

**MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET  
COLLEGES**

by

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## DECLARATION

I, Nokuthula Nomcebo T Mhlongo, declare that the dissertation, entitled “**Managing online teaching and learning in Mpumalanga TVET colleges**”, which I hereby submit for the degree of Master Education in Education Management at the University of South Africa, is my work and is credible to the best of my knowledge. All the information shared within this study is correct, and I take full responsibility for its correctness. I solemnly declare that the information in this dissertation is true to the best of my knowledge and belief.

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Signature

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Date

## **DEDICATION**

I dedicate this dissertation to my late dad, Mr MRT Mthembu, who passed on in 2021 during Covid-19. He always wanted the best for me, and education was very important to him. I hope he is proud of me for not giving up.

Firstly, I would like to thank God for giving me the strength to push, even in difficult times. To my family and my kids, thank you for giving me hope throughout my academic journey. I am where I am today because you gave me all the support I needed.

My heartfelt appreciation goes to my supervisor, Professor R.N Marishane. Your advice and motivation never went unnoticed. You always pushed me to do my best. Thank you for not giving up on me. I have completed my dissertation today because of your support. Thank you, Professor.

Lastly, I would like to thank Miss Nomsa Chirisa who played a big role in assisting me with editing this dissertation and making sure that the language is of a good editorial standard.

## ABSTRACT

### Managing online teaching and learning in Mpumalanga TVET colleges

Technology today plays an ever-increasingly important role in society than ever before. Back then, teaching and learning were conducted face-to-face in classrooms only. There has been an increasing use of online teaching and learning through the integration of information and communication technologies since the outbreak of Covid-19, which challenged the education system worldwide to shift to an online mode of teaching overnight. This is why the quality of online teaching and learning may have been disrupted. Hence, this study sought to examine the management of virtual teaching and learning in TVET colleges in the Mpumalanga Province and propose strategies to enhance the quality of virtual teaching and learning. This study developed a conceptual framework comprising key ideas on managing online teaching and learning, including learner achievement, personnel involvement (human resources), technology in education, teaching and learning, and management. The study adopted the narrative research design and the qualitative methodology. Semi-structured interviews were conducted with three (3) campus managers, two (2) e-learning managers, and six (6) lecturers who were purposively selected. Data was analysed using the thematic analysis method, which emerged with five themes. The study found that the online teaching and learning process is managed through e-learning platforms, including GS Academy, GS4ME, Student Hub, LMS, Google Classroom, and social media. It was also established that the college management experiences challenges in managing virtual learning, such as the lack of training for lecturers and students, lack of confidence in lecturers, lecturers' negativity, and a lack of resources. The college management responds to these challenges by providing resources, training lecturers, and motivating the students. The study also found that the transition from face-to-face to virtual learning had effects such as frustration for the lecturers. The type of training offered to the lecturers to assist with online teaching and learning includes training in digital literacy. The study recommends that to enhance the quality of virtual teaching and learning, there should be the training of lecturers and students in ICT use, provision of resources, recruitment of special lecturers for e-learning, the appointment of an administration team, benchmarking with other TVET colleges, and the lecturers taking ownership of virtual teaching and learning.

**Keywords:** online teaching and learning, virtual learning, e-learning, TVET college, Covid-19, management

## ABSTRAK

### Bestuur van aanlyn onderrig en leer in Mpumalanga TBOO-kolleges

Tegnologie speel vandag 'n toenemend belangrike rol in die samelewing. In die verlede is onderrig en leer slegs van aangesig tot aangesig in klaskamers gedoen. Sedert die uitbreek van Covid-19, het aanlyn onderrig en leer 'n sentrale plek ingeneem deur die integrasie van inligting- en kommunikasietegnologieë (IKT's) wat die onderwysstelsel wêreldwyd uitgedaag het om oornag na 'n aanlyn modus van onderrig oor te skakel. Dit het moontlik die gehalte van aanlyn onderrig en leer ontwig. Daarom het hierdie studie gepoog om die bestuur van virtuele onderrig en leer in Tegniese en Beroepsgerigte Onderwys en Opleiding- (TBOO)-kolleges in die Mpumalangaprovincie van Suid-Afrika te ondersoek en strategieë voor te stel om die gehalte van virtuele onderrig en leer te verbeter. 'n Konseptuele raamwerk is ontwikkel wat sleutelidees oor die bestuur van aanlyn onderrig en leer, insluitend leerderprestasie, personeelbetrokkenheid (menslike hulpbronne), tegnologie in onderwys, en bestuur bevat. 'n Narratiewe navorsingsontwerp en kwalitatiewe metodologie is gebruik. Semi-gestruktureerde onderhoude is gevoer met drie (3) kampusbestuurders, twee (2) e-leerbestuurders, en ses (6) dosente wat doelbewus gekies is. Data is ontleed deur die tematiese ontledingsmetode te gebruik wat vyf temas opgelewer het. Daar is gevind dat die aanlyn onderrig- en leerproses bestuur is deur e-leerplatforms, insluitend GS Academy, GS4ME, Student Hub, LMS, Google Classroom, en sosiale media. Daar is ook vasgestel dat kollegebestuurspanne probleme ondervind het met die bestuur van virtuele leer, soos 'n gebrek aan opleiding vir dosente en studente, 'n gebrek aan vertroue in dosente, negatiewe houding onder dosente en 'n gebrek aan hulpbronne. Hulle het op hierdie uitdagings gereageer deur hulpbronne te verskaf, dosente op te lei en die studente te motiveer. Daar is ook gevind dat die oorgang van aangesig-tot-aangesig na virtuele leer frustrasie vir die dosente veroorsaak het. Die tipe opleiding wat aan dosente gebied word om hulle met aanlyn onderrig en leer te help, het opleiding in digitale geletterdheid ingesluit. Daar word aanbeveel dat om die gehalte van virtuele onderrig en leer te verbeter, dosente en studente opgelei moet word in IKT-gebruik, dat hulpbronne verskaf moet word, en dat spesiale dosente vir e-leer gewerf moet word. Die aanstelling van 'n administrasiespan, normering met ander TBOO-kolleges, en dosente wat verantwoordelikheid neem vir virtuele onderrig en leer, word ook aanbeveel.

**Sleutelwoorde:** aanlyn onderrig en leer, virtuele leer, e-leer, TBOO-kollege, Covid-19, bestuur

## I-ABSTRACT

### Ukuphatha ukufundisa nokufunda ku-inthanethi emakolishi e-TVET eMpumalanga

Ubuchwepheshe namuhla budlala indima ebaluleke kakhulu emphakathini kunanini ngaphambili. Ngaleso sikhathi, ukufundisa nokufunda kwakwenziwa ubuso nobuso emakilasini kuphela. Kube nokusetshenziswa okwandayo kokufundisa nokufunda ku-inthanethi ngokuhlenganiswa kobuchwepheshe bolwazi nokuxhumana selokhu kwaqubuka i-Covid-19, okuphonsele inselelo uhlelo lwezemfundo emhlabeni wonke ukuthi lushintshela kumodi yokufundisa ku-inthanethi esikhaleni. Yingakho izinga lokufundisa nokufunda ku-inthanethi kungenzeka ukuthi liphazamisekile. Ngakho-ke, lolu cwaningo lwalufuna ukuhlola ukuphathwa kokufundisa nokufunda okubonakalayo emakolishi e-TVET esifundazweni saseMpumalanga futhi luphakamise amasu okuthuthukisa ikhwalithi yokufundisa nokufunda okubonakalayo. Lolu cwaningo lwakha uhlaka lomqondo oluqukethe imiqondo esemqoka ekuphatheni ukufundisa nokufunda ku-inthanethi, kubandakanya impumelelo yabafundi, ukubandakanyeka kwabasebenzi (izinsiza zabantu), ubuchwepheshe kwezemfundo, ukufundisa nokufunda, kanye nokuphatha. Lolu cwaningo lwamukela umklamo wokucwaninga oxoxayo kanye nendlela yokuhlola. Kwaqhutshwa izingxoxo ezihlelwe ngokwengxenywe nabaphathi bekhampasi abathathu (3), abaphathi ababili (2) be-e-learning, kanye nabafundisi abayisithupha (6) abakhethwe ngenhloso. Idatha yahlaziywa kusetshenziswa indlela yokuhlaziya ngokwezihloko, eyavela ngezihloko ezinhlanu. Lolu cwaningo luthole ukuthi inqubo yokufundisa nokufunda ku-inthanethi iphathwa ngokusebenzisa amapulatifomu okufunda nge-inthanethi, kufaka phakathi i-GS Academy, i-GS4ME, i-Student Hub, i-LMS, i-Google Classroom, kanye nemithombo yezokuxhumana. Kwatholakala futhi ukuthi abaphathi bekolishi babhekana nezinsalelo ekuphatheni ukufunda okubonakalayo, njengokuntuleka kokuqeqeshwa kwabafundisi nabafundi, ukungabethembi abafundisi, ukungabi nandaba kwabafundisi, kanye nokuntuleka kwezinsiza. Abaphathi bekolishi babhekana nalezi zinsalelo ngokunikeza izinsiza, ukuqeqesha abafundisi, nokukhuthaza abafundi. Lolu cwaningo lwathola nokuthi ukuguqukela ekufundeni ubuso nobuso kuya ekufundeni okubonakalayo kwaba nemiphumela efana nokukhungatheka kwabafundisi. Uhlobo lokuqeqeshwa olunikezwa abafundisi ukusiza ngokufundisa nokufunda ku-inthanethi lubandakanya ukuqeqeshwa kwe-digital literacy. Ucwano luthusa ukuthi ukuze kuthuthukiswe izinga lokufundisa nokufunda okubonakalayo, kufanele kube nokuqeqeshwa kwabafundisi kanye nabafundi ekusebenziseni i-ICT, ukuhlinzekwa kwezinsiza, ukuqashwa kwabafundisi abakhethekile be e-learning, ukuqokwa kwethimba labaphathi, ukuqhathanisa namanye amakolishi e-TVET, kanye nabafundisi abathatha ubunikazi bokufundisa nokufunda okubonakalayo.

**Amagama angukhiye:** ukufundisa nokufunda ku-inthanethi, ukufunda okubonakalayo, e-learning, i-TVET college, i-Covid-19, ukuphathwa

## LIST OF ACRONYMS

TVET	Technical and Vocational Education and Training
ICT	Information Communication Technology
E-Learning	Electronic learning
DHET	Department of Higher Education and Training
WI-FI	Wireless Fidelity
LMS	Learning Management System
SRC	Student Representative Council
NSFAS	National Student Financial Aid Scheme
GS Academy	Gert Sibande Academy
GSC4ME	Gert Sibande College Interactive Student Portal

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# **CHAPTER ONE**

## **INTRODUCTION AND OVERVIEW**

### **1.1 INTRODUCTION AND BACKGROUND**

Today's technology is more integrated into society than it has ever been. Every element of peoples' daily lives is evolving, including how people communicate and conduct business, and even study in academic and educational settings. Technology is causing an equivalent evolution in the learning environment. Teaching and learning were only done face-to-face in schools in the past. However, the introduction of technology and technical tools has upgraded the excellence of teaching and learning in educational environments.

On account of this, Technical and Vocational Education and Training (TVET) colleges are not an exception. They have the admirable goal of helping students who have completed Grade 9 in secondary school to develop and shape their skills. To this end, they offer Engineering and Business studies streams to students, and supply them with the tools which they need to excel in the workforce after graduation. However, TVET colleges need to be open to change if they are to survive in the rapidly changing technological landscape (Aina & Ogegbo, 2022). This chapter thus presents an introduction into the issues surrounding the management of online teaching and learning in Mpumalanga TVET colleges, including the background to the problem, contextual setting, and what this study sought to achieve.

Following the Covid-19 pandemic, there has been a surge in the usage of information and communication technology (ICT) aimed at online teaching and learning (Zalat, Hamed & Bolbol, 2021; Khoza, 2022). The global Covid-19 pandemic presented a threat to the educational system, compelling instructors to abruptly switch to an online learning environment (Dhawan, 2020). Online learning, also known as virtual learning or e-learning, may be software-based or web-based, and accessible via a portal (Al Rawashdeh, Mohammed, Al Arab, Alara & Al-Rawashdeh, 2021). Since it allows non-traditional students to return to school and improve their lives on their own schedule, e-learning has opened doors for many students who would have otherwise failed to

participate in traditional educational settings because of time or financial constraints (Dahiya & Singh, 2019).

Technology is an effective instrument that enhances education in many ways, from helping instructors to create lesson plans more quickly, to enabling students to engage in innovative learning and teamwork (Carstens, Mallon, Bataineh & Al-Bataineh, 2021). In this sense, previously accepted technology-enhanced teaching approaches that make use of internet technologies include distant learning, e-learning, and virtual universities (Mishra, Gupta & Shree, 2020). Unlike conventional teaching and learning methods where the lecturer is always required to be physically present with the student, technology enables educational activities to take place without the lecturer and student's physical presence at a particular time and location. To teach and study at their convenience, whether at home or in any of their comfort zones, online learning only requires both the lecturers and students to have a computer and the internet. As the demands, abilities, and knowledge of the students vary, so does the lecturer's job, and vice versa.

