the TA training programme, with a specific focus on the alignment of the programme's objectives with TA experiential feedback. The feedback implies that the current training is cognitively demanding; should be extended; some redundancy for senior TAs; the need for SP integration, and course material should be ready before the training starts. Re-calibrating the TA training with these points in mind could potentially improve the overall efficacy of the TAs' performances in their classes.

7.5 LIMITATIONS

While this study provides invaluable insights into the effective TA pedagogical practices in hybrid education, particularly within the UFSS module, it is nevertheless essential to recognise the study's limitations. Understanding these limitations gives the context of the findings for interpretation and paves the way for future research projects that can fill these gaps.

Teaching Window:

This study was narrowed down to a specific timeframe where TAs were teaching winter school classes lasting two weeks. Therefore, this only partially represents the TA pedagogical practices enacted throughout the year module, UFSS1504. Thus, the data were not collected for all instances of the teaching of the TAs, as there is a summer school, as well as catch-up Fridays.

Pedagogical Practices Scope:

Another significant limitation of this study links to the previous point regarding the teaching window. This study focused only on the TAs pedagogical practices in hybrid teaching modes, nor did it collect data from all the extra pedagogical practices enacted by staff and guest speakers. This means that no (1) assessments were evaluated during this study; (2) learning experiences were observed consisting of a large class of more than a thousand students, delivered by guest speakers, and (3) asynchronous classes were analysed. These essential practices of the module remained outside the purview of this study.

Student perspective:

Although the study explored the pedagogical practices of TAs, it did not collect data from the approximately 9000 students of the UFSS module. These students, whom the TAs taught, could have supplied a nuanced perspective of the teachings by the TAs. Including student perspectives would have provided a multidimensional layer to the study, thereby increasing its comprehensiveness and depth. Thus, the omission of this viewpoint represents a restriction, as student feedback might have illuminated aspects of TA teaching practices not immediately apparent from observations or TA interviews alone. Furthermore, it would have brought in more data than from the 31 observations.

Generalisability:

This study has inherent limitations in direct generalisability because it was conducted inside a unique framework that studied TAs, using semi-scripted lessons in higher education for a large module, utilising hybrid teaching across two campuses. However, the methodologies employed – observations, interviews, and surveys – and the theoretical framework used, are adaptable across different educational settings. Despite this study's specificity, the empirical evidence presented regarding these contextual factors, can still offer broader implications that can be replicated, even if scripts are not employed or TAs used. This can be seen from the assertions and suggestions presented, that can be applied in different contexts. Therefore, it thus enhances the likelihood that the findings from this study could be of value elsewhere.

Scripted Lessons:

As indicated by the findings of the use of scripted lessons, along with its advantages and disadvantages, the study could not measure the full range of the TAs' teaching capabilities. Therefore, the results of this study are linked to the TAs' teaching capability in the context of scripted lessons.

The Campus Effect:

Owing to the nature of a hybrid teaching environment, technological discrepancies between the two campuses and among TAs and students, could have influenced the teaching and learning experiences. Although these discrepancies were observed through the campus effect and were acknowledged, they were not thoroughly investigated.

Observation distributions:

The observation window of the winter school was available only for two weeks. Of these ten teaching days, only six were effectively used due to logistical constraints. This resulted in an unequal distribution of observations in terms of the two hybrid modalities. As seen in Figure 12, the distribution of TA observations was fairly sporadic and relied on the convenience sampling technique.

External observers:

Lastly, the afore-mentioned logistical constraints required the use of external observers. With a few days available to observe 30 TAs, assistance was requested by external individuals. This limitation was mitigated through training and the use of the instrument before observations and follow-up sessions.

By recognising these limitations, this study underscores the nuanced, multifaceted nature of educational research, particularly in large-scale modules, such as the UFSS. While the findings provide a solid framework for understanding TA responsibilities in hybrid environments, they also highlight areas that need further research.

7.6 RECOMMENDATIONS FOR FUTURE RESEARCH

The advantage of the field of education, irrespective of the level, is that it can create many opportunities for future research ideas. By completing this Master's dissertation, new knowledge was learnt, and new ideas formed, as is customary with all lifelong learning endeavours. One of the first recommendations that this study can offer is to study the limitations above and replicate the study at another university and ensure that the limitations are mitigated. Moreover, it would be interesting to research how many institutions apply scripted or semi-scripted lessons in a comparative study.

Although the limitations can provide some direction for future research, what follows are some of the ideas picked up throughout the study as future research recommendations.

1. **Instrument Refinement**: It is recommended that the instruments be refined to scrutinise TAs that implement semi-scripted lessons, specifically. Furthermore, with hindsight, Phase 3's instrument might have worked better if it were a

questionnaire and not a full population Likert Scale survey, because it might have provided more nuanced responses.

2. **Comparative Analysis**: For future iterations of this study, it is suggested to juxtapose the other teaching time windows, i.e., summer schools and catch-up Fridays. This would allow for a comparative study that could unravel season-specific dynamics, thus providing a larger data basis for the enactment of CoI by TAs.

3. **Potential PhD**: With the two above points in mind, this study could serve as a foundation for a future PhD, specifically an article-based study. This would involve one or two more iterations of the study. Collaborative efforts with the UFSS module staff could be initiated to redesign the module guide into a more hybrid-script-friendly approach, with one or two more iterations to test the efficacy of the amended module guide. Analysing the asynchronous attendance data with students' success, compared to the hybrid class attendance is another useful study. Lastly, including another layer of student perspectives would provide a well-rounded, holistic assessment of the CoI's enactment and the overall effectiveness of TA teachings.

4. **Technological Innovations**: The impact of technology in mediating these experiences cannot be overstated, as hybrid teaching and learning approaches grow more widespread. Future research could investigate how diverse technological tools, platforms, and breakthroughs, affect the implementation of the CoI framework.

5. **Impact on Student Outcomes**: While this study narrowed down to TAs exclusively, a natural extension would be to assess the direct influence of TA practices on academic and non-academic student outcomes. Metrics, such as student involvement, satisfaction, retention, and academic success could be included.

The above ideas for future research would not only build on this study's foundational insights but would also widen the understanding of TAs' pedagogical practices in the ever-changing, hybrid education landscape.

7.7 CONTRIBUTION OF THIS STUDY

The academic landscape is in continual flux, with research projects attempting to answer important questions in all fields of study; not limited to higher education. This Master's dissertation is, in itself, a vital attribution to the complexities of hybrid teaching and learning environments, with a focus on the roles and effectiveness of TAs in the UFS's UFSS module.

Foremost, the use of a mixed-method approach that combined quantitative and qualitative data, provided a comprehensive overview of the topic. A methodological design this detailed, geared to investigate the intricacies of the CoI framework, has enhanced academic discourse about hybrid teaching modes. This study dissected the strengths and challenges intrinsic to TA-led instructions by deconstructing the three presences of CoI – TP, CP and SP.

Furthermore, the elaborative data collection, from observations to interviews and surveys, has provided rich, in-depth insights into TAs' real-world enactment of CoI presences. These findings, particularly the evident gaps in facilitating SP in online environments, are consistent with global shifts in education practices following the pandemic. As a result, this study not only reveals issues but also encourages institutions to re-evaluate and improve their hybrid teaching practices.

The literature review section on worldwide and national perspectives on TAs provided essential background context to understanding the roles of TAs in different educational institutions. This study combines theory and practice by contrasting global and local insights with empirical findings from the UFSS module, thus providing useful takeaways for both academic scholars and educational practitioners.

In essence, this Master's dissertation contributes significantly to the academic conversation on hybrid teaching and learning. By emphasising the critical functions of TAs, analysing their pedagogical practices, and providing actionable recommendations, it establishes a precedent for future research in this area. Most importantly, it asks the academic community to prioritise the human touch in digital classrooms.

7.8 CONCLUDING REMARKS

Developments in technological advances, shifts in student demographics, and socio-political movements are all driving changes in higher education settings. The UFS's UFSS module, which depends heavily on TAs, serves as a microcosm of the larger trends in hybrid teaching and learning environments, as academic institutions around the world struggle with these changes.

This study took an intricate journey, exploring and analysing pedagogical practices used by TAs in the UFSS module by measuring them against the CoI framework. It consisted of a pragmatic, multi-level triangulation mixed-method design that included a three-phase approach of observations, interviews, and surveys. This approach assisted in answering the main research question of this study and revealed areas of strength and gaps in the enactment of TP, CP, and SP. While TP and CP were successful, the findings reveal a need for training interventions, given the difficulties of enacting SP, particularly in online classes. It was also found that the use of the same approach for both hybrid platforms could be a limitation; therefore, it was recommended to redesign the study guide to accommodate both modes, given their dynamic relations.

The study's conclusions suggest that academic institutions may need to re-evaluate their approaches to teaching; improve their TA training initiatives; ensure that all campuses receive equal institutional support; respond to the specific needs of different demographics of students, and realise that one cannot use the same approach for different hybrid platforms. It is recommended that future research endeavours be paved with the commendations provided, which range from improving research instruments to considering utilising this work as a foundation for a more comprehensive PhD study.

The differences in perspectives between teaching assistants and staff, the nuanced nature of the *campus effect* and the consequences of scripted lessons, all add to a wealth of information that could completely reshape hybrid teaching methods when using a large number of TAs or instructors. This can be transferred to other higher education institutions that employ similar tactics.

Following worldwide occurrences, such as the latest pandemic and local efforts, such as 'Fees Must Fall Movement,' the significance of hybrid teaching and learning will only increase. Thus, this study is not only an academic endeavour but hopefully, also a pertinent and significant addition to the ongoing dialogue on successful pedagogy in the twenty-first century. One thing is certain, as we stand at this crossroads: although technology will continue to reshape the nature of education, the human element, the authentic, spontaneous encounters that are the foundation of learning, remains indispensable. The success of educational endeavours will be determined by this cohesive synthesis of technology and the human touch in the future.

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APPENDICES

1. **Ethics**
   - 1.1. Title Registration Proof
   - 1.2. Ethical Clearance Proof
2. **Language Editor certificate**
3. **Research Instruments**
   - 3.1. Phase 1: Observation Form – Offline version.
   - 3.2. Phase 1: Observation Form – Online version.
   - 3.3. Phase 2: Semi-structured interview questions.
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4. **Communication forms**
   - 4.1. Communication via UFSS Module Office.
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5. **Supplementary Data**
   - 5.1. Phase 1's Combined Data in Tables
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   - 5.3. Field Notes from Observations
6. **Analysis**
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   - 6.2. List of Thematic Codes used in Phase 2.
7. **Supplementary UFSS1504/1522 Information**
   - 7.1. Semester 1 Content Overview
   - 7.2. Semester 2 Content Overview
   - 7.3. Study Guide (Semi-script) Samples
   - 7.4. TA Teaching Manual (Semi-script) Samples

1 ETHICS

1.1 TITLE REGISTRATION

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA

UFS EDUCATION

9 May 2023

APPLICATION FOR TITLE REGISTRATION

Applicant: Scheepers, SJ
Student Number: 2012121196
Discipline: Higher Education Studies
Study Code: Masters (EDHS8900)

Dear Mr Scheepers

Your registered title is as follows: "Effective pedagogical practices teaching assistants use in hybrid teaching modes: A Community of Inquiry Approach."