The researcher noted that there was a period when there was a high student-to-learning resource ratio in higher education institutions, including TVET colleges, which made it difficult to fit every student into a single classroom. Given this, the decision to provide education outside of the conventional classroom setting has turned out to be more pressing in this era, thanks to electronic media and technology. Due to the prompt improvements in technology and the large quantities of students enrolling in higher education, many educational institutions now provide online or distance learning, sometimes referred to as e-learning (Alarifi & Song, 2024). E-learning, according to Machumu (2016), is a technology that supports computer-based instruction and web-based learning. It fills the space between a lecturer and student who are separated by distance. Additionally, it uses audio and video multimedia communications, or a mix of both with other conventional distribution techniques, to provide options for the dissemination of educational resources to areas outside of the classroom, building, or site.

All opportunities to promote knowledge should be investigated since online teaching and learning entails integrating ICT which creates effective learning environments, and

supports students in handling information in proactive, self-directed, and constructive ways (Luhamyia, Bakkabulindi & Muyinda, 2017). According to Ghavifekr and Rosdy (2015), ICT is a collection of tools that enable individuals to access and exchange knowledge in a variety of formats. These tools include computers, softwares, networks, satellite linkages, and associated systems. In a similar vein, TVET colleges and other international higher education establishments are now a part of this revolutionary shift in incorporating ICT into their instruction through virtual teaching and learning.

The Covid-19 pandemic caused TVET colleges to hasten the transition from conventional in-person instruction to online instruction. South African TVET colleges were forced to switch from conventional classrooms to virtual ones (Mapulane, 2020). The transition from a traditional classroom setting to Zoom, from a personal to a computer-generated environment, and from meetings to webinars, were the hallmarks of the shift to virtual teaching and learning. A number of other learning platforms, including Google Classroom, Blackboard Learn, Class time, and Classwize, are also gaining traction.

Dhawan (2020) claims that the Covid-19 pandemic's obstacles opened everyone's eyes to the possibilities of virtual teaching and learning. Lecturers engaged students in remote instruction using a variety of platforms, including Microsoft Teams, Adobe Connect, Google Hangouts, Skype, and a few others, but Zoom was the obvious victor. Due to its value and efficacy, this method of instruction may be used as a transitional tool (Mishra, Gupta & Shree, 2020).

Considering the aforementioned, managing online teaching and learning at TVET institutions presents a number of difficulties. According to Mishra, Gupta and Shree (2020), the majority of the lecturers believed that faculty members could only be more motivated if they were persuaded of the benefits of the virtual teaching technique, particularly during the lockdown time. The authors also showed that virtual teaching and learning has become very difficult, and that stakeholders may not be able to adapt to the abrupt shift in education since they lack the technical know-how to cope with the present circumstances. Mbongo, Hako and Munangatire (2021) conducted research which revealed that lecturers faced many noteworthy obstacles when it came to online



teaching and learning. These issues included inadequate knowledge of technology, poor internet access and availability, low student attendance, and loneliness.

Mishra, Gupta and Shree (2020) claim that an erratic network connection makes it difficult to manage remote teaching and learning. Students do not participate as much when lecturers and students turn off audio and video in order to improve connection stability. The three main obstacles to virtual teaching are size, distance, and individualised instruction (Dhawan, 2020). Another issue that some students struggle with is the digital gap, which is made worse by the fact that some lack the means to enrol in virtual courses. Student obstacles include trouble maintaining a consistent power connection, sporadic signal problems, and a lack of comprehension and meaningful interaction. On the other hand, mechanical classroom procedures, and an inability to read students' emotions and facial expressions present a risk to the management of online teaching and learning (Mishra, Gupta & Shree, 2020). In order to support students and faculty members who are looking for advice on digital literacy, educational institutions should not only identify new technologies to use, but they should also rethink what they teach (Dhawan, 2020).

The absence of motivation and feedback poses a challenge to the way online teaching and learning is managed. According to a research by Mishra, Gupta and Shree (2020), lecturers find it challenging to alter their style of instruction without being able to predict the students' responses. These issues could have had an effect on the calibre of e-learning programmes, which is a serious problem because the government has not made any explicit regulations regarding e-learning programmes, standards for calibre, quality control, e-resource development, or e-content delivery in their educational policies (Dhawan, 2020). However, in the context of virtual learning, managing change entails a "combination of processes, activities, and approaches that manage the people of the organisation through the transition from the old way of teaching to new e-learning," as stated by Parlakkiliç (2017: 640). Without consistently using e-learning platforms, managing teaching-learning scenarios will be difficult even in the post-Covid-19 educational settings (Mishra, Gupta & Shree, 2020).

The shift from in-person instruction to virtual learning has an effect on academic institutions. Traditional classrooms were replaced by online learning environments overnight, requiring lecturers to modify their whole pedagogical strategy to adapt to

the new circumstances. Dhawan (2020) makes the following arguments: first, it is difficult for educational institutions to include students in the teaching and learning method; and second, it is difficult for lecturers to switch from an offline to an online mode of instruction, modify their methods, and manage their time. As a result, the shift virtual learning necessitates the adoption of efficient technologies that can replace in-person instruction (Basilaia, Dgebuadze, Kantaria & Chokhanelidze, 2020). Das (2023) lists software, apps, and strong internet connections, as part of the technologies.

In order to close the gap in distance education, Das (2023) proposes a number of solutions. These steps consist of providing the students' homes with high-speed internet connections, making sure that technical support is available for fixing lost connections and other technical problems, instructing students on how to use particular applications to take part in online classes, and informing students on the variables that may affect lecture timings. It is crucial to set out certain times for breaks, and to remind students to concentrate on their assigned reading and studying tasks, rather than becoming side-tracked by entertainment or messages on social media.

Another concerning problem in TVET colleges is the type of training that the institutions provide to help the instructors, and the methods that they use to develop online teaching and learning. The degree of technological proficiency and instructional style of college lecturers have an influence on the quality of education which they provide (Coman, Tîru, Meseşan-Schmitz, Stanciu & Bularca, 2020). Das (2023) asserts that instructors need to be aware of the critical requirement of incorporating diverse assessment techniques such as exams, quizzes, and project-based learning activities, together with effective learning materials such as podcasts, videos, conversations, articles, and blogs.

According to Dhawan (2020), the switch to online teaching and learning happened quickly, and educators had to modify their pedagogical strategies to keep up with the times. Colleges embraced this shift, but it was not without its difficulties, which have made it challenging for the students to partake in their education, and worsened by the already-existing educational disparities (Brown-Wilsher, 2021). This study aimed to examine how virtual teaching and learning is managed in TVET colleges in the

province of Mpumalanga in order to suggest strategies to improve the quality of virtual teaching and learning in the colleges.

## **1.2 PURPOSE OF THE STUDY**

This study sought to examine the management of online teaching and learning in Mpumalanga TVET colleges. The study highlights how the management in Mpumalanga colleges manage the shift from traditional face-to-face teaching and learning to the new virtual teaching and learning mode to facilitate the successful and continued learning for the students.

## **1.3 RESEARCH QUESTIONS**

The study addressed the following main research question: “How is online teaching and learning managed in Mpumalanga TVET colleges?”

### **1.3.1 Secondary research questions**

The study addressed the following secondary questions which emanated from the main research question:

1. How is online teaching and learning conducted in TVET colleges in the Mpumalanga Province?
2. What are the challenges experienced in managing online teaching and learning in TVET colleges in the Mpumalanga Province?
3. How do the TVET college management respond to the existing online teaching and learning challenges?
4. What strategies can be suggested to enhance the quality of online teaching and learning?

## **1.4 RATIONALE FOR THE STUDY**

The Covid-19 pandemic lockdown served as the impetus for this investigation. Around this time, many TVET colleges in South Africa adopted e-learning, which entailed drastically changing the traditional face-to-face interaction model to virtual learning, as

many students and instructors started working off-campus. Throughout lockdown, a number of the students fled the college campuses to their homes, which meant that they were without resources such as internet access, data, or a strong internet signal. Based on the researcher's experience, college lecturers were not equipped for e-learning before the Covid-19 pandemic, since classroom instruction was proceeding well until an unexpected Covid-19-induced lockdown was effected.

Online learning has taken the place of in-person teaching in many post-secondary educational institutions throughout the globe (Czerniewicz, 2020). Numerous institutions found it difficult to adjust to the sudden shift to offering courses online. Higher education establishments should, therefore, quickly adapt and incorporate e-learning through the usage of key technologies and pedagogical approaches. However, the lack of resources to support online courses and the high cost of adopting e-learning materials are the main obstacles to virtual education in South Africa. Only when students have gadgets such as a laptop or mobile phone to study online will e-learning be successful. Although cell phone technology is now more accessible than it was ten years ago, South Africans' ability to perform academically is still uneven (Reiersgord, 2020). This suggests that higher education institutions need to gather sufficient data for students to have access to e-learning.

In light of these concerns, the researcher was inspired to conduct this study with a focus on Mpumalanga TVET colleges in particular, as well as other TVET colleges and higher education establishments globally, in order to examine how they manage their online teaching and learning. Given the many problems with online teaching and learning, the researcher was of the view that conducting this study will assist several college institutions in South Africa and throughout the globe to identify the challenges which they face, and provide answers which South African legislators and college administrators would find helpful.

## **1.5 STATEMENT OF THE PROBLEM**

A vast number of colleges throughout the world are transitioning from traditional in-person education to online training. This tendency can be observed at both universities and TVET colleges due to the concentration of e-learning on a broad range of technological platforms, and the introduction of instructional technology tools into the learning environment. Students may participate in the process of constructing their education in an environment that is differentiated, full of best practices, and is sufficiently sophisticated to allow them to move at their own pace, thanks to the availability of modern technology (Eslit, 2023).

One motivation for switching to online learning is that it provides more flexibility than in-person instruction. It makes it easy for lecturers to plan their class schedules, which is beneficial when they need to study languages extensively, such as more than twice a week. Lecturers and students may collaborate to set flexible meeting times for their online sessions. In an online course, instructors may master new teaching strategies in the most comfortable environment imaginable. The students need to engage in the online course and attend from any place with a working internet connection. The students may grasp the concepts better if they are in an environment that helps them to feel at ease, and enables them to concentrate on their studies (Ramya, 2020). Therefore, it was critical to explore how TVET colleges in the Mpumalanga Province manage their online teaching and learning, since many higher education institutions in South Africa, including TVET colleges, are transitioning from traditional instruction to e-learning.

## **1.6 LITERATURE REVIEW**

The reviewed literature comprising primary and secondary sources is presented in Chapter Two. Some of the key concepts discussed in this review are highlighted in the conceptual framework which is briefly discussed in the next section.

## **1.7 CONCEPTUAL FRAMEWORK**

Drawing from Imenda (2014), a conceptual framework is an amalgam of interconnected elements and factors that aid in resolving practical issues. It is the last filter through which to see the logical solution of an issue once it has been identified. The key ideas that constitute the conceptual framework supporting this research include objectives (learner accomplishment), personnel involvement (human resources), technology in education, teaching and learning, and management. A brief discussion of the following principles is presented: administration, instruction, and use of technology in the classroom, personnel, and student success.

### **1.7.1 Management**

The four management functions of planning, organising, leading, and controlling are the emphasis of management. The goal is to discover how TVET college administration handles these four roles in managing online teaching and learning. The management is the fundamental organ of an organisation, as the late Peter Drucker (2005) discovered, hence it is concerned with five main functions, namely, planning, organising, staffing, leading, and controlling (University of Arizona, 2023). Managers who fail to lead their businesses risk failing to accomplish their objectives and actualise their vision. TVET colleges are headed by managers who plan, organise, lead, and control, and the failure of one of the four roles means that the whole college may suffer, potentially leading to poor teaching and learning in both face-to-face and virtual environments. Given the significance of these responsibilities, it was vital for this research to investigate how managers used their management abilities to promote effective online teaching and learning.

### **1.7.2 Teaching and learning**

Teaching, as described by Gravells (2021), is "a process where various approaches and activities are used to help the students to gain the skills and understanding which they need to gain a particular qualification or to perform a particular job role." Therefore, a lecturer gives a lecture, and the students take notes. Managers in TVET colleges are responsible for overseeing and guiding classroom instruction, while

lecturers educate students in a variety of ways to help them acquire the skills which they need. Virtual classrooms are one example of these methods.

### **1.7.3 Technology in education**

Raja and Nagasubramani (2018) claim that the twenty-first century is often understood to be a technology era. The role of technology in present day society is critical, even to the development of the economy. A prosperous economy is impossible in the absence of technology. This standstill is due to the fact that technological advancements have made manual work easier and faster to do. Its effects are seen in many walks of life, including classroom instruction.

Online education is rapidly growing in popularity across the world. Due to this development, no business can afford to ignore this reality. Numerous technologies are being used to supplement traditional classroom instruction, and colleges are emphasising the "blurring" of boundaries (Norton & Cakitaki, 2016). However, due to several unsolved issues such as insufficient technology, no college has yet fully adopted online teaching and learning.

### **1.7.4 Staff involvement through communication**

Successful workplace communication fosters a positive environment, eliminates incompetence, and ensures that everyone has the information which they need to accomplish their tasks well. Effective communication aims for a flawless transfer of information, while maintaining or improving social bonds. Campus managers are responsible for coordinating and facilitating online teaching on behalf of the lecturers and students.

Akbaba Altun and Bulut (2023) suggest that campus administrators increase their communication in order to lessen teaching and learning crises. Online teaching and learning has the potential to improve communication when the lecturers and students are both involved in the process, hence they need to be actively engaged in the process.

### **1.7.5 Learner achievement**

Students in the modern day expect to have access to high-calibre content wherever and whenever they want. Due to these pressures, online learning has emerged as a significant option (Wladis, Hachey & Conway, 2015). Students who use technology to supplement classroom lectures spend more time on fundamentals than their peers who do not. Students who make frequent use of technology report higher degrees of pride in accomplishment, competence, and general wellbeing. Students' motivation and engagement in the class are boosted by online instruction, which encourages them to make use of a variety of learning methodologies (Hamdan & Amorri, 2020). This indicates that college administration assistance is important to student academic progress.

## **1.8 RESEARCH METHODOLOGY AND DESIGN**

This section presents the research methodology and design roadmap for this study. These issues are discussed fully in Chapter Three.

### **1.8.1 Research Design**

Qualitative research methods such as story design formed the basis of this investigation due to their attention to actual events and the human dimension of scientific inquiry. The qualitative research design aims to pay attention to the process of story construction, the motivations behind story construction, and the cultural discourses that result from story construction. According to Ntinda (2020), the foundation of narrative research is the idea that individuals use narratives to make sense of the world around them. This method was chosen by the researcher to learn more about how people in TVET colleges in the Mpumalanga Province feel about and interact with online education.

### **1.8.2 Research Methodology**

This study employed the qualitative research method which focuses on the social context in which reality is created. The term "qualitative researcher" was used by Merriam and Tisdell (2015) to describe those who are curious about the significance



that people have constructed in order to interpret the world and their own experiences. Open-ended questions are essential because they allow for responses without stifling the participants' creativity. As long as they have something to teach, they may continue. Instead of giving participants questions that have predetermined right or wrong answers, qualitative researchers allow individuals to be themselves while they gather information. Researchers will have a better chance of finding successful methods if individuals are willing to share their thoughts honestly. To find new data, they may listen to interviews that were recorded with the participants (Gaille, 2018a).

### **1.8.3 Data collection and Instrumentation**

Data was gathered using semi-structured interviews with the participants in order to allow the researcher to probe more information from the participants. Through this technique, the researcher is free to probe for further information or pursue a different line of inquiry based on the interviewee's responses (Coryn, 2018).

### **1.8.4 Population and sampling**

Campus administrators, e-learning administrators, and faculty members from TVET colleges made up the study's sample population. Purposive sampling was used to choose research subjects from the public. In TVET colleges in Mpumalanga Province, the sample included three campus managers, two e-learning managers, and six lecturers. These individuals were chosen because of their roles in overseeing distance education programmes in the colleges.

Managers at the colleges make sure that the operations are run effectively and efficiently. E-learning managers play a major part in the process of bringing online education into existence, from the early stages of planning to the development of effective methods for putting those plans into action. By taking part, students were able to provide useful information into how the TVET colleges implement and oversee online education. Finally, the lecturers are responsible for conducting online teaching with the students. The goal was to learn from their online teaching practices as this is a novel concept for most professors.

### **1.8.5 Data analysis and interpretation**

The information gathered during the interviews was analysed using the thematic analysis method. This technique may be used to extract relevant themes and patterns from a dataset in relation to a research issue (Braun & Clarke, 2013). Category coding is the heart of thematic analysis. Both exploratory studies, in which the researcher has no clue which pattern to seek for, and deductive studies, in which the researcher already has a clear notion of what he or she is interested in, may benefit from the thematic analysis approach due to its adaptability (Mortensen, 2020). The research employed the following four steps in generating the themes (Harding, 2020):

- Finding the theme and generating a category;
- Organising codes from different descriptive issues into the category;
- Forming sub-categories to reflect different elements of the themes; and
- Developing the themes to explain the interactions between the different parts of the data and structuring theory.

### **1.8.6 Ensuring the quality of the study**

Models of credibility and trustworthiness are utilised in qualitative research rather than reliability and validity. Credibility, transferability, reliability, and confirmability are all characteristics of anything that may be trusted. These concepts are briefly explained subsequently.

#### ***1.8.6.1 Trustworthiness***

Confidence in data, interpretation of data, and quality assurance procedures constitute trustworthiness (Polit & Beck, 2014). For a study to be credible to its audience, researchers should define appropriate methods (Amankwaa, 2016). The researcher took steps to establish credibility in an effort to foster an atmosphere of candour. The participants were comfortable to share their thoughts and feelings with the researcher who established trust with the participants by keeping their answers private and confidential.

### **1.8.6.2 Credibility**

Drawing from Polit and Beck (2014), the most crucial criterion is the reliability of the research. The study has to be credible, and thus ensuring credible findings. In order to back up the study claims, the researcher collected adequate data.

### **1.8.6.3 Transferability**

Through the provision of a detailed description, the researcher helps a potential user to decide whether or not to utilise the resource (Moser & Korstjens, 2018). The evidence of which findings from one study may be used in several contexts is referred to as "transferability." In this step, the reader takes careful notes on the study setting and methodologies used, and then makes an analogy to a situation with which they are more acquainted. The original study is more likely to be trusted if there are consistent details. The first investigator is obligated to provide a comprehensive account of their work environment and procedures. This study was written and organised such that the findings may be applicable to other situations with little difficulty.

### **1.8.6.4 Dependability**

After establishing trustworthiness, many qualitative researchers see no need to further prove the reliability of the data. A closer relationship between credibility and validity, and dependability and reliability, emerges if the researcher permits an examination of the concepts. A data audit is used to evaluate the accuracy of the data. If the dataset is sufficiently rich and dense, an auditor can determine whether or not the study scenario is relevant to their own. This is impossible without further information providing context. It has been indicated that dependability is difficult to foresee in a changing social world (Silverman, 2016). The findings of this study were reported in sufficient detail in order for another researcher to replicate the investigation with equivalent outcomes. This may help other scientists to learn about the techniques, and how effective they are.

### **1.8.6.5 Confirmability**

Confirmability is how easily other researchers might replicate the study results. As the researcher is assumed to contribute a unique viewpoint to qualitative research, the technique of confirmability is employed to determine whether or not the researcher has been biased throughout the investigation. An independent investigator may examine the information gathered during the first study to see whether it is indeed the case. Confirmability refers to the steps taken by the researcher to show that the findings arise from the data, and not their own predispositions (Anney, 2014).

### **1.8.7 Ethical considerations**

This section presents a brief discussion of the standard ethical principles adopted for this study, including harm or risk and mitigation, informed consent, confidentiality, and anonymity. These ethical considerations were followed in conducting this research.

#### **1.8.7.1 Harm or risk mitigation**

Part of the researcher's responsibility in a research study is avoiding harm. Acceptable amounts of damage need value judgements. The participants taking part in this study were not put in danger. For instance, in order to avoid the risk or harm of spreading Covid-19, the participants maintained social distancing during face-to-face interviews, and wore face masks as per the Covid-19 requirements.

#### **1.8.7.2 Informed consent**

The researcher solicited the consent of the participants through a consent form which outlined the terms and circumstances of participating in the study, and which also informed them that they were allowed to withdraw from the study at any time if they wished to.

### **1.8.7.3 Confidentiality**

Confidentiality refers to when a researcher knows the identity of a study subject, but takes precautions to stop others from discovering it. Researchers may be held to their word of secrecy (Fossheim & Ingierd, 2015). The information provided by the participants was private and confidential.

### **1.8.7.4 Anonymity**

The researcher should not identify the participants in a study. In this research, no identifying information about the participants was exposed in written or any other form of communication.

### **1.8.8 Delimitations and limitations of the study**

The TVET colleges in Mpumalanga Province were the focus of this research. However, the researcher faced challenges such as the lack of willing participants, inadequate time, or a lag in getting answers from the participants.

## **1.9 OVERVIEW OF THE STRUCTURE OF THE DISSERTATION**

This dissertation comprises five chapters which are organised as follows:

### **Chapter One: Introduction and overview**

This chapter focused on the introduction and background to the research study. It defined the research problem, purpose of the study, research questions, overview of the methodology, conceptual framework, preliminary literature review, rationale of the study, scope and delimitations of the study, and it defined the key terms.

### **Chapter Two: Literature review**

In this chapter, literature on existing theoretical and empirical studies is reviewed based on the conceptual framework for this study, guided by the research questions which focus on managing online teaching and learning in TVET colleges.

### **Chapter Three: Research design and methodology**

This chapter provides justification for the research design and methodology used in the study. It explains the research paradigm, process for this study. The chapter also details the ethical considerations and trustworthiness issues for the study, and how data collected was analysed.

### **Chapter Four: Data presentation, analysis, and discussion**

This chapter presents and analyses the data collected through interviews, and provides the discussion of the findings, supported by literature review.

### **Chapter Five: Summary, conclusions, and recommendations**

This chapter summarises the study, makes conclusions and recommendations based on the data obtained from the study. Based on the discussion of the findings, the researcher suggests recommendations, and makes suggestions for further research.

## **1.10 SUMMARY**

This chapter provided the background to the study, and its context. It defined the research problem, purpose, rationale, and research questions. The conceptual framework, and research methodology and design roadmap were also introduced in this chapter. The next chapter reviews literature.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The previous chapter introduced the study, and set the background to the study. The chapter articulated the problem statement, aim, and objectives of the study. It further defined the key concepts, provided a brief literature review, research methodology, and design, and the credibility and trustworthiness strategies, as well as the structure of the study. This chapter reviews extant literature on managing online teaching and learning in TVET colleges.

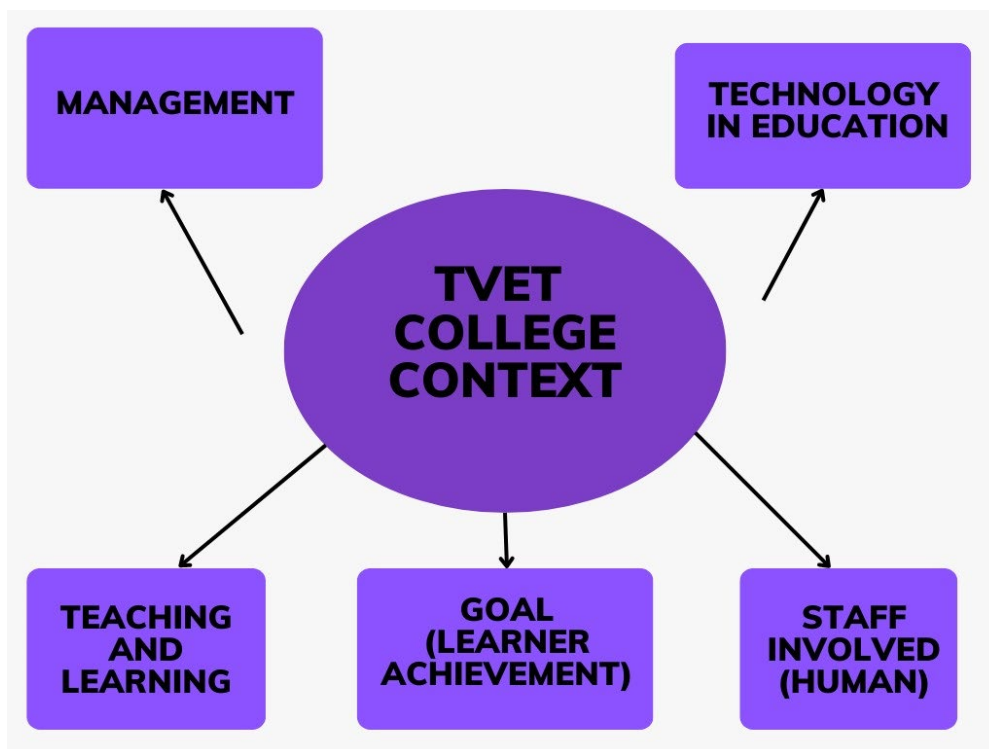
The first section of this chapter discusses the conceptual framework underpinning this study. Regoniel (2015) describes a conceptual framework as a representative of the researcher's formation of the literature explaining a phenomenon. The conceptual framework is the researcher's understanding of how the particular variables in the study connect. The study is not based on a specific theory, but it links concepts that successfully make up online teaching and learning in TVET colleges. These concepts are discussed and analysed to clarify how effective online teaching and learning is managed. The second section discusses the educational policies and frameworks for both higher education and TVET colleges on online learning. The third section addresses the following on online teaching and learning: challenges and benefits, strategies to enhance quality, supporting students, and applying the best practices.

#### **2.2 CONCEPTUAL FRAMEWORK**

A conceptual framework is the total, rational orientation of anything and everything that forms the underlying thinking, structures, plans, practices, and implementation of the entire research process. It includes the researcher's thoughts on the identification of the research topic, problem to be investigated, questions to be asked, literature to be reviewed, theories to be applied, methodology to be used, methods, procedures, and instruments, as well as the data analysis and interpretation of the findings, recommendations, and conclusions (Ravitch & Riggan, 2017). The framework makes it simple for the researcher to specify and define the concepts within the problem of

the study (Luft, Jeong, Idsardi & Gardner, 2022). The structure of the conceptual framework gives the reader clues on what the study is about, and how the concepts are linked to each other. Therefore, a conceptual framework is the reasonable conceptualisation of the whole research.

The structure in Figure 2.1 depicts the essential concepts that build up online learning for TVET colleges. Each concept is discussed further by studying how TVET colleges manage their online teaching and learning.