All of the best with your studies.

Yours sincerely,

Prof Patrick Mafora
Chair: CTR committee

Ms CS Duvenhage
Secretary: CTR committee

205 Nelson Mandela Drive | Park West, Bloemfontein 9301 | South Africa
P.O. Box 339 | Bloemfontein 9300 | South Africa | www.ufs.ac.za

1.2 ETHICAL CLEARANCE

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

13-Jul-2023

Dear Mr Stefanus Scheepers

Application Approved

Research Project Title:
Effective pedagogical practices teaching assistants use in hybrid teaching modes: A Community of Inquiry Approach.

Ethical Clearance number:
UFS-HSD2023/0504

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis
Chairperson: General/Human Research Ethics Committee

Adri Du Plessis
Digitally signed by Adri Du Plessis
Date: 2023.07.13 08:21:38 +02'00'

205 Nelson Mandela Drive
Park West
Bloemfontein 9301
South Africa

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Tel: +27 (0)51 401 9337
duplessisA@ufs.ac.za
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2 LANGUAGE EDITOR CERTIFICATE

Proof of Language Editing

Date: 12 November 2023

Declaration

I, Carol Julia Keep, confirm that I have edited this dissertation, "Effective pedagogical practices teaching assistants use…", checked the in-text references, punctuation and language expression.

Student details

Student name:	Stefanus Scheepers
Study level:	Masters
Student number:	2012121196

Mrs Carol Julia Keep, MA (English); Bed (Hons.); SOD; Cert. of Proofreading
East London
South Africa

072 508 0936
Caroljkeep@gmail.com

3 RESEARCH INSTRUMENTS

3.1 PHASE 1 - OFFLINE OBSERVATION FORM

Name and Surname:			**The TA is aware that you are observing them?**		
Date:		**Time:**		**F2F or Online:**	
Observer Name:			**Observer's signature:**		

This section will deal with the enactment of the first of three elements represented by the Community of Inquiry - **Teaching Presence**: Refers to the design, facilitation, and direction of a learning experience by the instructor or teaching assistant.

Likert Scale (Likert Scale (Not Applicable = 0, Never = 1, rarely = 2, sometimes = 3, often = 4, most of the time = 5)

Examples of N/A (0) responses = "TA was teaching online and during the activity she/he lost connection and there was a pause for 3 minutes, this hindered the TA to complete the activity".

#	Criteria	0	1	2	3	4	5	Comment/Reason
1	The TA encouraged student participation during the class.							
2	The TA used techniques or methods that kept students engaged during the session.							
3	The TA provided valuable feedback to students after they responded to a question.							
4	The TA provided valuable feedback to students during class activities.							
5	The TA assisted students in connecting the course material to real-world situations.							
6	The TA ensured that students understand the content.							
7	The TA encouraged students to ask questions during the class.							
8	The TA fostered a positive learning environment in the session.							
9	The TA ensured that students felt comfortable during the class and were not intimidated to ask questions or participate in discussions?							

This section will deal with the enactment of the second of three elements represented by the Community of Inquiry - **Social presence:** Refers to the ability of participants to form meaningful connections and relationships with others in a learning environment.

Likert Scale (Likert Scale (Not Applicable = 0, Never = 1, rarely = 2, sometimes = 3, often = 4, most of the time = 5)

Examples of N/A responses = "TA was teaching online and during the activity she/he lost connection and there was a pause for 3 minutes, this hindered the TA to complete the activity".

#	Criteria	0	1	2	3	4	5	Comment/Reason
1	The TA created opportunities for students to collaborate and work together in class.							
2	The TA encouraged students to engage with each other and build relationships during the session.							
3	The TA assisted/helped students feel comfortable and confident in their ability to participate in class discussions and activities.							
4	The TA promoted a supportive and inclusive learning environment during the session.							
5	The TA allowed and helped students build relationships with each other.							
6	The TA allowed and encouraged students to share their ideas and perspectives in class.							
7	The TA accommodated shy and/or intimidated students.							
8	The TA effectively addressed conflicts or disagreements between students during the session.							
9	The TA fostered a sense of community and belonging during the session.							

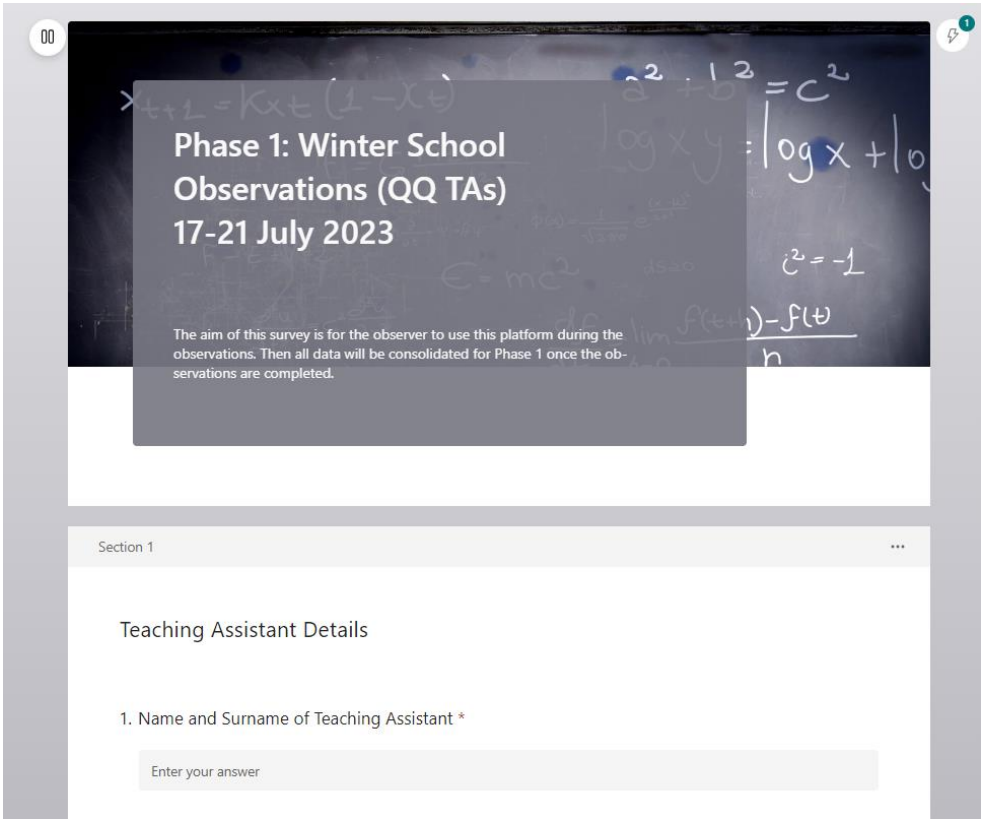
This section will deal with the enactment of the **last** of three elements represented by the Community of Inquiry - **Cognitive presence:** Refers to the extent to which participants are able to construct meaning through reflection and discussion.

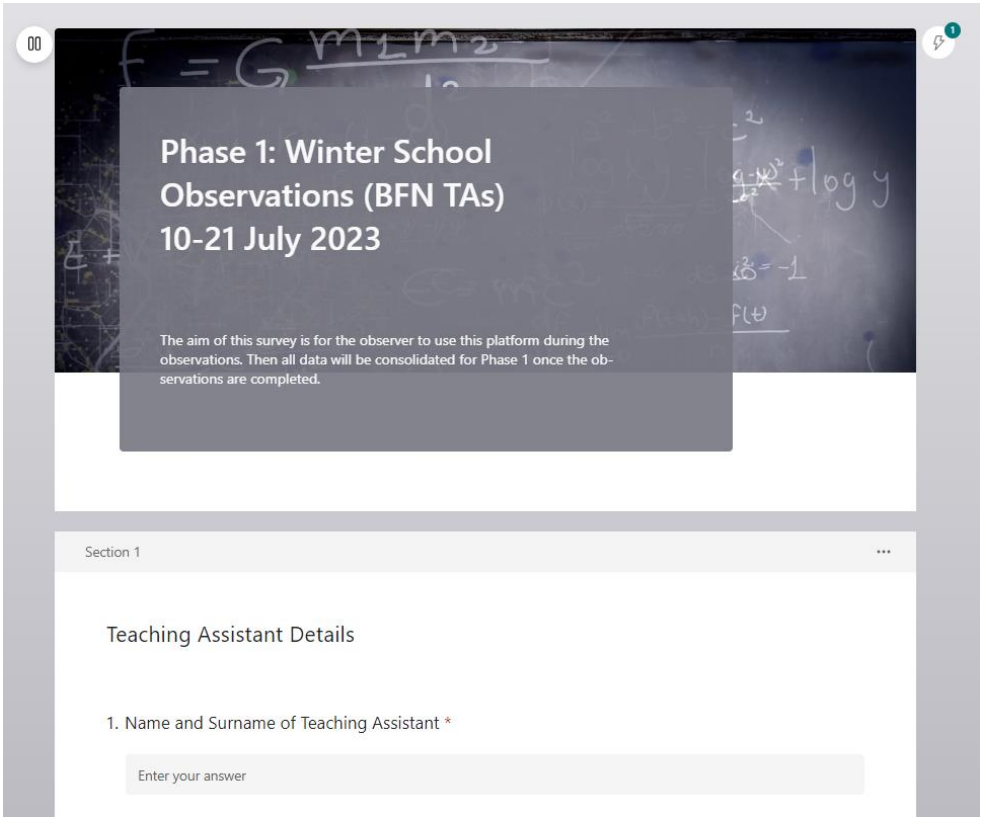
Likert Scale (Likert Scale (Not Applicable = 0, Never = 1, rarely = 2, sometimes = 3, often = 4, most of the time = 5)

Examples of N/A responses = "TA was teaching online and during the activity she/he lost connection and there was a pause for 3 minutes, this hindered the TA to complete the activity".

#	Criteria	0	1	2	3	4	5	Comment/Reason
1	The TA encouraged students to reflect on their own learning and understanding of the course material.							
2	The TA assists students connect course material to their prior knowledge and experiences.							
3	The TA promoted critical thinking and problem solving during the session.							
4	The TA encouraged students to critically engage with the content during the lesson.							
5	The TA helped students make connections between different course concepts during the lesson.							
6	The TA helped students make connections to prior or upcoming units during the lesson.							
7	The TA encouraged students to apply course material to real-world concepts.							
8	The TA promoted a deeper understanding of course material.							
9	The TA helped students make the connection to the relevance and importance of the course material to their future careers and/or personal lives.							
10	The TA encouraged students to reflect on their own learning proves and identify areas for improvement.							
11	The TA promoted activities that engage in higher-level thinking such as analysis, synthesis, and evaluation.							