**Figure 2.1:** Conceptual framework (Researcher, 2023)

The conceptual framework shown in Figure 2.1 is linked to the study's primary focus, which is the management of online teaching and learning in TVET colleges. According to the structure, various components shape virtual teaching and learning in the TVET sector. These include management, technology in education, teaching and learning, staff involvement, and goals, and they are discussed in subsequent sections.



### **2.2.1 Management**

Heinz, Cannice and Koontz (2019) define management as the art of getting things done through and with the people in properly organised groups. It is the art of making an environment where people can perform, and individuals can co-operate to accomplish group goals. Taylor, Doherty and Peter (2015) describe management as an art of knowing what to do, when to do it, and seeing that it is done in the best and inexpensive way.

Through studying the different theoretical perspectives on management, it is clear that the duties of the management are essential to keep together the plans of a college. The management exists to make things happen by ensuring that the managers work together with their subordinates, and giving clear goals and expectations of what and when things are expected in order to accomplish the college goals. E-learning requires the management to guide lecturers and students, and adequately plan for the efficient running of online teaching and learning.

Goals are achieved through leaders and supervisors with the support of their team. To attain the organisation's goals, managers should fulfil core responsibilities, known as the four management functions (Boogaard, 2021), namely planning, organising, leading, and controlling systems, resources, and actions daily in order to attain the organisational goal of student achievement. Planning is the first step to implementing a vision in TVET colleges successfully. In this step, managers need to develop a detailed action plan (Boogard, 2021), where the mission and vision of the new projects are discussed. Virtual learning is a comprehensive process in which the curriculum is delivered, and without proper planning, things can go wrong. The management should properly plan before implementing online learning in their colleges.

The second step in the management function is organising. Stretton (2015) defines organising as the work that a manager performs to arrange, and it relates to the work to be done to execute it effectively by the people. Organising identifies the work to be done, and the people responsible for the work, and time management. TVET colleges are introducing online learning as a new way of learning. Without proper organising, it is bound to fail because this stage identifies delegation. With the first two steps

underway, managers should then move the attention to the employees, and be the leaders to them. The leading stage involves motivating and influencing employees to work and meet the performance standards (Boogard, 2021). College staff and students need to be led by good leaders who will encourage them to accept online learning, and pass knowledge to the students. If the team is motivated, good responses will follow from the lecturers and students.

According to Cambalikova and Misun (2017), control in management is one of the management functions aimed at accomplishing the defined goals set by an organisation within an established timetable. Control, in management, is usually understood as setting standards, measuring the actual performance, and taking remedial action. This final stage is where the college's vision is monitored for success, and checking if e-learning is not failing. Controlling helps the managers to monitor the achievements and failure of online learning, and correct any faults that might cause failure.

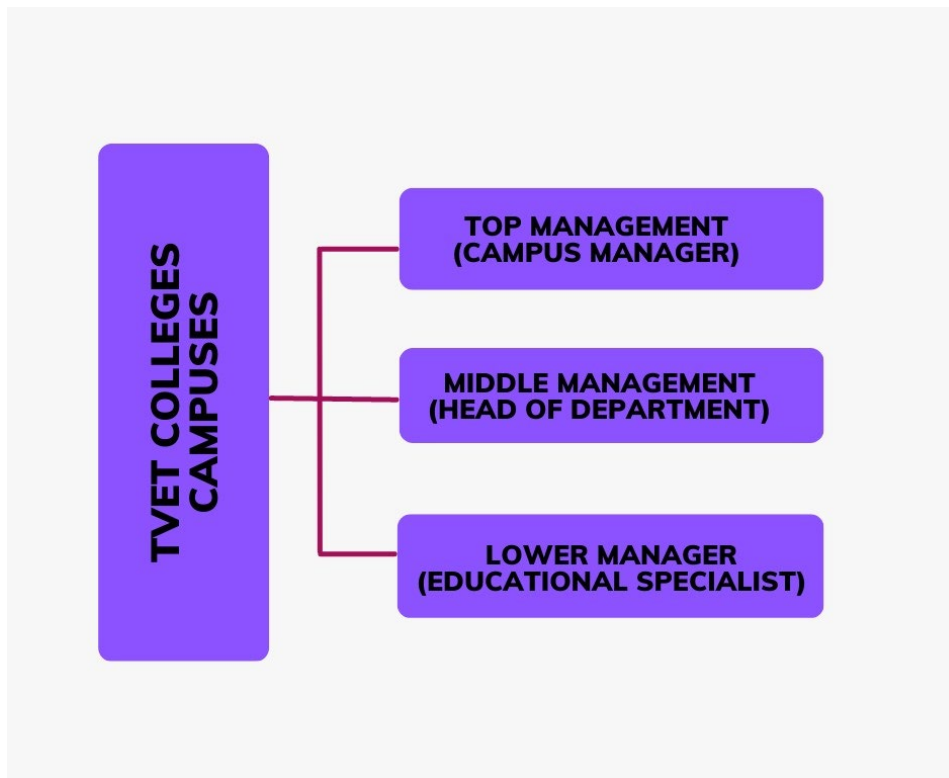
Reh, Dias, Nelson III, Kaufer, Werker, Kolb, Levine and Hensch (2020) mention critical thinking as one of the skills that the management should portray. According to the authors, the manager tries to understand where and how projects fit into the bigger picture to increase effectiveness. The manager reviews priorities in light of the larger organisational goals. They translate this understanding into meaningful goals and objectives for the team members to understand where their work fits in the big picture. Critical thinking by managers, therefore, plays a vital role in TVET colleges because a good manager should be open-minded, bring fresh ideas, and share those ideas with their team.

The effectiveness of virtual learning relies on how each management in different TVET colleges prioritises this type of learning. Managers should bring ideas, communicate with their team, and develop strategies to make e-learning both practical for the lecturers and students, and meaningful and essential for everyone involved. This is possible through planning by providing the necessary resources, guidance, and support. The management of the TVET colleges comprises the principal and deputy directors. The principal is the accounting officer, and has the power necessary to perform all administrative functions (Dibete, 2015). Campus managers who report

either directly or indirectly to the principal are part of the comprehensive management of the college. Prior to the merger process in 2002, campus managers were referred to as principals. Campus managers are based in the TVET college campuses, and are accountable for teaching and learning, and student success.

According to Culduz (2023), successful institutional leaders improve teaching, learning, and student achievement. Due to their central leadership role, campus managers are placed at the top of institutional capacity-building programmes. The core business of TVET colleges is teaching and learning, which can be achieved by having effective campus management. Essential hints and tools to improve student achievement and the core task of the manager are to set a direction and create an organisational culture that is conducive to these priorities (Balkrishen, 2015). Consequently, campus managers should be knowledgeable on providing leadership on curriculum matters in order for the college to excel at its core business of teaching and learning. Such managers need to be aware of leadership roles to improve their efficiency and effectiveness, especially teaching and learning, and student achievement.

Figure 2.2 shows a college structure or team that involves college management. The team promotes teaching and learning in TVET colleges, and implements the process through planning as a team.



**Figure 2.2:** TVET college management structure (Researcher, 2023)

The structure in Figure 2.2 displays the management structure at a campus level, where teaching and learning occur. Campus managers work closely with the middle management and lower management by planning together before the decision is communicated to the staff and students. If planning fails among the three management structures, the chances of poor implementation are high. The management is there to assist each other in good implementation and decision-making on the campus duties, including the new online learning method. All three parties are essential in helping lecturers and students to understand the need for and importance of online teaching. The success of the new learning depends on how each management manages their online teaching and learning programmes in their colleges at a campus level.

According to Dimov and Pistrui (2018), managers need to bring a varied set of thinking styles to accept the challenges which they face. Truly breakaway thinking attains its spark from the playful experimentation of many people exchanging their views, integrating their experiences, and imagining different futures. The managements' decisions play a huge role in the effectiveness of an organisation. Every decision taken by the management may affect an organisation positively or negatively. Therefore, this

study sought to examine how online teaching and learning is managed in Mpumalanga TVET Colleges.

The supreme critical role of campus managers in TVET colleges in South Africa is giving instructional leadership by ensuring that instructional quality becomes the top priority of the institution in order for student achievement to be improved. Campus managers exist to support the staff in ensuring that teaching and learning is conducted accordingly. They are tasked with ensuring that online teaching and learning functions properly, and that all resources are fully provided. Having all the necessary resources makes teaching and learning easy for lecturers and students.

Kleynhans, Heyns & Stander (2021) emphasise that the leader's behaviour should be consistent between words and actions. For instance, the vision of the campus is to improve student achievement. In that case, the campus manager needs to transmit the vision, and demonstrate that they support it through appropriate actions such as leading staff development, monitoring and evaluating instruction, and coordinating student achievement development plans. Campus managers support lecturers and students in achieving the best online teaching by providing the necessary support, skills, and resources to improve and produce positive outcomes.

### **2.2.2 Teaching and learning**

Munna and Kalam (2021) define teaching and learning as transferring information from lecturers to students. Rajagopalan (2019) describes teaching as a set of events outside the students, designed to support the internal process of learning. Teaching (instruction) is outside the student. Learning is internal to the students. Lecturers in TVET colleges should assist students in acquiring knowledge through learning. Grogan (2013) argues that it takes experience to make experience. This view suggests that campus managers should know what is required for effective instruction, and they need to be aware of how teaching and learning occurs. Lecturers need support from managers through guidance, and ensure that all the necessary equipment is available to provide effective online teaching and learning to the students.

According to Brolund (2016), research shows that student achievement improves when leaders provide instructional support through creativities such as direct coaching or modelling of instruction. In other words, when campus managers support lecturers in online teaching and learning by providing guidance and support, learning follows readily.

### **2.2.3 Technology in education**

Educational technology is an organised process of adopting modern technology to improve the quality of education. It is an orderly way of conceptualising the execution and evaluation of the educational process (Budhwar, 2017). Technology has a positive impact on student learning. It allows students to be more involved in their studies, and due to the rapid arrival of new technologies globally, technology is relevant to the students. New technology-assisted learning tools include mobile devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualisations, and virtual laboratories have altered education in schools and institutions (Haleem, Javaid, Qadri & Suman, 2022).

Technology provides purposeful learning experiences (Al-Labadi & Sant, 2021), and it is an influential contributor to learning as it is used to deepen students' engagement with the curriculum in a meaningful and intellectual manner. Technology has always been used in the classroom through overhead projectors to enable every student to participate actively in learning. This kind of technology gives students a firm foundation for learning in an inclusive environment. Today, technology has improved as students can access their studies online. Lacovitti (2021) points out that using technology, where information can be shared in real-time, will be of significance, especially when information has to be communicated as a matter of seriousness.

Technology in education is slowly growing in higher institutions. The Covid-19 pandemic quickly proved why online education should be a vital part of teaching and learning. By combining technology into existing curricula instead of using it exclusively as a crisis-management tool, lecturers can utilise online learning as a powerful educational tool.

TVET colleges are now promoting online teaching and learning due to many issues that affect teaching and learning, one being the 2019 Covid-19 pandemic. Numerous TVET colleges had to adjust to new teaching and learning strategies abruptly. The TVET colleges management is responsible for assisting lecturers and students in ensuring that both adopt technology to pursue online learning (DHET, 2015).

#### **2.2.4 Staff involved (Human resource)**

Hyland-Wood, Gardner, Leask and Ecker (2021) recommend that campus managers should increase the frequency of communication to minimise teaching and learning crises. Communication can be enhanced by involving lecturers and students directly in implementing online teaching and learning. Both lecturers and students are directly involved in online teaching and learning. The lecturer's role in encouraging successful online teaching and learning is guiding the students to create their questions, interpretations, and reflections when listening to the other students. Technology-mediated learning offers lecturers a chance to create an environment of learning that allows students to discuss the task, and acquire skills through reflection on the task, and evaluation of the students' messages (Darling-Hammond, Flook, Cook-Harvey, Barron & Osher, 2020).

According to Kennedy (2020), productive learning occurs when a lecturer designs and presents material or activity to students who then participate by acting and reflecting on it. Students later respond to the material or activity, given their current understanding, often to the lecturer. The lecturer then reflects and acts upon this before a new cycle is initiated. Again, the lecturer may present the material or activity, rectify or give feedback to the students.

From the above discussion, it is clear that TVET college management promotes a big role in assisting lecturers and students to teach and learn online by providing them with the necessary material. This can only be achieved through communication due to the involvement and decisions that should be taken through the new method of teaching and learning. Communication should come directly from the management to the lecturers and students. If communication goes accordingly, teaching and learning become successful.

### **2.2.5 Learner achievement**

Technology can help students to learn more effectively. Technology involves students, and as a result, students use more time on basic learning tasks than students who interact with lecturers in class. Students who frequently use technology take more pride in their work, have better confidence in their capabilities, and develop higher levels of self-esteem. This is likely because technology can help students to learn more effectively and to stay engaged in their learning. In 2020, the Covid-19 pandemic prompted millions of college students worldwide into virtual learning. The TVET college students were part of the shift from traditional learning to e-learning. Online learning is now part of new teaching and learning strategies, and although colleges still need to work harder to involve the students more effectively, it can be just as effective as traditional face-to-face learning, especially for students who are self-motivated and have good time management skills. This may be particularly beneficial for attaining learner achievement. The TVET management exists to assist all the parties involved to adapt to this new way of teaching and learning.

TVET colleges that provide their students with access to technology and online learning resources are more likely to have students who are successful in their studies. This is because technology can help students to learn more effectively, stay engaged in their learning, and collaborate with their peers and teachers. D'Errico, Paciello and Cerniglia (2016) mention that the students' positive feelings across different online-learning activities are higher than negative emotions because many students are now exposed to technology such as smartphones, tablets, and even televisions. The authors also found out that encountering positive emotions during examination preparation strongly associates with the students' inspiration which supports the students learning process and learning outcome. This explains how important it is for the management to plan accordingly, and provide essential resources for lecturers and students for successful online teaching and learning. In colleges, managers ensure that all the necessary resources are available and utilised accordingly. In general, many colleges globally have improved their online resources by adding more computers, providing students with laptops, and making WI-FI available on campuses for all students to access the internet. The improvement of resources means that students can now access the internet anytime and anywhere around the campuses.



The availability of WI-FI in TVET colleges was proposed during the managers' strategic planning in 2015. The aim was to encourage online teaching and learning. They used their ability to oversee the students' futures as the world moved towards the fourth industrial revolution. Ultimately, this positively contributes to learner achievement.

## **2.3 EDUCATIONAL POLICIES AND FRAMEWORK**

A policy is a set of rules or guidelines for an organisation and its employees which should be followed to achieve a specific goal. The White Paper for Post-School Education and Training (DHET, 2013) was designed for higher education institutions to implement online learning, and build an extended, actual, and integrated post-school education system. Different policies underpin online teaching and learning in the higher education and training division, including TVET colleges. These policies are used as guidelines for implementing online instruction in higher institutions without deviating from the policy. The two policies that support online learning in higher institutions are The Department of Higher Education and Training Policy on Online Learning, and the TVET Policy on Online Learning, which were both designed in 2013 in the White Paper for Post-School Education and Training (DHET, 2013).

### **2.3.1 Department Of Higher Education and Training Policy on Online Learning**

The White Paper (2013) defines open learning for post-school education and training as an approach that combines the principles of student-centeredness, lifelong learning, and flexibility of learning delivery. The Department of Higher Education and Training (DHET) has the responsibility to ensure that online programmes and course offerings are widely used to support and advance teaching, learning, and accountable assessment strategies. This policy embraces open learning principles set out in the White Paper for Post-School Education and Training (2013).

The responsibility of DHET is to provide an empowering environment for higher institutions to deliver quality online programmes through the development and implementation of relevant policies, strategies, and appropriate funding mechanisms. The White Paper (2013) defines e-learning as digitally supported, digitally dependent,

internet-supported, internet-dependent, and fully online. The DHET encourages the management from colleges to expand online learning to offer education, especially to students who cannot attend full-time programmes, either due to their employment status or their geographical distance from the college campuses. It further promotes virtual learning to encourage all students who are willing to learn but fail because of personal issues such as being away from colleges or due to employment. Online learning allows students to study wherever they are, as long as they have internet access. Higher institutions are now shifting from traditional teaching to online learning. This shift was more prioritised during the outbreak of Covid-19 in 2020. The pandemic played a massive role in prompting the managers in universities and colleges to consider online learning as the first choice, and more ideas are developed on how virtual learning can be more effective to benefit all students.

### **2.3.2 TVET Policy on Online Learning**

The White Paper for Post-School Education and Training (2013) views the traditional way of providing education and training through face-to-face learning as not sustainable in the world that we are living in currently. This means that online learning approaches and methodologies should be considered for a better world and better education. The DHET has a target of reaching 2.5 million student enrolments in colleges by the year 2030. To achieve this, DHET needs to revise the way in which colleges implement their teaching and learning, the long-term impact of technology developments, and how they are planning to structure themselves around increasing the employability of their students. To support this, the DHET needs to re-evaluate teaching methods, consider the long-term impact of technology, and focus on enhancing student employability through technology-based education.

TVET colleges have centres, called e-learning centres, where online programmes are developed. These centres develop online programmes such as websites, where students can access their courses, past exam papers, chat with their lecturers, and even check the progress of their performance in assessments. E-learning also provides support to lecturers and students to conduct their teaching and learning using online method. Based on the two policies, TVET college managers need to work tirelessly with the DHET to promote online teaching and learning in their colleges and

assist DHET in reaching the 2030 target of having 2.5 million enrolments including students studying online. In line with these policies, TVET college managers must collaborate with DHET to promote online teaching and learning, thereby contributing to the 2030 enrolment target and advancing the use of online education in their institutions.

## **2.4 ONLINE TEACHING AND LEARNING IN HIGHER EDUCATION**

Internationally, online learning has become the virtual channel of instructional delivery in many higher education institutions (Imran, Fatima, Elbayoumi Salem & Allil, 2023). Online learning concentrations on a wide range of technological-based learning platforms, delivery methods, and educational technology components in the learning environment. Learning institutions offering online programmes are provided with unique opportunities to approach the learning process from a wide-ranging outlook. The following subsections discuss online teaching and learning in higher education institutions, specifically TVET colleges.

### **2.4.1 Online teaching and learning challenges**

Students with a lack of self-regulation have a habit of not assigning themselves enough time to complete assignments. They end up submitting poor quality work or late assignments altogether (Kang, 2014). Students studying online lack self-motivation from lecturers, and they fail because they feel neglected. The lack of motivation is because of the lack of support from their institutions.

Many students are introduced to online learning without computer skills (Mashau & Nyawo, 2021). Technological backgrounds cause many students anxiety, confusion, and a loss of control (Khasawneh, 2022). Students who have good computer skills background turn out to be faster and cleverer than students who have poor computer skills background. This challenge demotivates students as they feel threatened by their peers, and they turn to lag in, and even end up giving up on their studies.

A South African study by Basar, Mansor, Jamaludin and Alias (2021) on online learning indicates that students' problems include limited computers, high cost of computing,

internet access, language barriers, and poor writing skills. The lack of technology leaves students feeling demotivated and anxious. This creates a digital division between lecturers and students (Basar, Mansor, Jamaludin & Alias, 2021). When students find a chance to study online, they have high expectations which become a challenge because they are discouraged if things do not meet their expectations (Luyt, 2013). Some students may have wrong expectations, such as immediate feedback on their online comments and assignments, or become rude and demanding in their e-mails. Some may question their marks, and other students may not commit to deadlines for their assignments.

Another big challenge which both students and lecturers face is transitioning from face-to-face to online learning. Anderson (2011) pointed out that the main challenge discovered with online teaching is the disconnection between the way lecturers were taught and how they teach online. It becomes difficult to teach online as both the lecturers and students are used to the traditional face-to-face learning technique. This disconnection represents a problem as many lecturer education programmes might not have caught up with the developing online teaching environments. Both the lecturers and students should be trained to adapt to the new method of teaching and learning. Colleges need to step in and assist lecturers and students in perfecting their online teaching and learning skills by providing all the support they need, including offering training to perfect their skills of teaching online.

The Covid-19 outbreak is another challenge that emerged without preparation and obligated many educational institutions to implement online teaching and learning in 2020. This pandemic affected people globally, and many countries were forced to implement a lockdown to control the spreading of the virus. During that time, no one was prepared, including students and lecturers. Lederman (2020), in his study, states that due to Covid-19, both the lecturers and students found themselves in a situation where they felt forced to embrace the digital academic experience as something good that has happened in the education sector. In countries such as India, when Covid-19 broke out, online teaching and learning became a huge challenge. The management of the institutions could not adjust to the unexpected educational change as they were not technologically skilled to embrace the situation. Therefore, for a successful shift

from traditional to online learning, all parties, including college management, needed to address change implications.

In South Africa, using technology in designing and transforming learning and assessment has been a strategic goal for many years. However, some challenges delayed the process, such as the cost of investing in technology. The lockdown changed all the planning because of the sudden unplanned change that had to be implemented due to Covid-19. During the lockdown, reality struck because many public-school and higher institutions lecturers did not have the skill, knowledge, or infrastructure to conduct online learning, hence they found it puzzling. The teaching and learning method is now a big revolution since the Covid-19 spread globally. Education is one of the areas that had a primarily significant effect on teaching conditions. The lecturers' challenges in online learning during the pandemic included supporting facilitation, the process of learning, and the environment of the learning activities. Further, the lecturers missed the face-to-face interactions with their students, hence they cannot control the students' affective factors, which are also crucial for the teaching and learning process.

According to Liu, Gomez and Yen (2009), social presence predicts community colleges' holding and the final accomplishment in online community college environments. Social presence is a critical way of promoting social and interpersonal communication needed for online teaching and learning. Lowenthal and Dunlap (2014) believe that social presence promotes emotional answers and speech, open communication with others during the course, and clear communicative responses. The outbreak of the Covid-19 pandemic forced many higher institutions to switch their traditional teaching and learning methods to online learning. The switch became a challenge to both the lecturers and students because they had to adapt to the new way of teaching and learning. Covid-19 is still a challenge, and this challenge is slowly moving higher institutions globally to teach online in order to promote social distancing as the virus is spread by being at least 1.5m close in the same venue or place.

Due to the Covid-19 pandemic, the DHET was deeply affected, and it pleaded with all TVET colleges, including those in the Mpumalanga Province, to continue teaching and learning by conducting their classes online. The college management had to assist the

lecturers and students in continuing teaching and learning online by providing emotional support and the necessary resources.

#### **2.4.2 Benefits of online teaching and learning in the higher education sector**

Higher education institutions have progressively embraced online education, and the number of students enrolled in distance programmes is rapidly rising in colleges and universities. A recent study on higher education in the United States reported that more than 2.35 million students registered in online courses from 2004. Online education is becoming an essential long-term strategy for many higher institutions. Given the fast growth of online education and its importance for higher institutions, it is commanding that higher education institutions provide excellent online programmes.

Gemma (2022) describes online learning as a flexible way of teaching that allows the lecturer and the student to progress at their own learning pace. There is additional flexibility in developing a programme that fits everyone's agenda. As a result, using an online educational method allows for a better balance of work and studies, hence there is no need to give anything up. Studying virtually teaches students vital time management skills.

Online courses are advantageous to students who prefer self-regulated learning (You & Kang, 2014). Higher education has students taking care of their families without forgetting the need to study for a better life. Online learning is more beneficial to those students who want to work and learn simultaneously because they find time to pursue both work and their studies. Sahu, Dalcik, Dalcik, Gupta, Chattu and Umakanthan (2022) argue that the online teaching method effectively educates students. It is used for professional development as it is cost-effective to combat the rising cost of higher education. This is against the backdrop that there is a struggle to provide the economically-disadvantaged students with equal opportunities as those with an economic advantage (Tartaglia, 2020), hence online teaching becomes the new approach to address this divide. Further, it has credit equivalency at the higher level, and the opportunity of providing a world-class education to anyone with a broadband connection. Online learning is taking the world to a better place, and higher standard

of living. Students can now study in the comfort zone of their homes without travelling, and still achieve good results.

### **2.4.3 Strategies to enhance the quality of online learning in higher education**

Online learning can be effective if all higher institutions, specifically TVET colleges, can change from traditional teaching, and adjust to online learning methods. Virtual learning is one unique learning method that allows students to interact with their lecturers online without their physical presence. This will enable them to enhance technical proficiency and develop a reliable and robust technology infrastructure. The best practice for effective e-learning would be for the colleges and universities to incorporate more online courses into their curriculum, even if the institutions plan to offer in-person classes (Doucet, Netolicky, Timmers & Tuscano, 2020). Having more online classes will motivate lecturers and students to take online learning as seriously as they take traditional learning. Therefore, the management plays a vital role in incorporating online courses in their institutions.

Mintz (2020) believes that all students need equal access to technology, or consistent, high-speed internet connections, or distraction-free study space. Having access to technology is one of the strategies that can help TVET college management in promoting online teaching and learning in their colleges without failure. If colleges and universities are committed to developing high-quality online programmes and courses, there should also be a commitment to provide technical support for both the students and lecturers. Students should access technology, hence they should be provided with gadgets such as laptops, and data.

### **2.4.4 Management of online teaching and learning in higher education**

The college management needs to play a considerable role in promoting online teaching and learning in higher education, including TVET colleges. They need to provide essential needs to the lecturers and students such as technology, training, professional development, a budget, and a voice. The voice is the most important need for the lecturers' concerns to be heard, even for their ideas to be listened to with an open mind, and for them to be considered people of value (Vivolo, 2020).

Lecturers may have the skills to teach online, but they lack the resources to assist them in teaching. If the colleges do not provide online teaching resources, teaching and learning may be affected. The college management needs to listen to the opinions of the staff and assist them in making sure that everything is in place to provide quality education. Some lecturers do not have the skills to teach online. The management needs to give them support by providing training and any other form of assistance that will enable them to teach online and provide good quality education. If the college management does not assist the lecturers, technology will probably not be used efficiently, and the learning objectives will be compromised (Cabaleiro-Cerviño & Vera, 2020).

As John Dewey said in 1916, “if we teach today as we taught yesterday, we rob our children of tomorrow.” Time changes, technology changes, the lecturers may be willing to change the teaching method, but without the assistance of the management, things may fall behind, and the student’s future may be affected. Therefore, the management plays a major role in making certain that the schools’ teaching and learning are effective. According to Kuscu and Arslan (2016), managers in distance education should see themselves as educational leaders, with less directing and more motivation. Lecturers and students need inspiration without being criticised to do better. Many students are computer illiterate and need support from their instructors.