3.2 PHASE 1 - ONLINE OBSERVATION FORM





3.3 PHASE 2 - SEMI-STRUCTURED INTERVIEW QUESTIONS

PHASE 2: INTRODUCTION

- The purpose of the interview is to gain a deeper understanding of your experiences and perspectives as a teaching assistant in the UFSS1504/1522 course.
- Your participation in this interview is voluntary and your responses will be kept confidential. No identifying information will be collected. You will, however, be given a pseudonym during the collection and analysis phase.
- The interview will take approximately 60 minutes (1 hour) to complete.
- The interview will be recorded for transcription and analysis purposes. The recordings will be kept confidential and will be stored on a secure computer.
- Your responses will be used solely for research purposes and will not be shared with anyone outside of the research team.
- Please be honest in your responses, as your feedback is valuable in improving the quality of teaching in this course.
- If you feel uncomfortable answering any question, please let the interviewer know and they will move on to the next question.
- If you have any questions about the study or the interview process, please do not hesitate to ask the interviewer.
- If you wish to withdraw from the study at any point during the interview, please let the interviewer know and your responses will not be included in the analysis.
- Thank you for agreeing to participate in this interview. Your insights and perspectives are greatly appreciated.

INTERVIEW QUESTIONS FOR EXEMPLARY TAS:

INTRODUCTORY QUESTIONS:

1. Can you tell me a little bit about yourself, what you are studying, and your background in teaching?
2. Can you briefly mention your teaching philosophy?

MAIN QUESTIONS

Definitions of the three presences for context when questions of the Community of Inquiry are asked:

- **Social presence:** Refers to the ability of participants to form meaningful connections and relationships with others in a learning environment.
- **Cognitive presence:** Refers to the extent to which participants are able to construct meaning through reflection and discussion.
- **Teaching presence:** Refers to the design, facilitation, and direction of a learning experience by the instructor or teaching assistant.

1. Can you describe how you interact with students during online and face-to-face teaching modes?
2. In your opinion, what are some effective teaching strategies for online and face-to-face teaching modes?
3. How do you create a sense of community among your students in both online and face-to-face teaching modes? (A sense of community would refer to a sense of belongingness and is usually achieved through group activities)
4. Can you describe any specific challenges you face when teaching online or face-to-face, and how you address those challenges?
5. How do you evaluate student learning in both online and face-to-face teaching modes?
6. How do you ensure that students are actively engaged in the learning process in both online and face-to-face teaching modes?
7. How do you adapt your teaching approach to suit the different teaching modes of online and face-to-face?
8. How do you facilitate student collaboration and discussion in both online and face-to-face teaching modes?
9. Can you share an example of a successful online or face-to-face teaching experience you had with your students?
10. Can you reflect and share an experience that was not as successful as you hoped and what you will do in the future to avoid it?
11. How do you ensure that students are motivated to learn in both online and face-to-face teaching modes?

QUESTIONS THAT WILL DETERMINE AND FINALISE PHASE 3'S SURVEY:

1. What training or support have you received to prepare you for your role as a teaching assistant in this module?
2. In your opinion, what aspects of your training were most helpful in preparing you for your role as a teaching assistant?
3. What aspects of your training do you feel could have been improved to better prepare you for your role as a teaching assistant?
4. Have you received any feedback or support from the course instructor or other faculty members regarding your performance as a teaching assistant? If so, can you describe the feedback and how it helped you in your role?
5. Have you had any experiences working with other teaching assistants in this module, and if so, how did this collaboration impact your teaching practices?
6. What suggestions do you have for future training or support programs for teaching assistants in this module to enhance their proficiency in enacting effective pedagogical practices for online and face-to-face teaching modes?

3.4 SURVEY QUESTIONS IN WORD FORMAT

PHASE 3 INTRODUCTION:

For phase 3, both teaching assistants and the UFSS module office staff members will be recruited to partake in the survey. The first two phases involve the observations of teaching assistants during winter school (phase 1) and interviews of the exemplary teaching assistants (phase 2). However, the current questions designed and guided by the CoI framework are preliminary and will be adjusted based on the responses received from the interviews in phase 2.

The aim of the third phase is to explore the current ways of enacting the module in terms of teaching and learning in a hybrid space, as well as what can be done to improve the teaching assistant programme. Thus, the reason why both teaching assistants, as well as the UFSS module staff members, will be recruited to partake in the survey.

The questions designed in this survey, based on Phase 2's results, were still rooted in the CoI framework, with reference to another survey done by SIAH et al., 2020: 461.

Similar to phase 1, this phase will use the Likert scale, however, it will make use of different descriptions: "Strongly disagree" assigned a value of 1, "Disagree" assigned a value of 2, "Neutral" assigned a value of 3, "Agree" assigned a value of 4, and "Strongly agree" assigned a value of 5.

PHASE 3: INSTRUCTIONS

- Please read each question carefully and answer it to the best of your ability.
- Your participation in this survey is voluntary and your responses will be kept confidential. No identifying information will be collected.
- Your participation in this survey will take approximately 10 minutes to complete.
- Please be honest in your responses, as your feedback is valuable in improving the quality of teaching in this course.
- If you have any questions about the survey, please contact Stefan Scheepers at (ScheepersSJ@ufs.ac.za).
- Thank you for taking the time to complete this survey. Your participation is greatly appreciated.

SECTION A: THE COI PRESENCES.

This study measures its statements against the Community of Inquiry Framework. This framework consists of three presences. Social presence, cognitive presence, and teaching presence. Kindly peruse through the short explanations of these presences below to give you context before/while you are responding to the statements.

Social Presence: Social presence is where you, as a teaching assistant, encourage the students in class to feel like they belong and that they collaborate and learn from each other.

Cognitive Presence: Cognitive presence involves the exploration and understanding new things by thinking, discussing, and applying knowledge and skills.

Teaching Presence: Teaching presence refers to the guiding role you, as a teaching assistant, play in the learning process whereby students feel that they are able to interact, and receive valuable feedback during interactions.

SOCIAL PRESENCE:

1. TAs are trained to create a welcoming and supportive learning environment in their online classes.
2. TAs are trained to create a welcoming and supportive learning environment in their face-to-face classes.
3. TAs are trained to create meaningful interactions and discussions with students in online classes.
4. TAs are trained to create meaningful interactions and discussions with students in face-to-face classes.
5. TAs are trained to help TAs with techniques to establish rapport and build relationships with students in online classes.
6. TAs are trained to help TAs with techniques to establish rapport and build relationships with students in face-to-face classes.
7. TAs are trained to know how to accommodate shy and quiet student in their online classes.
8. TAs are trained to know how to accommodate shy and quiet student in their face-to-face classes.

COGNITIVE PRESENCE:

9. TAs are trained to understand the course content of the UFSS1504/1522 module.
10. TAs are trained with teaching techniques that guide students in exploring challenging questions and critical thinking tasks.
11. TAs are trained to teach students to reflect on course content to understand fundamental concepts in their classes.
12. TAs are trained with the skills to allow students to apply course content in real life scenarios.
13. TAs are trained to promote deeper learning experiences by encouraging students to think critically and solve problems during class activities.

TEACHING PRESENCE:

14. TAs are trained to clearly communicate the objectives of lesson.
15. TAs are trained to provide clear instructions on how students can participate in class activities.
16. TAs are trained to communicate important information such as due dates for tests and assignments, during their classes.
17. TAs are trained to facilitate group discussions and collaborative activities to enhance student engagement in the classroom.
18. TAs are trained to keep students engaged and to participate during online classes.
19. TAs are trained to keep students engaged and to participate during face-to-face classes.
20. TAs are trained to create a helpful environment that assists students to understand course content.
21. TAs are trained to frequently provide detailed feedback during class activities to nurture a supportive teaching environment.

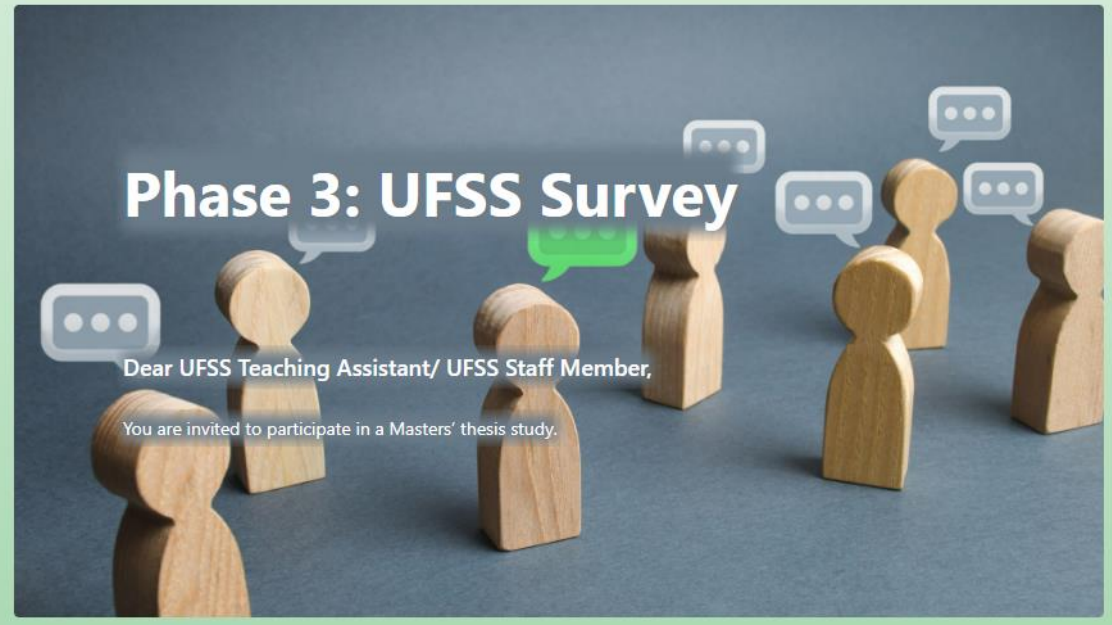
SECTION B: THE TA TRAINING

1. The training program effectively provided TAs with the necessary skills and knowledge to fulfil their role as a TA in the module.
2. The training program adequately covered topics related to instructional strategies, course materials, and teaching methods for online teaching modes.
3. The training program adequately covered topics related to instructional strategies, course materials, and teaching methods for face-to-face teaching modes.
4. The training program prepared TAs to handle the challenges and complexities of teaching in online classes.
5. The training program prepared TAs to handle the challenges and complexities of teaching in face-to-face classes.
6. The training program effectively addressed the use of technology and online tools to enhance student collaboration in online teaching classrooms.
7. TAs received sufficient feedback and support from the UFSS module office during the training period.
8. TAs received sufficient feedback and support from the UFSS module office during the winter school period.
9. The training program provided helpful guidance and support in managing administrative tasks such as log in their timesheets, capturing attendance, using the winter school schedule effectively, and navigating and using the Blackboard class links.
10. The training program's length (3-days) was adequate and provided enough time to know what is expected of TAs and how to execute it effectively during the semester.
11. The training adequately prepared TAs to facilitate effective teaching methods as aligned with the presences of the Community of Inquiry framework (social, cognitive, and teaching presence) for online teaching classes.
12. The training adequately prepared TAs to facilitate effective teaching methods as aligned with the presences of the Community of Inquiry framework (social, cognitive, and teaching presence) for face-to-face teaching classes.
13. Rate the overall satisfaction of the TA training program. (This will have a unique Likert scale of – 1= Poor, 2= Fair, 3=Satisfactory, 4= Good, and 5=Excellent).