#### **2.4.5 Supporting and engaging the isolated student in online learning**

Students commonly have one goal, which is to improve their lives through education by attaining positive results. Many students may experience personal issues based on their backgrounds, such as anxiety associated with using technology. Martin and Bolliger (2018:38) encourage the managers and lecturers to design engaging activities that accommodate all students without making them feel isolated because adapting to online learning requires creativity. If the lesson is poor, the students might lose interest and feel left out. Creativity can be implemented by creating groups online, supporting those groups, making a quick poll, and giving a shared whiteboard to all students. This way, virtual learning can be entertaining, and students may feel as if they are in physical class, and can participate even better than they did in the classroom. The



management supports all the planned activities, and gives the go-ahead in planning that benefits students.

Regardless of the best intentions of providing reasonable and helpful learning experiences for all students, many lecturers may feel anxious, and not appropriately equipped to teach online (Rucker & Downey, 2016). The lecturer should attend to all students equally, and make them feel comfortable, and not isolated during virtual learning lessons. Students have personal issues that can make them lose concentration, hence they drop out of school because they get less attention from their lecturers. Lecturers should assist students with their studies, and make them feel the importance of learning. The lack of experience and feeling of inferiority in online teaching may affect their teaching, and teachers may provide poor support to students who need more help.

Based on these views, the lecturers need to accommodate each student by spending the first several days of class helping them to understand technology, and learn how to work with it. If students can learn using a computer, it may be easy for them to learn online. While lecturers need to create an excellent strategy to support the isolated students in an online environment, it also assists in meeting the students individually online, interacting with them wherever they need assistance. Individual interaction will make each student feel appreciated and put effort into their online studies because of the attention which they receive from the lecturers.

#### **2.4.6 Applying best practices for online teaching and learning**

Developing institutional capability for online learning needs a careful approach to training online instructors, and a workload investment in staff training and development (Gregory & Lodge, 2015). Every stakeholder involved in online teaching and learning needs to be trained for successful learning. Training lies in the hands of an active management that can think ahead, and apply best practices for the college.

DeFuria (2021), on the other hand, encourages lecturers to attend training before they conduct online lessons because it differs from face-to-face teaching. The author believes that lecturers should be trained online in the same environment where they

will be teaching. This training will assist them to understand online classroom better from a student's viewpoint. This is the best practice because lecturers will be thoroughly trained based on how they understand the students' view of online lessons.

Cooper (2016) also encourages the lecturer's presence through support and availability. This presence is not the physical presence in a classroom, but being present or available for the students whenever they need help in virtual lessons. The presence can be achieved by utilising various communication methods, and ensuring that students are monitored daily in their online activities if required. This can be achieved through discussion boards, e-mails, announcements, and forums.

To conclude, online learning should not be left in the student's hands. Both the lecturers and students need to participate actively. If anything is not clear, both of them should voice out to the management in charge so that the challenges that they face can be addressed timeously.

## **2.5 SUMMARY**

Based on the discussion, it is clear that the world is slowly moving to online teaching and learning, and soon, learning institutions will fully adopt e-learning as a method of studying. Currently, many higher institutions globally are embracing online learning. However, there is still a question on how well the institutions can adopt online teaching and learning without challenges. Several Chinese government studies show that the country has recently applied policies to address the key limits that prevent TVET colleges from adapting technological change, and integrating ICT into teaching and learning (Stewart, 2015). The challenge faces the South African TVET colleges, specifically those in the Mpumalanga Province, but the challenge of using technology is facing the world. Therefore, TVET colleges need to develop a plan that will assist the college management to overcome the difficulties which they encounter, and ensure that they are prepared to fully implement online teaching and learning.

The main focus of this chapter was to review extant literature, and discuss the conceptual framework adopted in this study. In this framework, a few concepts were discussed based on the management of online teaching and learning by TVET

colleges. The conceptual framework pointed out the importance of TVET college management in implementing successful virtual teaching and learning in the colleges. Additionally, the educational policies for higher institutions and TVET colleges were also reviewed to analyse how they view online teaching and learning. The next chapter discusses the research design and methodology employed in the study.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 INTRODUCTION**

In the previous chapter, the literature review and the theoretical framework for the study were discussed, with a focus on the management of online teaching and learning in Technical Vocational Education and Training (TVET) colleges. This chapter provides a detailed discussion on the chosen research design and methodology for this study. The chapter discusses the research paradigm, research process, data analysis, and ethical considerations. The main research question was: 'How is online teaching and learning managed in Mpumalanga TVET colleges?' This primary research question generated the following secondary research questions:

1. How is online teaching and learning managed in TVET colleges in the Mpumalanga Province?
2. What are the challenges experienced in managing online teaching and learning in TVET colleges in the Mpumalanga Province?
3. How does the TVET college management respond to the existing online teaching and learning challenges?
4. What strategies can be suggested to enhance the quality of online teaching and learning?

#### **3.2 RESEARCH DESIGN**

According to Creswell (2013), a research design is an inclusive plan for linking the conceptual research problems to the related and attainable empirical research. It is an inquiry that provides specific direction for procedures in research. Kirumbi (2018) defines a research design as a set of methods and procedures used to gather and analyse the measures of the variables specified in the research problem. The research problem investigated in this study was based on how online teaching and learning is managed in TVET colleges. The research design provided direction on conducting the research with the participants by following all the required steps and procedures.

In this study, the qualitative case study research design was used. Rashid, Rashid, Warraich, Sabir and Waseem (2019) define a qualitative case study as a design that enables researchers to examine complicated phenomena within a specific context. A case study research design includes a detailed and thorough analysis of a particular event, situation or organisation, or social unit. Creswell (2013) describes a case study as a method that discovers a real-life, present case or multiple confined cases over time; in-depth data collection involving various sources of information; and reports a case description and case themes. However, on the other hand, Yin (2014) describes the case study design as a study investigating an existing case in its real-world context, especially when restrictions between the case and context may not be evident.

The case study method is when real-life situations are studied over a specific period of time to reach conclusions on the studied case(s) (Creswell, 2013). It includes a detailed analysis of a particular case or cases over a period of time. The multiple case study design was chosen for this study, where numerous instrumental bounded cases are selected to develop or gather a more in-depth understanding of the study than a single case can provide. This research was broad to rely on a single case because of the different issues faced by each TVET college. The aim was to understand the differences and similarities in managing online teaching and learning in TVET colleges. The focus of the study was on three different colleges in the Mpumalanga Province.

Due to inconsistent epistemological hypotheses, and the difficulty characteristic in qualitative case studies, scientific thoroughness can be challenging to show, and any resulting findings can be difficult to confirm (Baškarada, 2014). Although a case study is regarded as one of the best designs, it is challenging to analyse. The challenge is due to much information provided by the participants.

### **3.2.1 Advantages of using a case study design**

According to Miller (2020), the case study method provides an underpinning for data generalisation, permitting researchers to demonstrate their statistical findings in meaningful ways. Using data generalisation makes it easier to discover unusual features, unique outcomes, or even find conclusions that would not be available without a case study. Generalisation assisted the researcher by giving predictable

outcomes when the participants were placed in a similar situation that is, analysing their views on the management of online teaching and learning in the colleges.

Researchers do not need to be present at all times or be at a specific location. Data can be collected over the telephone, e-mails, or other remote communication (Gaille, 2018b). There were limitations in conducting this research because of the current living conditions owing to the Covid-19 pandemic, but that did not halt data gathering. A case study allows the researcher to use other methods to collect data. Data was collected through face-to-face interviews. Interviews are one of the ideal methods of implementing the case study method because it is cheap, and can be done remotely. The participants were requested to consent to participating in the interviews so that they can share their views and opinions on how online teaching and learning is managed in the colleges.

### **3.2.2 Disadvantages of using a case study design**

The case study method has no fixed boundaries; it is highly dependent on situational conditions rather than overarching societal situations (Miller, 2020). The author further notes that there is no fixed limit when conducting research using a case study because the case may have enough flexibility built into its structures to allow additional explorations. The design can lead to time-consuming and expensive complications, although it is affordable because it takes time to gather data at first before the researcher interprets the information received. However, conducting individual face-to-face interviews was time-consuming. A single response was not enough, hence more information was gathered from the participants, which took much time. This required more time, hence data collection became expensive.

## **3.3 RESEARCH METHODOLOGY**

Cropley (2021) describes the qualitative method as the main material that studies the way people make sense out of their own real-life experiences in their own minds and words. This study adopted the qualitative research method in order to understand the participant's views on how online teaching and learning is managed in TVET colleges in the Mpumalanga Province based on their real-life experiences.

### **3.3.1 Qualitative research**

According to Crossman (2020), qualitative research is a type of social science research that gathers and works with words instead of numbers. It strives to interpret meaning from data, and also aids the researcher in understanding social life through the study of targeted populations.

The targeted population for the study were employees in TVET colleges in the Mpumalanga Province. The aim of choosing this research methodology was to collect information from selected the participants using words instead of numbers. The collected information would interpret the prevailing online teaching and learning management practices, and enhance readers' understanding of the topic under study.

Qualitative research relies on open-ended questions as it allows the participants to respond without limited answers. They can provide as much information as long as they still have more to share. Qualitative research collects data in a different way because instead of bringing questions with only specific answers, it allows the participants to be themselves during the research process. Researchers are then able to study the topic with better accuracy if the participants share their views freely. Researchers can search through recordings from the participants to find new data as the information is beyond the limit (Gaille, 2018a).

According to Wolff, Mahoney, Lohiniva and Corkum (2018), the qualitative method allows flexibility in the content and flow of questions to challenge and review deeper meanings, and follow new clues if they lead to a deeper understanding of an issue. This study promoted flexibility for the participants so that all questions and information provided are explained to obtain more profound meaning in their responses.

### **3.4 RESEARCH PARADIGM**

According to Kivunja (2017), a research paradigm is a full belief framework that guides research and practice in a field. It leads the researcher in the overall investigation process, including selecting research problems, setting research questions,

determining the nature and types of reality, knowledge, methodology, and the value of the research work. This study adopted the interpretivist paradigm.

### **3.4.1 Interpretivist paradigm**

According to Husam Helmi and Abraham (2020), interpretivists consider variances such as culture, circumstances, and times, leading to different social realities. It aims to include richness in the insights collected to provide certain and universal laws that can be generalised and relevant to everyone. The use of the interpretivist paradigm in this research was based on the belief that the participants become actively involved in all the stages of the research process (Lim, 2023). The interpretivist paradigm permitted the researcher to view the world through the insights and experiences of the participants. The researcher used these experiences to construct and interpret her understanding of the gathered data.

Theorists believe that genuineness is multi-layered and complex, and a single occurrence can have various interpretations (Lim, 2023). In other words, it means that before the information is interpreted, the researcher cannot rely on single information, but there should be several reasons to support certain information. Interpretivists emphasise that social reality is regarded and interpreted by the individual according to the ideological positions that she or he holds. Knowledge is, therefore, personally experienced rather than acquired or imposed from outside. In other words, each individual holds different information from the other, and when information is gathered together, the results become conclusive.

The interpretivist paradigm was used in this research to understand how each participant feels about the management of online teaching and learning in TVET colleges. Using the interpretivist paradigm in this research was based on the belief that the participants become actively involved in all the stages of the processes as they get to share their views without expecting others to add on what they would have said (Husam Helmi & Abraham, 2020). Through interviews, the participants were actively involved in sharing their own experiences and beliefs on how online teaching and learning is managed in TVET colleges in the Mpumalanga Province.



## **3.5 RESEARCH PROCESS**

### **3.5.1 Research site**

The selected sites for this study were three TVET colleges located in the Mpumalanga Province. The motivation was the Covid-19 pandemic which led to a national lockdown. Through this "new normal" of staying at home, education had to carry on one way or another. Educational institutions implemented e-learning where students had to be taught online while at home.

This study put focus on finding out how online teaching and learning is managed in three TVET colleges in the Mpumalanga Province. Many higher institutions are now introducing virtual teaching and learning as a new way of teaching and learning. During lockdown in 2020 when Covid-19 broke out, physical teaching and learning stopped, while teaching and learning continued online. There was a huge challenge because many lecturers, especially in TVET colleges, had never taught online before. The students had always been taught in a traditional way where the lecturer was always present in the classroom. The new approach to learning contributed greatly on the lives of both the lecturers and students.

There are three TVET colleges in the Mpumalanga Province which are based in Nkangala district, Gert Sibande district, and Ehlanzeni district. Since these colleges operate in different locations, the challenges which they face are not the same. One of the main problem could be making sure that teaching and learning online is conducted effectively and efficiently. Many students come from less privileged families, hence they depend on school funding to survive. For instance, the researcher noticed that many students did not have smartphones that could enable them to access the internet to study online. This affects teaching and learning because many students use bursary funds to buy smartphones and data for learning. This study thus allowed the participants to express their views, opinions, and suggestions on how they think online teaching should be managed so that everyone involved benefits through online teaching and learning without being left behind.

### **3.5.2 Sampling**

McCombes (2021) defines sampling as the group of individuals who participate in the research. The most two popular sampling used in qualitative research are convenience sampling, and purposeful sampling. In convenience sampling, only members of the population that meet a certain criterion such as easy accessibility, or the enthusiasm to participate are included in the study; while in purposeful sampling, the subjects are chosen based on study purpose, with the hope that each participant will provide exclusive and rich information of value to the study (Etikan, 2016). This study used purposive sampling, also known as purposeful sampling, to choose the participants for the study.