SECTION C: OPEN ENDED QUESTION

1. What suggestions do you have that can improve the UFSS TA programme for future training programmes? Please elaborate below:

3.5 PHASE 3 ONLINE SURVEY



Section 1

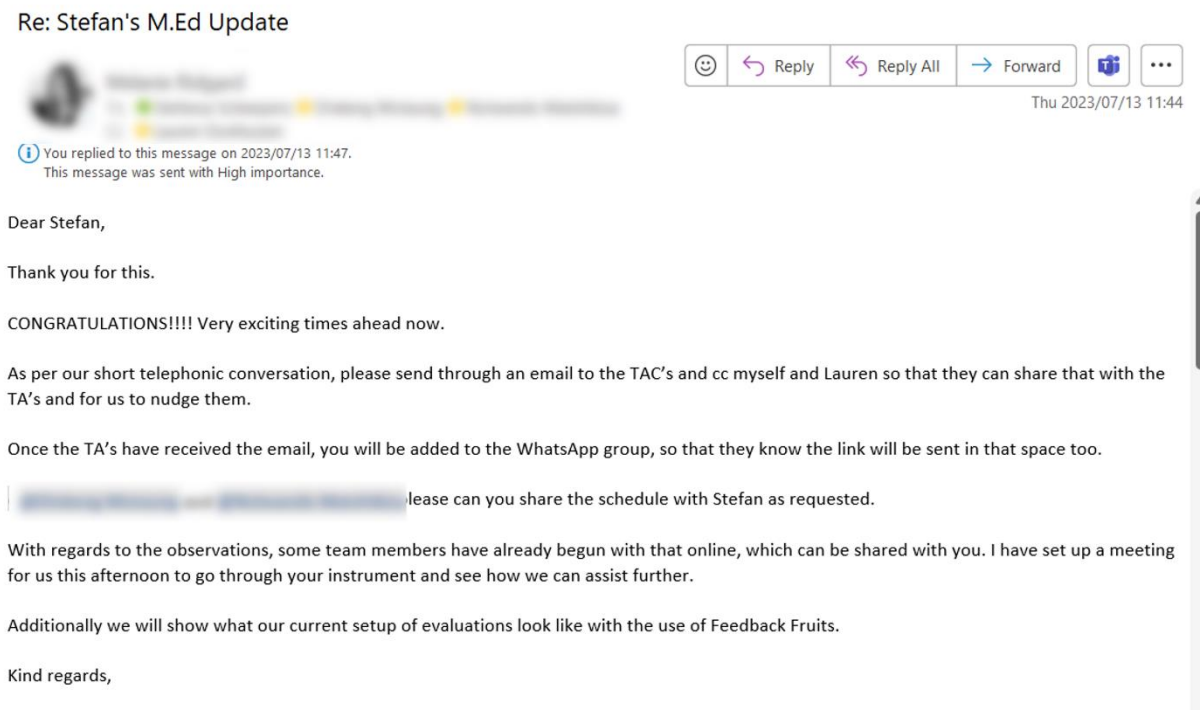
Section 1: Informed Consent

You are invited to participate in a Masters' thesis study. Some of you have been observed in Phase 1 and/or interviewed in Phase 2 of my masters' study. The objective of my study is focused on evaluating the pedagogical practices of UFSS Teaching Assistants and their effectiveness in a hybrid teaching and learning environment. The final phase, Phase 3, will be the next step of my masters' study.

Phase 3 of my study involves conducting a survey to gather feedback from both UFSS TAs and UFSS staff members of the UFSS module office from the pedagogical practices enacted during the winter school that recently took place. Your participation in this survey is very important as it will provide the study with valuable insights into the above-mentioned practices in this module.

4. COMMUNICATION FORMS

4.1 COMMUNICATION VIA UFSS MODULE OFFICE



Re: Stefan's M.Ed Update

Reply | Reply All | Forward

Thu 2023/07/13 11:44

You replied to this message on 2023/07/13 11:47.
This message was sent with High importance.

Dear Stefan,

Thank you for this.

CONGRATULATIONS!!!! Very exciting times ahead now.

As per our short telephonic conversation, please send through an email to the TAC's and cc myself and Lauren so that they can share that with the TA's and for us to nudge them.

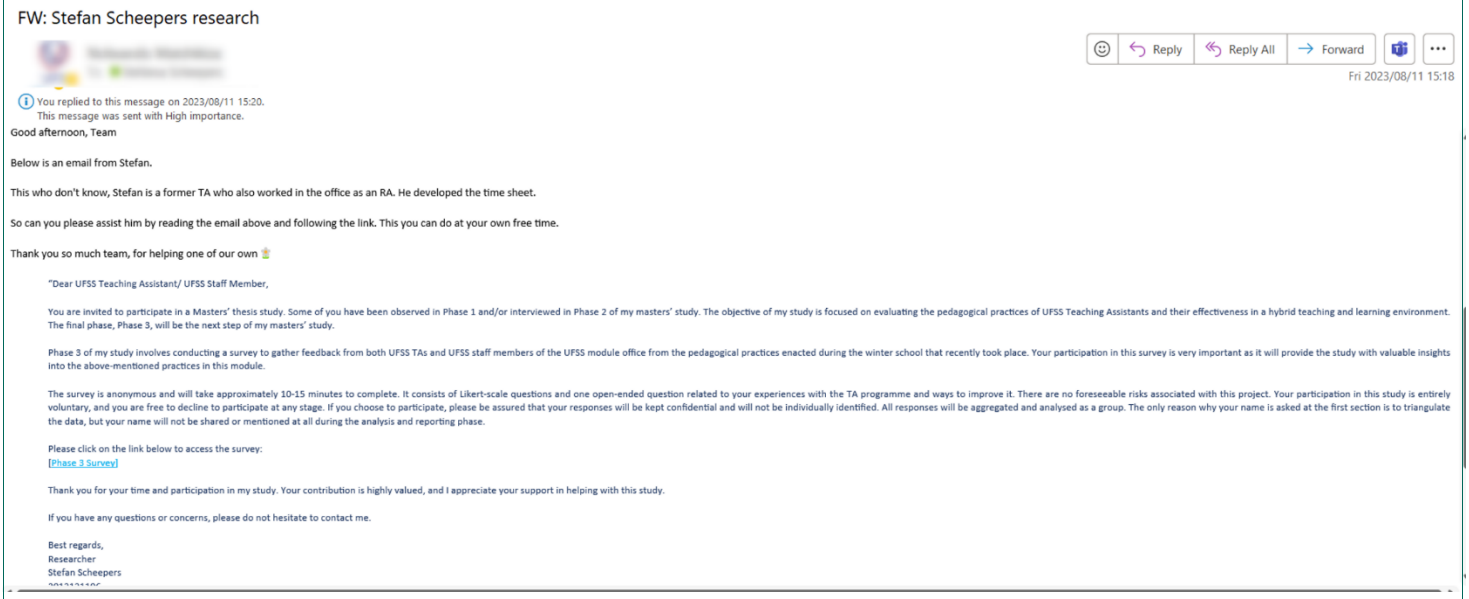
Once the TA's have received the email, you will be added to the WhatsApp group, so that they know the link will be sent in that space too.

[redacted] please can you share the schedule with Stefan as requested.

With regards to the observations, some team members have already begun with that online, which can be shared with you. I have set up a meeting for us this afternoon to go through your instrument and see how we can assist further.

Additionally we will show what our current setup of evaluations look like with the use of Feedback Fruits.

Kind regards,



FW: Stefan Scheepers research

Reply | Reply All | Forward

Fri 2023/08/11 15:18

You replied to this message on 2023/08/11 15:20.
This message was sent with High importance.

Good afternoon, Team

Below is an email from Stefan.

This who don't know, Stefan is a former TA who also worked in the office as an RA. He developed the time sheet.

So can you please assist him by reading the email above and following the link. This you can do at your own free time.

Thank you so much team, for helping one of our own

"Dear UFSS Teaching Assistant/ UFSS Staff Member,

You are invited to participate in a Masters' thesis study. Some of you have been observed in Phase 1 and/or interviewed in Phase 2 of my masters' study. The objective of my study is focused on evaluating the pedagogical practices of UFSS Teaching Assistants and their effectiveness in a hybrid teaching and learning environment. The final phase, Phase 3, will be the next step of my masters' study.

Phase 3 of my study involves conducting a survey to gather feedback from both UFSS TAs and UFSS staff members of the UFSS module office from the pedagogical practices enacted during the winter school that recently took place. Your participation in this survey is very important as it will provide the study with valuable insights into the above-mentioned practices in this module.

The survey is anonymous and will take approximately 10-15 minutes to complete. It consists of Likert-scale questions and one open-ended question related to your experiences with the TA programme and ways to improve it. There are no foreseeable risks associated with this project. Your participation in this study is entirely voluntary, and you are free to decline to participate at any stage. If you choose to participate, please be assured that your responses will be kept confidential and will not be individually identified. All responses will be aggregated and analysed as a group. The only reason why your name is asked at the first section is to triangulate the data, but your name will not be shared or mentioned at all during the analysis and reporting phase.

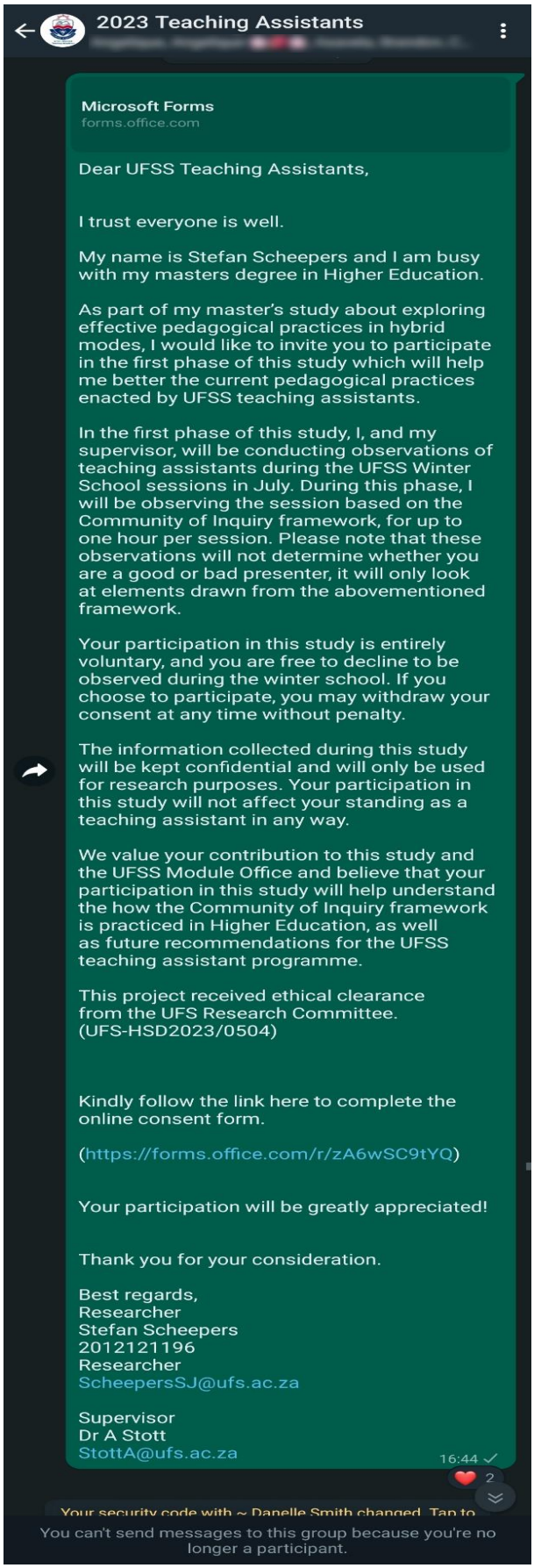
Please click on the link below to access the survey:
[Phase 3 Survey]

Thank you for your time and participation in my study. Your contribution is highly valued, and I appreciate your support in helping with this study.

If you have any questions or concerns, please do not hesitate to contact me.

Best regards,
Researcher
Stefan Scheepers

4.2 COMMUNICATION VIA WHATSAPP GROUP



5 SUPPLEMENTARY DATA

5.1 PHASE 1'S COMBINED DATA IN TABLES

Table 12, 13, and 14 below are supplementary data that presents the combined results of all TAs across the two campuses. The results reveal all the frequencies of the enactment of the CoI presences per criterion.

Table 12: Phase 1 Teaching Presence - Combined Results

Teaching Presence n=31								
#	Criteria	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)	Average
1	The TA encouraged student participation during the class.		1	4	5	8	13	**3.90**
2	The TA used techniques or methods that kept students engaged during the session.			4	5	9	13	**4.00**
3	The TA provided valuable feedback to students after they responded to a question.	2*	3	4	4	12	6	**3.48**
4	The TA provided valuable feedback to students during class activities.	6*	2	5	5	6	7	**3.44**
5	The TA assisted students in connecting the course material to real-world situations.	1*			3	7	20	**4.57**
6	The TA ensured that students understand the content.			1	5	17	8	**4.03**
7	The TA encouraged students to ask questions during the class.		2	10	10	6	3	**2.94**
8	The TA fostered a positive learning environment in the session.			2	2	15	12	**4.19**
9	The TA ensured that students felt comfortable during the class and were not intimidated to ask questions or participate in discussions?		1	2	4	15	9	**3.94**

*Criteria that were excluded from the averages.

Table 13: Cognitive Presence - Combined Results

Cognitive Presence n=31								
#	Criteria	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)	Average
1	The TA encouraged students to reflect on their own learning and understanding of the course material.	1*	1	2	5	18	4	**3.73**
2	The TA assists students connect course material to their prior knowledge and experiences.	1*	2	1	4	17	6	**3.80**
3	The TA promoted critical thinking and problem solving during the session.	1*	2	7	6	12	3	**3.23**
4	The TA encouraged students to critically engage with the content during the lesson.		1	5	10	11	4	**3.39**
5	The TA helped students make connections between different course concepts during the lesson.		1	2	3	20	5	**3.84**
6	The TA helped students make connections to prior or upcoming units during the lesson.	1*	4	7	9	8	2	**2.90**
7	The TA encouraged students to apply course material to real-world concepts.			2	5	5	19	**4.32**
8	The TA promoted a deeper understanding of course material.	1*	1		8	16	5	**4.80**
9	The TA helped students make the connection to the relevance and importance of the course material to their future careers and/or personal lives.	2*		1	2	10	16	**4.41**
10	The TA encouraged students to reflect on their own learning proves and identify areas for improvement.			4	10	9	8	**3.68**
11	The TA promoted activities that engage in higher-level thinking such as analysis, synthesis, and evaluation.	4*	5	8	8	4	2	**2.63**

*Criteria that were excluded from the averages.

Table 14: Social Presence - Combined Results

Social Presence n=31								
#	Criteria	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)	Average
1	The TA created opportunities for students to collaborate and work together in class.	1*	25	3	1		1	**1.30**
2	The TA encouraged students to engage with each other and build relationships during the session.	1*	24	4		1	1	**1.37**
3	The TA assisted/helped students feel comfortable and confident in their ability to participate in class discussions and activities.		1	4	4	12	10	**3.84**
4	The TA promoted a supportive and inclusive learning environment during the session.		1	4	7	8	11	**3.77**
5	The TA allowed and helped students build relationships with each other.	1*	24	3	1		2	**1.43**
6	The TA allowed and encouraged students to share their ideas and perspectives in class.	2*	1	2	11	6	9	**3.69**
7	The TA accommodated shy and/or intimidated students.	4*	2	3	7	9	6	**3.52**
8	The TA effectively addressed conflicts or disagreements between students during the session.	21*	1	2	6	1		**2.70**
9	The TA fostered a sense of community and belonging during the session.		2	4	7	12	6	**3.52**

*Criteria that were excluded from the averages.

5.2 PHASE 1'S COMPARATIVE DATA IN TABLES

Tables 15, 16, and 17 below are supplementary data that presents the comparative results of all TAs between the two campuses and per hybrid mode. The results reveal all the frequencies of the enactment of the CoI presences per criterion.

Table 15: Teaching Presence - Comparative Results

Teaching Presence (n=31)								
#	Criteria	Hybrid mode	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)
1	The TA encouraged student participation during the class.	BFN F2F (n=4)		1			2	1
		QQ F2F (n=12)				3	2	7
		BFN Online (n=9)			3		2	4
		QQ Online (n=6)			1	2	2	1
2	The TA used techniques or methods that kept students engaged during the session.	BFN F2F (n=4)			1	1	2	
		QQ F2F (n=12)			1	2	2	7
		BFN Online (n=9)			1	1	3	4
		QQ Online (n=6)			1	1	2	2
3	The TA provided valuable feedback to students after they responded to a question.	BFN F2F (n=4)		1		1	2	
		QQ F2F (n=12)	1	1	2	2	4	2
		BFN Online (n=9)	1		1		3	4
		QQ Online (n=6)		1	1	1	3	
4	The TA provided valuable feedback to students during class activities.	BFN F2F (n=4)	2			2		
		QQ F2F (n=12)	1	2	2	1	2	4
		BFN Online (n=9)	2		1	1	2	3
		QQ Online (n=6)	1		2	1	2	
5	The TA assisted students in connecting the course material to real-world situations.	BFN F2F (n=4)				1	1	2
		QQ F2F (n=12)				1	3	8
		BFN Online (n=9)					2	7
		QQ Online (n=6)	1			1	1	3
6	The TA ensured that students understand the content.	BFN F2F (n=4)				1	3	
		QQ F2F (n=12)				1	6	5
		BFN Online (n=9)				2	6	1
		QQ Online (n=6)			1	1	2	2
7	The TA encouraged students to ask questions during the class.	BFN F2F (n=4)		1		1	2	
		QQ F2F (n=12)			4	5	1	2
		BFN Online (n=9)			3	3	3	
		QQ Online (n=6)		1	3	1		1
8	The TA fostered a positive learning environment in the session.	BFN F2F (n=4)			1		2	1
		QQ F2F (n=12)				1	7	4
		BFN Online (n=9)				1	2	6
		QQ Online (n=6)			1		4	1
9	The TA ensured that students felt comfortable during the class and were not intimidated to ask questions or participate in discussions?	BFN F2F (n=4)		1			3	
		QQ F2F (n=12)				2	8	2
		BFN Online (n=9)				2	3	4
		QQ Online (n=6)			2		1	3

Table 16: Cognitive Presence - Comparative Results

Cognitive Presence (n=31)								
#	Criteria	Hybrid mode	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)
1	The TA encouraged students to reflect on their own learning and understanding of the course material.	BFN F2F (n=4)			1	2	1	
		QQ F2F (n=12)				1	8	3
		BFN Online (n=9)			1	1	6	1
		QQ Online (n=6)	1	1		1	3	
2	The TA assists students connect course material to their prior knowledge and experiences.	BFN F2F (n=4)		1	1		2	
		QQ F2F (n=12)				1	7	4
		BFN Online (n=9)				2	5	2
		QQ Online (n=6)	1	1		1	3	
3	The TA promoted critical thinking and problem solving during the session.	BFN F2F (n=4)			1		3	
		QQ F2F (n=12)			2	2	5	3
		BFN Online (n=9)		1	2	2	4	
		QQ Online (n=6)	1	1	2	2		
4	The TA encouraged students to critically engage with the content during the lesson.	BFN F2F (n=4)				2	1	1
		QQ F2F (n=12)			1	3	6	2
		BFN Online (n=9)			2	3	3	1
		QQ Online (n=6)		1	2	2	1	
5	The TA helped students make connections between different course concepts during the lesson.	BFN F2F (n=4)			1	1	2	
		QQ F2F (n=12)				2	8	2
		BFN Online (n=9)		1			6	2
		QQ Online (n=6)			1		4	1
6	The TA helped students make connections to prior or upcoming units during the lesson.	BFN F2F (n=4)		2	1		1	
		QQ F2F (n=12)		1	1	3	5	2
		BFN Online (n=9)	1		2	5	1	
		QQ Online (n=6)		1	3	1	1	
7	The TA encouraged students to apply course material to real-world concepts.	BFN F2F (n=4)			1	1	1	1
		QQ F2F (n=12)				3	1	8
		BFN Online (n=9)				1	2	6
		QQ Online (n=6)			1		1	4
8	The TA promoted a deeper understanding of course material.	BFN F2F (n=4)				1	1	2
		QQ F2F (n=12)				4	7	1
		BFN Online (n=9)				2	5	2
		QQ Online (n=6)	1	1		1	3	
9	The TA helped students make the connection to the relevance and importance of the course material to their future careers and/or personal lives.	BFN F2F (n=4)				1	2	1
		QQ F2F (n=12)				1	4	7
		BFN Online (n=9)	1				3	5
		QQ Online (n=6)	1		1		1	3
10	The TA encouraged students to reflect on their own learning proves and identify areas for improvement.	BFN F2F (n=4)			3	1		
		QQ F2F (n=12)				2	6	4
		BFN Online (n=9)				4	2	3
		QQ Online (n=6)			1	3	1	1
11	The TA promoted activities that engage in higher-level thinking such as analysis, synthesis, and evaluation.	BFN F2F (n=4)	2	2			2	
		QQ F2F (n=12)		2	2	4	2	2
		BFN Online (n=9)	1	1	4	3		
		QQ Online (n=6)	1	2	2	1		