Campbell, Greenwood, Prior, Shearer, Walkem, Young, Bywaters and Walker (2020) define purposeful sampling as a system in which the researcher relies on his or her judgement when selecting the participants. Crossman (2020) defines a purposive sample as a sample chosen based on the characteristics of participants and the study objectives. In this study, the sample was drawn from the college population which comprised college managers, e-learning managers, and lecturers. Therefore, a complement of twelve participants were selected for the study. Each college was represented by four participants, comprising one college manager, one e-learning manager, and two lecturers. The primary purpose of the sampling was to select suitable participants based on their experience and knowledge on how online teaching and learning is managed in the TVET colleges. The aim was to find out how online teaching and learning is managed in TVET colleges in the Mpumalanga Province. The inclusion criteria were participants who were involved in online teaching and learning, and were willing to participate in the study. Therefore, the exclusion criteria were participants who were not involved in online teaching and learning, and were not willing to participate in the study.

### **3.5.3 Data Collection**

Data collection refers to the process of collecting information from the participants for analysis and interpretation. The collection of data is an important step in conducting research, and it influences results significantly. After the research question and data

sources have been identified, suitable data collection methods are then determined. Data collection involves a wide range of techniques.

Interviews are common data collection strategy used to gather qualitative research data because they are perceived as "talking," and talking comes naturally. Semi-structured interviews were used to collect data for this study. A semi-structured interview allows the researcher to motivate the interviewee by encouraging them to speak further if they are looking for more data or finding out more if what they are saying is interesting. This method gives the researcher more freedom to ask the interviewee to elaborate or follow a new inquiry line introduced by the interviewee (Coryn, 2018). A semi-structured interview allows the participants to participate freely, elaborate on their statements, and even make suggestions if they want to.

This study allowed the participants to answer semi-structured questions, and express their views and feelings towards online teaching and learning freely. This enabled accurate and sound data analysis because many interpretations came from the participants who expressed their views on how they thought online teaching and learning should be managed in TVET colleges to benefit the students and lecturers. Despite regarding semi-structured interviews as the best way of conducting interviews, there were limitations. Semi-structured interviews are time-consuming because there is substantial information, a considerable volume of notes, and sometimes, many hours of a transcription (Taherdoost, 2021).

Semi-structured face-to-face interviews was conducted. Horsfall, Eikelenboom, Draisma and Smit (2021) describe face-to-face interviews as the gold standard for qualitative data collection because they provides an opportunity to build relationship with the participants and a gain broad understanding of their experiences and views. According to Marshall (2016), face-to-face interviews are preferred because a researcher can obtain deep responses to specific questions by treating the interviews like an important discussion, and gathering the validity of each response. The researcher views semi-structured interviews as one of the best ways of conducting research interviews despite their limitations, because they work well with the case study design as they do not dwell on one answer. They go to the extent of giving quality answers (Barrett & Twycross, 2018). During the interviews, the

participants were given adequate time to give their thoughts, and elaborate on their responses without limitations.

### **3.6 DATA ANALYSIS**

Data analysis is the most critical part of any research, which summarises the collected data. It involves interpreting data collected through systematic and logical reasoning to determine patterns, relationships, or trends. According to Bernardita (2021), data analysis is the process of cleaning, transforming, and modelling data with the goal of extracting meaningful insights to answer the research questions and solve the problem under study.

Thematic analysis was used for this study as a method that identifies themes and patterns of importance across a dataset concerning a research question (Braun & Clarke, 2013). The main point of thematic analysis is category coding. It does not include theoretical sampling (Liamputtong, 2019). Thematic analysis seeks to classify patterns of themes in the interview records. One of the advantages of thematic analysis is that it is a flexible method that can be used for both explorative studies and deductive studies, where a researcher knows what he or she is interested in (Mortensen, 2020).

The thematic analysis method aims to create thematic domains, and to develop basic categories as theoretical coding. A case is analysed to determine themes, and the themes that materialise are used to analyse other cases comparatively. The research used the following six steps by Braun and Clarke (2018) of analysing themes:

Step one was familiarising with the data, where collected data was reviewed repeatedly to familiarise with the information provided by the participants. This step was followed by transcribing audio recordings, and reading through the text and the notes taken during the interviews. This process was repeated several times until the researcher was familiar with all the data.

Step two was coding, where vital information was highlighted in different colours. Each code described the idea or feeling expressed during interviews. Following this step,

the researcher went through each interview transcription, highlighting the relevant or interesting information and statements that match the codes created. Further, data was organised into groups identified by codes. These codes helped to summarise the main points and mutual meanings that reappeared throughout the data.

Step three is where the themes were generated. The focus was on the codes created, identifying patterns among the codes, and creating themes in these steps. Themes are broader than codes because many codes can be combined into a single theme, especially if they appear more than twice. Themes were generated through mind maps.

Step four is where themes were reviewed by going back to the primary data and comparing the themes against the data, making sure that nothing was missed. If problems were encountered, the solution was to split the themes instead of merging them as a single idea, or combining them. This way, the researcher could test if the themes were valuable or not.

In step five, the researcher defined and named the themes. This involved formulating the actual meaning of each theme, and figuring out how it helped to understand data well.

The final step was writing up the analysis of the data in full report format by explaining how the thematic analysis was conducted. The results addressed each theme.

Thematic analysis is a common and valuable strategy used in the analysis of qualitative data. The researcher thoroughly examined the data to identify common themes, topics, ideas, and patterns of meanings that came up repeatedly; hence it was essential to spend time on the first step to fully understand the participants' ideas by going back and forth before analysing data. The exploratory method was used to analyse the data. This is an inductive bottom-up approach to data analysis that involves identifying themes and patterns in the data without having a predetermined set of codes or categories (Azungah, 2018). This approach is often used when the researcher is not familiar with the data or when they want to let the data speak for itself.

## **3.7 ETHICAL CONSIDERATIONS**

Ethical considerations are one of the crucial elements of a research because participants should not be exposed to harm in any way. Respect for the dignity of the participants should be prioritised. Consent should be obtained from the participants before the study commences. This section focuses on ethical considerations such as informed consent, anonymity, confidentiality, and harm or risk mitigation, which were adhered to by the researcher.

### **3.7.1 Informed consent**

Obtaining consent from the participants implies that permission should be given freely or voluntarily, hence the participants should be competent to consent to participating in the study. In other words, the participants need to be adequately informed about the research, understand the information, and have the power of freedom of choice to decide whether to participate or not. The participants' agreement to participate in this study was obtained after a thorough explanation of the research process.

All participants were required to provide written informed consent. They were approached individually, and were informed on the purpose of the study and the data collection process. Furthermore, they were given time to ask questions and raise any concerns. The researcher explained to the participants that it is within their right to decline to participate or withdraw from the study if they do not feel safe and that there was no anticipated harm or benefits.

### **3.7.2 Anonymity**

Hoft (2021) describes anonymity as the data collected from entirely unknown respondents. The researcher did not identify the participants throughout the study. The anonymity and confidentiality of the participants were preserved by not revealing their names and identity. Privacy and confidentiality of the interview environment were managed carefully during communication.

### **3.7.3 Confidentiality**

Confidentiality is the agreement to set boundaries for access to a subject's information. A requirement for confidentiality may exist because of a promise made by a researcher (Cooper & McNair, 2015). The confidentiality of the participants was preserved by not revealing their names or the identity of their colleges during data collection.

### **3.7.4 Harm or risk mitigation**

The researcher must not cause harm. Decisions need to be made on the acceptable levels of harm. The participants were not exposed to any harm during the study. For instance, because of the Covid-19 conditions, individual face-to-face interviews were conducted, although measures were taken to protect the participants from being exposed to any Covid-19 related conditions.

## **3.8 TRUSTWORTHINESS**

The trustworthiness of the study refers to the level of confidence in data, interpretation, and methods used to ensure the quality of a study (Polit & Beck, 2014). In each study, researchers should form the protocols and procedures necessary for a study to be considered worthy of consideration by the readers (Amankwaa, 2016). Trustworthiness was implemented to create trust. Polit and Beck (2014) believe that if the study is trustworthy, it is easy to conclude with convincing results as the researcher gathers rich information to ensure credibility.

### **3.8.1 Credibility**

The credibility of the study is a crucial standard (Polit & Beck, 2014). Credibility ensures that the results of the research are convincing. The researcher ensured that the study gathered rich information from the participants to ensure credibility. This was done through the use of thick descriptions providing rich and detailed descriptions of the data and the context of the study. This helped the reader to understand the findings and to assess their credibility.

### **3.8.2 Transferability**

The researcher facilitates transferability judgment by a possible user through thick descriptions of the data (Moser & Korstjens, 2018). Transferability refers to the point at which the research can be conveyed to other settings. The reader notes specific details of the research situation and methods, and compares them to similar situations. If the specifics are similar, the original research would be considered more credible. The original researcher should give a highly detailed report of their situation and methods. This research was conducted in a manner that enables it to easily be transferable to other contexts, and be read and easily understood by the readers.

### **3.8.3 Dependability**

Many qualitative researchers believe that if credibility has been confirmed, it is unnecessary to validate dependability. However, if the researcher closely analyses the two terms, credibility will appear more related to validity, and dependability will be more related to reliability. Data validity is measured through the use of a data audit. A data audit can be revealed if the data set is both rich-thick so that an auditor can decide if the research situation applies to their circumstances. Without enough related information, this is not possible. It is important to remember that the aim is not to simplify beyond the sample (Devault, 2019). For this reason, this study was defined in detail to allow an external researcher to repeat the inquiry and achieve similar results.

### **3.8.4 Confirmability**

Confirmability is the level to which other researchers could confirm the findings of the research study. It is used to establish whether the researcher has been fair during the study, or not. This view stems from the hypothesis that qualitative research allows the researcher to bring a unique viewpoint to the study. An external researcher can establish whether this is the case by going through the data collected during the original inquiry. In order to confirm the original conclusion and demonstrate how each decision was made, an audit trail can be finalised throughout the study (Nowell, Norris, White & Moules, 2017).



It is imperative to gain the trust of the participants of the research. The researcher ensured that the participants gained the researcher's trust by applying procedures such as credibility to confirmability. Therefore, this study engaged multiple methods of data collection such as interviews, and recording information which led to a more valid, reliable, and diverse construction.

### **3.9 SUMMARY**

This chapter focused on research design and methodology and explained the methodology used to collect the data and analyse it. The chapter discussed the research paradigm, design, and approach. The discussion on the research process entailed the research site, sampling, data collection, data analysis, and ensuring the quality of the research. Furthermore, the chapter outlined the ethical principles adhered to during data collection. The next chapter presents, analyses, and discusses the research findings.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS**

#### **4.1 INTRODUCTION**

The previous chapter discussed the research design and methodology adopted for this study, and provided justification for their choice. The chapter outlined the research approach, design, population and sampling, and data collection and analysis. The criteria for trustworthiness and ethical considerations were also discussed. This chapter presents the study findings, analyses, and discusses the findings in line with the secondary research questions of the study. Sarker (2021) defines data analysis as a method of finding meaning from raw data and discovering their implications. Maguire and Delahunt (2017) argue that the main aim of data analysis is to summarise data such that it gives answers to the research questions. Data is presented and thematically analysed using the sequential approach.

The aim of the study was to examine how TVET colleges in the Mpumalanga Province of South Africa manage online teaching and learning. Data gathered was used to answer the following secondary questions:

1. How is online teaching and learning conducted in TVET colleges in the Mpumalanga Province?
2. What are the challenges experienced in the management of online teaching and learning in TVET colleges in the Mpumalanga Province?
3. How does the TVET college management respond to existing online teaching and learning challenges?
4. What strategies can be suggested to enhance the quality of online teaching and learning in TVET colleges?

#### **4.2 DEMOGRAPHIC PROFILES OF THE PARTICIPANTS**

Data was collected using semi-structured interviews with eleven (11) participants who were purposively selected. The participants in the study comprised three (3) campus managers, two (2) e-learning managers, and six (6) lecturers. These participants were selected because they are involved in managing online teaching and learning in TVET

colleges in Mpumalanga. Six (6) participants hold Bachelor of Education degrees, while four (4) have Honours degrees in Education, and one (1) has a Master's degree in Education. Further, five (5) participants have 0-9 years of experience, while two (2) have 10-19 years of experience, three (3) have 20-29 years of experience, and one (1) has over 30 years of experience.

### **4.3 PRESENTATION OF DATA**

The data is presented according to the following themes for subsequent data analysis:

Theme 1: Managing online teaching and learning.

Theme 2: Challenges experienced in managing online teaching and learning.

Theme 3: College management's response to online teaching and learning challenges.

Theme 4: Transitioning from face-to-phase to virtual teaching and learning.

Theme 5: Training lecturers in online teaching and learning.

#### **4.3.1 Theme 1: Managing online teaching and learning**

The main question established here was to determine how online teaching and learning is managed in TVET colleges. The following are the selected responses to the question:

##### ***4.3.1.1 Presentation of the finding***

It emerged from the interviews that online teaching and learning can be conducted using various platforms. The researcher found out that TVET colleges in the Mpumalanga Province conduct online teaching and learning through various online learning platforms, including the learning management system (LMS), Student Hub, Google Classroom, Microsoft Teams, and WhatsApp. The participants indicated that these online learning platforms allow the lecturers to share activities such as quizzes and videos with the students. Participant 2 noted that *“we use Student Hub where students find pre-recorded lessons there. The student can interact with the lecturer.”* Participant 10 noted that, *“we use LMS which is also incorporated with Microsoft*

*Teams this allows a lecturer to have a live online session with students, create a class and send links via the students' emails and students can access the classes via the links.*" This approach facilitates real-time interaction, collaboration, and engagement, mimicking the traditional classroom environment, and fostering a sense of community in the online learning setting.