Table 17: Social Presence - Comparative Results

Social Presence (n=31)								
#	Criteria	Hybrid mode	Not Applicable (0)	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Most of the time (5)
1	The TA created opportunities for students to collaborate and work together in class.	BFN F2F (n=4)		3	1			
		QQ F2F (n=12)		9	1	1		1
		BFN Online (n=9)		8	1			
		QQ Online (n=6)	1	5				
2	The TA encouraged students to engage with each other and build relationships during the session.	BFN F2F (n=4)		3	1			
		QQ F2F (n=12)		9	1		1	1
		BFN Online (n=9)		7	2			
		QQ Online (n=6)	1	5				
3	The TA assisted/helped students feel comfortable and confident in their ability to participate in class discussions and activities.	BFN F2F (n=4)		1		1	2	
		QQ F2F (n=12)			1	3	4	4
		BFN Online (n=9)			1		4	4
		QQ Online (n=6)			2		2	2
4	The TA promoted a supportive and inclusive learning environment during the session.	BFN F2F (n=4)		1		1	1	1
		QQ F2F (n=12)				2	5	5
		BFN Online (n=9)			1	3	1	4
		QQ Online (n=6)			3	1	1	1
5	The TA allowed and helped students build relationships with each other.	BFN F2F (n=4)		3	1			
		QQ F2F (n=12)		8	1	1		2
		BFN Online (n=9)		8	1			
		QQ Online (n=6)	1	5				
6	The TA allowed and encouraged students to share their ideas and perspectives in class.	BFN F2F (n=4)		1		2	1	
		QQ F2F (n=12)				5	2	5
		BFN Online (n=9)			1	1	3	4
		QQ Online (n=6)	2		1	3		
7	The TA accommodated shy and/or intimidated students.	BFN F2F (n=4)	1			2	1	
		QQ F2F (n=12)			1	2	5	4
		BFN Online (n=9)	1	1	1	2	2	2
		QQ Online (n=6)	2	1	1	1	1	
8	The TA effectively addressed conflicts or disagreements between students during the session.	BFN F2F (n=4)	3			1		
		QQ F2F (n=12)	7		2	3		
		BFN Online (n=9)	6			2	1	
		QQ Online (n=6)	5	1				
9	The TA fostered a sense of community and belonging during the session.	BFN F2F (n=4)		1		1	2	
		QQ F2F (n=12)		1		2	7	2
		BFN Online (n=9)			2	3	1	3
		QQ Online (n=6)			2	1	2	1

5.3 FIELD NOTES FROM OBSERVATIONS

The field notes below were taken during Phase 1's observations. Specific field notes are added below to support certain arguments mentioned in Chapter 6.

1. **Teaching presence: Referring to criterion 7**

BFN

- *TA did not encourage students to ask questions that often.*
- *TA was more concerned about time and wanted to finish the content.*
- *TA occasionally asked questions.*
- *TA did not instruct the students to ask questions much.*

QQ

- *Students were not prompted often to ask questions.*
- *Rarely requested students to ask questions.*
- *TA did not really encourage students to ask questions.*
- *The TA did not really encourage students to ask questions regarding the content.*
- *This was rarely seen during the observation.*
- *She did, although there was no question asked.*
- *Although, there were no questions asked.*
- *Although nobody asked a question.*

2. **Cognitive presence: Referring to the content and the last criterion.**

BFN

- *There were no activities during the lesson.*
- *There were no activities.*
- *Well... maybe asking them what they got from the video, and getting their ideas did this to some extent.*
- *There were no activities in the class.*
- *There was activities, but there were times where the TA did ask questions that did require higher-level thinking but he went so fast that the students did not have time to respond because he went on to the next slide.*

QQ

- *The polls helped with this.*
- *The use of social media and digital footprint provided higher-level engagements.*
- *The content offered such activities.*
- *Since it was an orientation class (the very first class for winter school) there was not really a space for students to partake in such activities.*

- *Higher-level thinking activities were used once near the end of the observation.*
- *Near the end there was an activity that required to apply higher order thinking however, the main presenter lost connection and this was not facilitated during the observation.*
- *There were activities, but the TA did not effectively execute the activities. TA also got impatient when students did not respond immediately.*
- *The content of today's unit required students to engage in higher-level thinking activities and the TA did facilitate this. However, there were not any responses from the student.*

BFN:

- *The content allowed for the TA to present a lot of real-world concepts in the session.*
- *TA continually used real-world examples to explain concepts and the content.*
- *Students responded with real-world examples related to them.*
- *The content catered for this criteria and the TA facilitated this really well.*
- *The content is catered for this criteria and the TA facilitated this well.*
- *Content catered for this and the TA facilitated this well.*

QQ:

- *Content catered for students to apply real-world concepts and examples.*
- *The content catered for this to be visible.*
- *Content catered for this criteria.*
- *Content catered for this criteria.*
- *The content was catered for this criteria and the TA facilitated it well.*
- *TA did use real-world example in the student context.*
- *TA used relevant examples in the student context when he explained the content.*
- *The content catered for this and the TA did facilitate this well.*
- *Even though the content is catered for this, the TAs facilitation of this was poorly executed.*
- *The content of today's unit required students to identify areas for improvement in their future careers and the TA did facilitate this. However, there were not any responses from the student.*
- *The content is catered for this and the TA facilitated this well.*

3. **Social presence: Referring to the criteria that lack collaborative activities.**

BFN

- There were activities but the TA did not instruct them to work in groups.
- No group work or pair work was promoted in this session.
- Online did not provide group work.

- TA did not instruct students to work together, however, this is an online session and might be difficult.
- TA was using a monologue discussing the content and the questions he asked did not foster collaboration.
- TA did not instruct students to work together in the online class.
- Ta did not instruct the students to work together in the online class.
- She had a very nice manner, but there was very little response from the participants. I don't know if she could have 'forced' participation more effectively. She tried hard, and modelled what to do, but the students mainly did not participate.
- Students were also not instructed to work together in groups during the session.
- No group work or pair work was promoted in this session.
- TA facilitated students responses that built on one another.
- TA did not instruct students to work together, however, this is an online session and might be difficult.
- TA was using a monologue discussing the content and the questions he asked did not foster collaboration.
- TA did not instruct students to work together in the online class.
- Ta did not instruct the students to work together in the online class. Also the TA mentioned that he cancelled the breakout session.
- She tried, but it was like pulling teeth because they were so nonparticipative.
- TA did not instruct or assisted students to engage with each other.
- No group work or pair work was promoted in this session.
- TA did not instruct students to work together, however, this is an online session and might be difficult.
- TA did not instruct students to work together in the online class.
- Ta did not instruct the students to work together in the online class.

QQ

- TA did not instruct students to work together or collaborate during the session.
- TA did not promote group work or pair work in this session.
- TA did not promote group work or collaboration during the session I observed.
- During the observation, no instruction were given for students to work together.
- No instruction was given for students to work together.
- TA did not instruct students to work together or to collaborate during the observation.
- Near the end the TA requested students to work in a group. However, it seemed that she was tired and just wanted to give an activity to take a break.
- TA did not instruct students to work together in groups or to collaborate.
- TA did not instruct students to work together, but this is a difficult one for an online class.

- TA did not instruct students to work together in the class, albeit, it was an online class which is difficult to execute.
- TA did not instruct students to work together in the online setting.
- TA did not instruct students to work together during the online session.
- With only one student in the online class, this was not possible.
- TA did not request students to work together in the online class.
- She mostly did individual work activities.
- The TA did a paired activity whereby he encouraged the students to speak in a beam work and also support their statements when they gave feedback.
- This was not encouraged.
- TA did not instruct students to work together or collaborate during the session.
- TA did not promote group work or collaboration during the session I observed.
- During the observation, no instruction were given for students to work together.
- No instruction was given for students to work together.
- TA did not instruct students to work together or to collaborate during the observation.
- Near the end the TA requested students to work in a group. This gave the students the opportunity to engage with one another.
- TA did not instruct students to work together in groups or to collaborate.
- TA did not instruct students to work together, but this is a difficult one for an online class.
- TA did not instruct students to work together in the class, albeit, it was an online class which is difficult to execute.
- TA did not instruct students to work together in the online setting.
- TA did not instruct students to work together during the online session.
- With only one student in the online class, this was not possible.
- TA did not request students to work together in the online class.
- TA did not promote group work or collaboration during the session I observed.
- During the observation, no instruction were given for students to work together.
- No instruction was given for students to work together.
- TA did not instruct students to work together or to collaborate during the observation.
- TA did not instruct students to work together, but this is a difficult one for an online class.
- TA did not instruct students to work together in the class, albeit, it was an online class which is difficult to execute.
- TA did not instruct students to work together in the online setting.
- TA did not instruct students to work together during the online session.
- With only one student in the online class, this was not possible.
- TA did not request students to work together in the online class.

6 ANALYSIS

6.1 EXAMPLE OF EXCEL ANALYSIS AND FORMULAS

The screenshot below is a summary of pivot tables used for the demographics of Phase 1's participants.

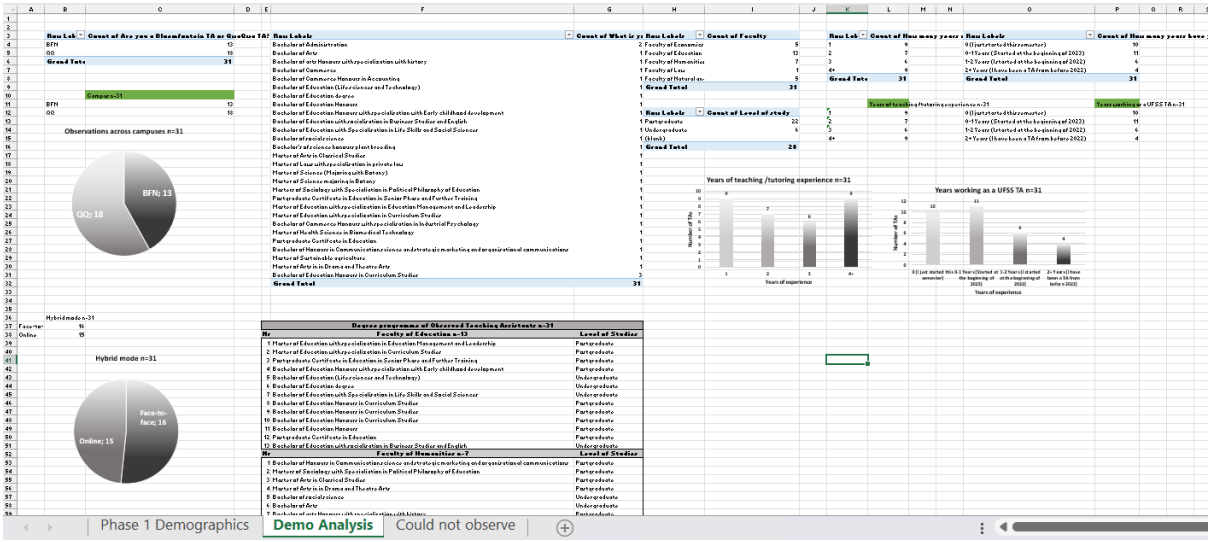


Figure 29: Phase 1's pivot table sample

The following two text boxes are samples of how the scores of each of the Likert scales were calculated with precision.

Phase 1: Teaching Presence Combined Formulas Sample for one criterion.

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;0)

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;1)

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;2)

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;3)

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;4)

=COUNTIF('Phase 1_Combined'!$H$2:$H$32;5)

Phase 1: Social Presence QQ Online Formulas Sample for one criterion.

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 0)

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 1)

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 2)

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 3)

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 4)

=COUNTIF('QQ Data (Scores only)'!$Q$2:$Q$32; 5)

Similar formulas were used for Phase 3 that was used in Phase 1.

The textbox below are the steps taken to work out the Cronbach's Alpha consistency test.

Phase 3: Cronbach's Alpha Test Formulas Sample of Cognitive Presence

The first step was to get the sum of the criteria of cognitive presence. See example of one (of 45) respondents below:

=SUM(Table1[@[...to understand the course content of the UFSS1504/1522 module.]:[...to promote deeper learning experiences by encouraging students to think critically and solve problems during class activities.]])

The second step was to get the total variance of Cognitive Presence of all the 45 respondents.

=VAR.S(AR2:AR46) – the answer here is 45,86.

Third step was to get the variance of each of the criteria. Here is a formula of one of the criterion.

=VAR.S(Table1[...to understand the course content of the UFSS1504/1522 module.])

The total variances of the five criteria of cognitive presence was summed (=SUM(M53:Q53)) and the answer here is – 9,89.

The fourth and final step was to bring this all together to calculate the Cronbach's Alpha for cognitive presence.

=(5/4)*((E61-E56)/E61)

E61 = 45,86 and E56 = 9,89

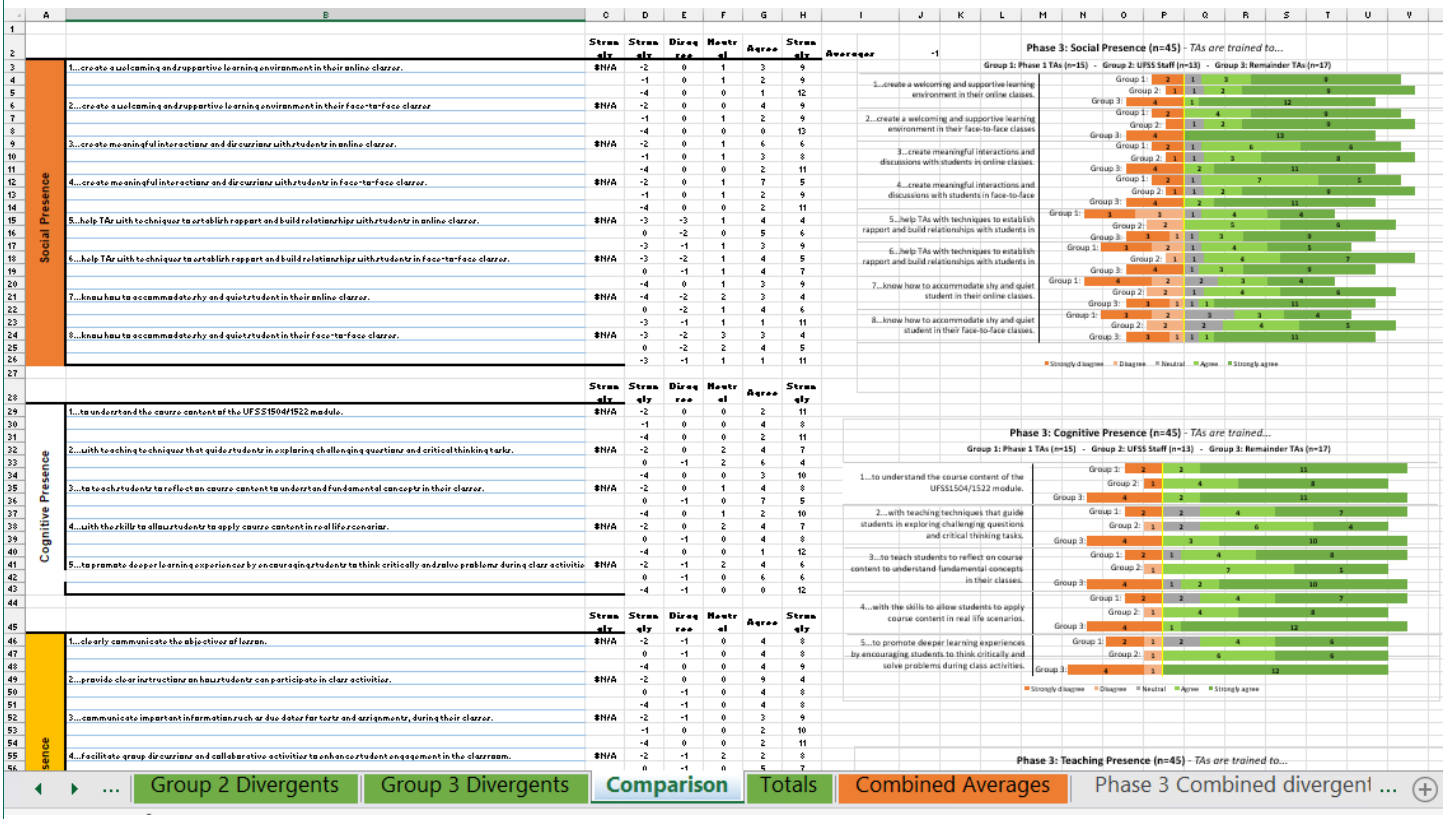
The final answer here is = 0,98.

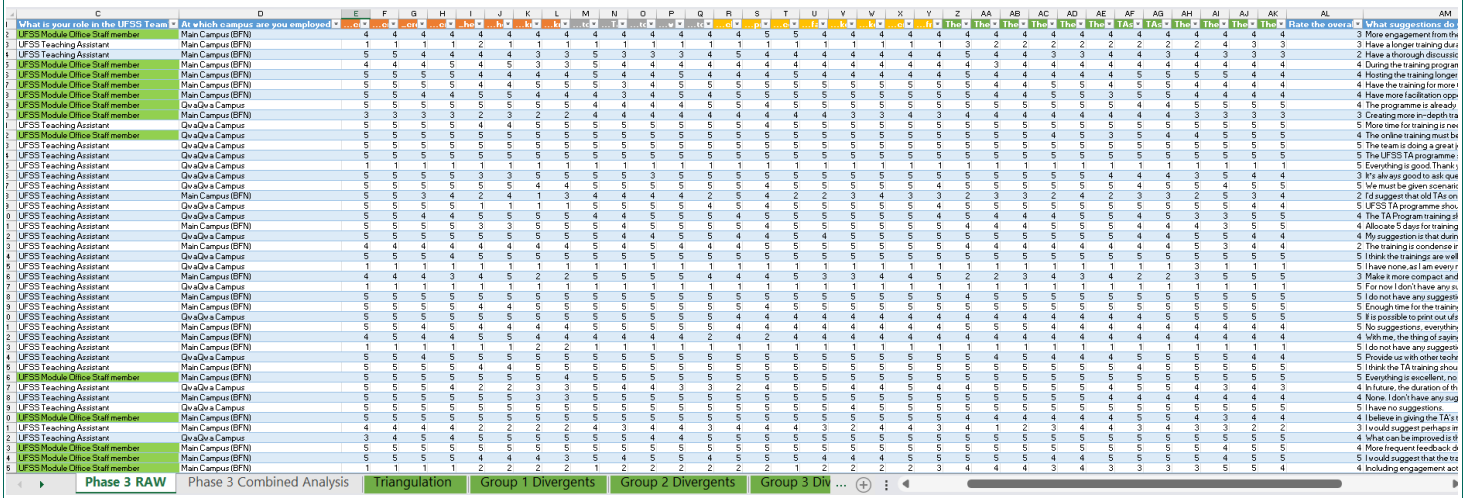
This was done for all CoI elements, as well as for the triangulation section where it was done for each group. See Table on the next page to view the summary of the Cronbach's Alpha for the triangulation.

Table 18: Phase 3: Cronbach's Alpha scores in the triangulation section

	Group 1: Observed TAs				Group 2: UFSS Module Staff				Group 3: Control group			
n=count	Social Presence	Cognitive presence	Teaching presence	TA Training	Social Presence	Cognitive presence	Teaching presence	TA Training	Social Presence	Cognitive presence	Teaching presence	TA Training
1	32	18	33	43	32	20	34	48	38	25	39	60
2	8	5	8	12	32	21	32	47	40	25	40	60
3	38	25	38	58	36	22	33	53	40	25	40	60
4	27	18	26	36	38	22	40	53	36	23	40	53
5	24	24	38	58	36	20	40	52	38	23	38	52
6	36	24	39	52	40	21	39	58	40	23	37	56
7	32	22	39	48	21	20	29	44	8	5	8	14
8	39	25	40	60	40	25	40	55	40	25	40	59
9	28	24	32	40	39	25	40	60	38	25	39	60
10	8	5	8	12	40	25	40	49	40	25	32	53
11	35	25	32	51	40	25	40	59	35	18	30	48
12	39	25	40	54	35	23	37	57	10	5	8	12
13	29	19	33	52	12	9	16	45	38	25	40	59
14	24	18	28	35					36	25	40	53
15	36	23	40	60					40	25	39	60
16									9	9	9	9
17									8	8	8	8
Total	97,86	44,57	111,83	242,78	71,24	17,92	48,26	28,90	170,51	60,68	177,25	412,2426
Cronbach's Alpha	0,82	0,78	0,86	0,90	0,86	0,76	0,86	0,83	0,87	0,75	0,87	0,93
	Total 1732,52	SUM 69,23	The numbers on the left were taken from another sheet		Total 540,67	SUM 26,10	The numbers on the left were taken from another sheet		Total 2755,81	SUM 89,57	The numbers on the left were taken from another sheet	
	Combined Cronbach's Alpha			0,99	Combined Cronbach's Alpha			0,98	Combined Cronbach's Alpha			1,00

Phase 3 Analysis Screenshots:





7 SUPPLEMENTARY INFORMATION ON THE UFSS MODULE

7.1 SEMESTER 1 CONTENT OVERVIEW

Table 19: Semester 1 Content Summary

Units	Outcomes	Assessments
Computer literacy	➢ Identify what you will be using a computer for at university; ➢ Navigate a computer and the UFS systems; ➢ Navigate Blackboard modules and organisations; ➢ Access your UFS student email account; ➢ Become aware of your digital footprint, how to manage it, your personal brand and online safety; and ➢ Become familiar with netiquette in the online classroom space.	Blackboard quiz on the unit Section within reflection assignment
Communication skills at university	➢ define organisational culture; ➢ describe and identify the different forms of communication at the UFS; ➢ appreciate the importance of communicating with your lecturer; ➢ apply good communication skills when communicating with your lecturer; ➢ appreciate the different ways students communicate at the UFS.	Blackboard quiz on the unit Section within reflection assignment
Time management and goal setting	➢ use your modules' credits and related notional learning hours to calculate how much time you should be spending on your studies; ➢ reflect on your level of procrastination and how it impacts your ability to be successful; ➢ list and schedule your class A, B and C activities and account for your notional learning hours; ➢ practice setting realistic academic goals for yourself; ➢ demonstrate goal setting strategies by completing academic goals for this semester; and ➢ describe the importance of regularly contacting an academic advisor.	Blackboard quiz on the unit Section within reflection assignment
Study skills	➢ demonstrate how to learn, retain, and recall information; ➢ explain fluency vs mastery when learning; ➢ explain elaboration, active retrieval, and interleaving practise as examples of effective study techniques; ➢ apply the Cornell note taking method; ➢ apply the SQ3R to your study material; and ➢ explain the Feynman Technique.	Blackboard quiz on the unit Section within reflection assignment
Referencing, plagiarism and searching for academic resources	➢ define what plagiarism is; ➢ illustrate the consequences associated with plagiarism at UFS; ➢ define what referencing is, and how to apply the specific referencing method required by your faculty; ➢ define what paraphrasing is; ➢ find academic resources by using Kovsiecat & Ebsco Discovery Services; and ➢ find electronic academic resources by using Databases, Sabinet African Journals & E-book Central.	Blackboard quiz on the unit Section within reflection assignment
Financial literacy	➢ define the concept of financial literacy; identify the common mistakes and provide solutions that students an make regarding their finances at University; ➢ provide solutions for the typical mistakes students make regarding tuition fee payments; ➢ assess and manage your finances; ➢ create a basic budget; and ➢ navigate the financial literacy skills on the Success Portal.	Blackboard quiz on the unit Section within reflection assignment
Growth mindset	➢ define the concept of growth mindset; ➢ understand how your thinking affects your success and failure; ➢ describe the relationship between thought and action; ➢ identify and explain the difference between a fixed and a growth mindset; ➢ develop a growth mindset.	Blackboard quiz on the unit Section within reflection assignment

7.2 SEMESTER 2 CONTENT OVERVIEW

Table 20: Semester 2 Content Overview

Units	Outcomes	Assessments
Strategies for Success 2.0	➢ Reflect on and demonstrate effective learning strategies in both an online and f2f learning environment; ➢ Compare unhealthy vs healthy methods that students might use in order to manage academic load. ➢ Draw up a SWOT analysis of what worked and what did not work in semester 1.	Blackboard quiz on the unit Section within reflection assignment
How does an entrepreneurial mindset boost my employability	➢ discuss the current economic climate in South Africa and its impact on ➢ youth employment; ➢ respond to the economic climate and youth unemployment by employing ➢ an entrepreneurial mindset; ➢ explain the differences between the entrepreneur, intrapreneur and hybrid entrepreneur as career options; and ➢ define critical skills required for idea generation, namely; problem solving, critical thinking and creative thinking	Blackboard quiz on the unit Section within reflection assignment
How do I position myself in a digital age workforce?	➢ explain the importance and value placed on digital skills in the context of universities and prospective employers/workforce by reflecting on digital skills; ➢ identify upskilling resources that the university provides students to ➢ respond to the Fourth Industrial revolution (4IR); ➢ discover items that should be included in a curriculum vitae and a LinkedIn profile to create and design a template for future employability; and ➢ discuss the link between your digital footprint, personal branding, social media presence and employability.	Blackboard quiz on the unit Section within reflection assignment
How do I build my future?	➢ define a career, in relation to career development; ➢ examine the cognitive information process approach to career-decision making; ➢ reflect on your values, interests and skills; ➢ explore career options through the use of online platforms; ➢ reflect on how university prepares you for the current and future world of work; and ➢ list the next steps in your career development.	Blackboard quiz on the unit Section within reflection assignment
How do UFS Graduate Attributes enhance my employability?	➢ list and describe the UFS graduate attributes; ➢ reflect on your development of UFS graduate attributes thus far in your ➢ university experience; ➢ appreciate the value of a well-designed ePortfolio in marketing yourself to a broad audience; and ➢ take time to plan for your intentional development of the UFS graduate attributes as part of your university experience.	Blackboard quiz on the unit Section within reflection assignment

3.1 The Entrepreneur as a career option

ENTREPRENEUR

Definition:
A person who starts a new business(es) based on an identified need/opportunity. The entrepreneur has the need to create value and the desire to realise profits from the added value.

Characteristics: The entrepreneur…
- assumes the complete risk of the venture;
- owns the idea;
- is not limited concerning the exploration of the idea;
- is not protected from the effects of failure; and
- is susceptible to external factors.

Advantages:
- Autonomy – you create new and better products/services as you please and have direct control over the increase of your income

Disadvantages:
- Forfeiting the security of a regular paycheck
- Less benefits at the start-up of the business

Example:
With as little as R800 in starting capital, Peter "Fats" Lazarides founded Ocean Basket in 1995 by opening the first restaurant in Pretoria.

Click on the play icon to watch a video on the concept of an entrepreneur (3min, 24MB).
Please note, downloading this video via the Global Protect app will not incur data charges.

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3.2 The Intrapreneur as a career option

*INTRA*PRENEUR

Definition:
A person who makes use of a company's resources more efficiently, in order to improve the financial performance of the organisation. An employee acting like and entrepreneur within the company they work for.

Characteristics: The intrapreneur…

- acts within the confines of an existing organisation. Therefore, the company, and not the intrapreneur, assumes the risk;
- is limited concerning the exploration of the idea/concept as approval needs to be granted by management first;
- has more room for error as the effects of failure will be carried by the organisation;
- is not susceptible to external factors, but the company is; and
- has little or no equity in the venture, the company typically owns the concept and intellectual rights.

Advantages:

- Working in a familiar environment
- Making use of company resources, reputation and knowledge

Disadvantages:

- Innovation is limited
- You are not your own boss
- Credit for your idea can be given to someone else

Example:
Ken Kutaragi was an engineer at Sony when he created the PlayStation video-game console and pushed the company to build it in 1994.

For a video on the concept of an intrapreneur (2min, 12MB), click on the play icon.
Please note, downloading this video via the Global Protect app will not incur data charges.

3.3 The Hybrid entrepreneur as a career option

HYBRID ENTREPRENEUR

Definition:
A person who starts or operates their own ventures while at the same time keeping jobs in paid employment. An individual who starts a business while maintaining a wage job.

Characteristics: The hybrid entrepreneur…
- assumes the complete risk of the venture;
- owns the concept / idea;
- is not limited concerning the exploration of the idea concept;
- is protected from the effects of failure as he/she has a salary to fall back on; and
- is not as susceptible to external factors as entrepreneurs are.

Advantages:
- Ability to try out new ideas with the security provided by a stable income
- With a salary there are fewer personal risks and uncertainties

Disadvantages:
- Stress of working full time and after hours
- Business progress might be slow as a result of divided attention

Example:
Henry Ford worked as chief engineer at Edison Illuminating Company and at the same time created the Model T by 1908.

For a video on the concept of a hybrid entrepreneur (2min, 11MB) Click on the play icon.
Please note, downloading this video via the Global Protect app will not incur data charges.

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3.3 Cognitive Information Processing : Case study activity

Peter

Peter is a third-year law student. His top 3 values are advancement, challenge and altruism. His top 3 career field interests are Law, Services, and Business. Peter has done his research on occupational options, but he is worried about making the wrong decision and the impact it will have on the rest of his life. At this moment, he feels like he might as well pull an option out of a hat and go with that.

What section of the pyramid of information processing domains does Peter need to work on next? How should he go about doing that?

Cynthia

Cynthia has always dreamed about becoming an educational psychologist, but try as she might, she has not been able to get into the Masters programme. Cynthia is embarrassed and worries about her future. She does not have a backup plan and is experiencing pressure from her family to get a job.

What should Cynthia do next? (Think beyond: "see a career counsellor") Provide supporting arguments for Cynthia's next steps.

Sine

Sine has just completed an Honours degree in Communications and Marketing. While studying, she always had that nagging feeling that she should change her direction, but she decided to push through and complete her BA degree, and then hoped she would become energised for this career field during her Honours degree. She did not. She has realised that she wants to pursue her first love – nursing, but she is concerned about the amount of time it is going to take. She has already spent 4 years of her life studying, and another 4 years means she would have been out of the job market for 8 years.

What is your advice for Sine? Provide supporting arguments.

3.4 Cognitive Information Processing : Reflection Activity

The CIP approach is a simple and effective way to help you learn how to solve career problems and make career decisions. It improves career development because it focuses on how to locate, store, and use information in decision-making.

Stop for a moment to think about the following questions, and note down your answers:

1. What does your Pyramid of Information-Processing Domains look like?

_____
_____

2. Is it strong in the knowledge domains and weak in decision making (e.g., CASVE Cycle)?

_____
_____

3. Does it change as you acquire new information about yourself or the world of work?

_____
_____

4. What is the quality of your thinking (negative or positive) in the executive processing area?

_____
_____

The nature of a person's Pyramid can provide information about how effective that person will be in solving career problems and making career decisions.

3 How does an entrepreneurial mindset boost my employability?

Basic ways of becoming more employable

Section name	Time
Developing an entrepreneurial mindset as a graduate attribute • Get an indication of whether students know the difference between Entrepreneurship and Entrepreneurial mindset. • The criteria for developing an entrepreneurial mindset at the UFS – VALUE Rubric), describe the criteria and definitions to the students. • How can an entrepreneurial mindset be applied to everything else?	15 minutes

The difference between the entrepreneur, intrapreneur and hybrid entrepreneur as career options

Section name	Time
Entre, Intra, Hybrid entrepreneurs – remember to tie in examples in addition to the ones mentioned as way to make the students relate more to the content	15 minutes
Question 3 (Poll/MCQ): After going through the three streams, which one do you relate to best? • Entrepreneur • Intrapreneur • Hybrid entrepreneur	2 minutes

3. How does an entrepreneurial mindset boost my employability?

Defining critical skills required for idea generation: problem solving, critical thinking, creative thinking

Section name	Time
Problem solving – explain the concept with own examples,and make references to the videos provided in the guide.	5 minutes
Critical thinking – explain the concept with own examples.	5 minutes
Creative thinking – explain the concept with own examples. Can refer to the table and need not go through it.	5 minutes
Question 5 (Poll/MCQ): Which of these three skills can you identify as an area that you would like to develop and improve on right now? • Problem solving • Critical thinking • Creative thinking	3 minutes
Radical VS Incremental ideas – explain the concepts and allow students to give examples of some ideas.	8 minutes
Breakout Activity: Applying problem-solving, creative and critical skills to a case study	10 minutes

5 How do I build my future?

What is a career?

Section name	Time
Thoroughly go through this section explaining the different types of career.	10 minutes
Poll: to gauge student understanding and engagement True/False 1. A career is lifelong, starting with your first year at university, and ending when you retire. (T) 2. You only develop in your career if there is upward mobility, and not only horizontal growth. (F) 3. You choose your career pathway at university. (F)	5 minutes

Theories of career choice and development

Section name	Time
You need to understand and be able to explain the CIP and CASVE very well. Simplify it for students. Go over it and ensure that students understand the pyramid like in TA training.	45 minutes
BREAK – 10 mins	
Case study – help students identify the issues, and apply the theory to the case studies (do not engage in meaningless banter here - that can make it feel like students are participating and there is engagement in the class; instead, focus on engaging students in application of the theory; help them to practice problem solving and critical thinking skills)	10 minutes
Reflection activity – read through it briefly and tell students they can do this in their own time. **Emphasise that they need to know CIP To do this reflective activity.**	5 minutes