The platforms grade the assessments, and allow the formation of virtual classes, and the sharing of links through students' e-mails. The lecturers also integrate the learning platforms, and use them concurrently so that they complement each other. This may be because one learning platform offers benefits which the other does not, and vice versa. The researcher established that these online learning platforms offer a wide range of actions which the lecturers can make use of. For example, Participant 10 noted that *"the lecturer is able to offer the students activities, question and answer sessions, and lecturers are also able to create quizzes for them, and upon answering the students are graded immediately."* Participant 11 added that, *"lecturers are linked to all the groups that they teach for each subject. Lecturers are trained on how to populate and upload presentations, quizzes, videos, etc."* This indicates that the online learning platforms accommodate numerous learning activities which can be used to vary the learning approaches for the students.

This view is shared by Participant 2 who also remarked that they use a learning management system (LMS) called *"Moodle"* in their institution. He reported that through the system, *"lecturers are able to upload their virtual recordings of the lessons, and students can access them."* Participant 6 said that *"the college has a YouTube platform where the lecturers record lessons which encourage the students to download."* This shows that there are a multitude of ways to conduct online teaching and learning which also allow the colleges to integrate the platforms to maximise their benefits.

The researcher also found out that the TVET colleges in the Mpumalanga Province have implemented various strategies to promote online teaching and learning. These include the use of policies, implementing a management system, and providing resources, training programmes, technical infrastructure, and gamification strategies. Participant 3 briefly highlighted that *"it is important to have a policy and we have one*

*from DHET in place.*” Such policies provide a framework for the colleges to follow. These policies should ensure consistency and quality in the delivery of online teaching and learning, and guidelines in addressing any potential challenges or concerns that may arise.

The colleges have also implemented a fully functional management system that is integrated with the student administration system. This integration helps to streamline the system's functionality, making it easier for both the students and lecturers to navigate and use. Participant 3 emphasised that they *“have a fully functional management system which is integrated with the student administration system.”* According to the participant, the integration of the system helps to streamline its functionality. This integration streamlines administrative processes such as enrolment, grading, and communication, making it simple for the students and lecturers to navigate and access the necessary information, thereby enhancing the overall experience and effectiveness of online teaching and learning.

Further, ongoing training is provided to both the students and lecturers on how to use the LMS and its functionalities. Participant 3 noted that, *“there is ongoing training of students and lecturers on using the LMS and all its functionalities.”* Training the students and lecturers is essential in ensuring that they are equipped with the necessary skills and knowledge to effectively navigate and utilise the online platform, hence maximising the benefits of e-learning.

The buy-in of all stakeholders is also seen as crucial in promoting online teaching and learning. It was established from the interviews that the Student Representative Council (SRC) can play a significant role in promoting the use of online learning platforms to students. Participant 3 highlighted this by saying that, *“the buy-in of all stakeholders, it needs to be motivated, advocated and marketed through social media maybe, SRC to the students.”* This ensures that everyone is on board and supportive of the initiative, which increases the likelihood of successful implementation and engagement from the students.

Furthermore, the implementation of gamification is highlighted as an effective strategy towards the fourth industrial revolution in conducting online teaching and learning.

Gamification adds an element of excitement and motivation for the students to use the virtual learning system. Incorporating game-like elements such as rewards and achievements encourages students to engage with the system actively. Participant 3 noted that, *“another factor is gamification; it is something towards the fourth industrial revolution that creates an element of excitement and motivation for the students in using the system.”* Gamification makes the learning experience more enjoyable, and increases the students’ engagement and participation in the online platform.

In terms of technical infrastructure, one college received assistance with the implementation of the platform. Participant 2 stated that, *“a service provider was identified to assist us with a platform that deals with online teaching.”* Implementing the platform ensures that the colleges have the required technical infrastructure to conduct online teaching and learning. The researcher also found out that both students and lecturers were trained on using the Google Classroom platform. Participant 7 noted that, *“both students and lecturers were trained on how to operate this programme and received login details.”* Training is required to ensure the successful use of online teaching tools, and to ensure their success.

In order to promote and ensure accessibility to the online learning platforms, laptops and dongles were provided to the lecturers and students. This would ensure continued learning, even when they are at home. In some colleges, each class has a smart television installed. Lecturers record videos of themselves teaching specific modules or topics which can then be accessed by the students at their convenience, according to the participants. This approach to learning enables the students to review the learning material at their own pace while also adding an element of excitement. Participant 11 noted that, *“we allow them to use our student support computer labs during their spare time.”* The students’ ability to access the lecturers’ recorded videos at their convenience is important in online teaching and learning as it allows flexibility in studying. The convenience enables the students to review the material at their own pace, and ensures that they have access to the content even if they are unable to attend face-to-face classes.

#### **4.3.1.2 Support from the literature**

The responses from the participants revealed that the colleges and lecturers use various online learning platforms to conduct and promote online teaching and learning. Curwood and Stephens (2016) encourage lecturers to engage with students through online posts, forums, or social media. Further, Sobaih, Palla and Baquee (2022) also view social media as the way to go in online teaching and learning since the young population uses it to share various content which is relevant to them with friends and colleagues, or to chat online. Some of the colleges not only conduct online teaching and learning, but they also offer support services through computer labs, which are resourced for the students.

This is in line with the views of Sobaih, Palla and Baquee (2022) who argue the importance of technical support to assist lecturers to use ICT in the classrooms. This suggests that the colleges are leveraging the technological opportunities that exist to conduct online teaching and learning. However, Irfan and Iman (2020) are of the view that online learning is fruitless, and is conducted inappropriately. If conducted appropriately, online teaching and learning can be beneficial. Similarly, scholars such as Moreira, Henriques, de Fatima Goulão and Barros (2017) also believe that online teaching needs to take advantage of virtual environments, and adapt the discourse to the uniqueness and complexity of the virtual environment.

#### **4.3.1.3 Analysis and discussion of the finding**

Online learning platforms have become an essential tool for colleges and lecturers to conduct and promote online teaching and learning. These platforms provide a convenient way for lecturers to upload learning material such as lecture notes, slides, videos, and other resources which the students can access anytime and from anywhere. This flexibility is particularly useful for students who may have other commitments such as work or family responsibilities that make it difficult to attend traditional face-to-face classes. One of the advantages of online learning platforms is that they allow for interaction between students and lecturers. Lecturers can use discussion forums, chat rooms, and other communication tools to facilitate student engagement and collaboration. Students can ask questions, seek clarification, and

receive feedback from their lecturers, enhancing their learning experience. Lecturers can also use these platforms to assess student progress by setting assignments, quizzes, and exams.

Some lecturers also use YouTube to upload pre-recorded videos. These videos can be accessed by students from the student support computer labs. This approach provides additional flexibility for students who may prefer to watch lectures at their own pace, or who may have missed a particular class. Moreover, this approach allows the lecturers to reach a broader audience beyond their immediate class. The findings mentioned by the participants reveal the need for technical support in facilitating the use of ICT in the classroom. Theodorio (2024) recognises that instructors need technical support to effectively integrate technology into their teaching practices. This support can come in various forms such as training, troubleshooting, and maintenance. The provision of computer labs with appropriate resources is also one way that colleges can provide technical support to their lecturers and students.

#### **4.3.2 Theme 2: Challenges experienced in managing online teaching and learning**

The main question established here was to assess the challenges experienced in the management of online learning. The following are critical responses to the question:

##### ***4.3.2.1 Presentation of the finding***

The researcher found out that the colleges face challenges in the management of online teaching and learning. The participants indicated that the challenges include the lack of training for the students and lecturers, lack of confidence for the lecturers, lecturers' negativity, and the lack of resources. The participants lamented mainly the lack of resources to facilitate, conduct, and manage online teaching and learning in the TVET colleges in Mpumalanga. The resources which are lacking include e-books, technological gadgets, data, and online learning platforms. Participant 6 noted that, *"the other thing is that as a college we haven't yet purchased Google Classroom. I can say we partially purchased it we haven't got a license to use it, so we aren't able to access some of the functions."* The disadvantage of not having access to Google



Classroom is that the college is unable to fully utilise its functions and features, and this limits the options for online teaching and learning. This can hinder the ability to provide an interactive learning experience for the students and lecturers.

The researcher also found out that there is a shortage of technological gadgets and data for the students and lecturers in the colleges. Participant 6 lamented that,

*“Because we can’t provide the students and lecturers with data we can’t enforce the purchase of Google Classroom. Both students and educators or lecturers complain about data. You find that in a class of 35, only 50% of the students participate”.*

Participant 3 stated that, *“only a few students have them [laptops] despite the promise by the NSFAS to provide laptops and computers.”* The lack of data provision and laptops for the students and lecturers to access Google Classroom can lead to low participation rates, and hinder the effectiveness of online teaching and learning. This limitation in data availability creates barriers to communication, collaboration, and engagement, which negatively impacts the overall learning outcomes and experience.

The researcher found that the TVET colleges experience challenges with the required e-books. Participant 11 noted that,

*“Yes, we have faced challenges such as e-books for some of the subjects were not available on the online platform that we use. The preferred book was also not available”.*

Participant 1 added that, *“the issue is still unresolved as the service provider is still searching for the desired books, so we are using physical textbooks for subjects without e-books.”* The absence of e-books and preferred books on the virtual platform limits the ability of the students to fully engage with the subject material, and can potentially impact their understanding and learning outcomes. This commonly creates frustration, and becomes a challenge in ensuring the success of e-learning.

The researcher established that another challenge faced in the management of online teaching and learning is the lecturers' negativity towards online teaching. The participants attributed this challenge to the mindset issue. Participant 2 lamented that *"people are still in the comfort zone where they still prefer hard copies rather than electronic resources. It's a mindset issue."* Participant 6 echoed on the issue of the comfort zone, and stated that,

*"The lecturers I think it is the issue of being used to a comfort zone; they are using the traditional way of teaching where they are only teaching physically and they think that they can't teach someone who is at home. I think it's an issue of mental change that is affecting the lecturers".*

The main problem is getting people to change their mind set and adapt to a new way of learning. Students are generally more open to change than lecturers who prefer to continue teaching in the same way they always have. The issue of preferring hard copies over electronic resources can create a challenge in fully embracing online teaching and learning. This preference for traditional methods limits access to digital resources, collaboration opportunities, and interactive learning experiences which impact the effectiveness and efficiency of online teaching and learning; while the openness to change from the students may not be enough to overcome the challenges faced by the lecturers. The resistance from lecturers to adapt to the new ways of teaching such as online methods has an impact on the successful implementation of virtual learning in colleges. This resistance creates a gap in the knowledge and skills required to effectively use online platforms and tools, which results in the compromise in the value of education provided to the students.

The researcher also found that the colleges face the challenge of the lack of training for both the students and lecturers in online teaching and learning. The participants complained that the lecturers and students do not have skills, as some of them were not trained in digital literacy for online teaching and learning. Participant 7 stated that, *"the students don't have a good background of using technology so they first have to teach that as well."* Participant 1 pointed out that,

*“Lecturers are not trained but I have trained myself in the use of technology. But looking at some colleagues, some of them are afraid to use technology even if they have the equipment to Google or use in the classroom, they are not familiar with how to use them, for example, Google Forms”.*

The lack of knowledge, skills and training among the lecturers and students results in their inability or the lack of confidence in using online teaching and learning tools. Without proper and adequate training, lecturers may struggle to effectively incorporate technology into their teaching methods, and this limits the potential benefits of virtual teaching and learning. Similarly, training opportunities can help to bridge this gap and enhance the overall quality of online education in TVET colleges.

#### **4.3.2.2 Support from the literature**

The findings reveal that there is an acute lack of resources required to manage online teaching and learning. This weakness results in the mismatch between the inputs which are the resources, and outcomes. Martin and Parker (2014) are concerned about the students' expectations with virtual classrooms, as the lack of resources results in unexpected outcomes as far as learning experience, and student performance and results are concerned. Basar, Mansor, Jamaludin and Alias (2021) suggest that online learning can pose challenges for students due to the limited access to computers, and the high cost of computing and internet access. These technological barriers can lead to feelings of anxiety, confusion, and a sense of loss of control among the students (Khasawneh, 2022).

Digital skills for both the lecturers and students are also a resource issue that should be considered in managing online teaching and learning. This is in line with a study conducted by Hampel and Pleines (2013) that reveals the many challenges of online learning, such as the skills that both the lecturers and students need to develop in order to deal with the implications of electronic communication. Similarly, Mashau and Nyawo (2021) state that many students are introduced to online learning without computer skills. Scholars such as Johnson, Jacovina, Russell and Soto (2016) have also discovered that a lecturer's confidence in their technological skills and in its use plays a huge role in how effectively it is used in the classroom. In agreement, Rucker

and Downey (2016) note that, regardless of the best intentions of providing equitable and beneficial learning experiences for all students, many lecturers may feel anxious, and not suitably equipped to teach online. In light of this, having technological or digital skills alone is not enough, but having confidence in applying the skills in online teaching and learning is part of the pieces of the puzzle.

#### ***4.3.2.3 Analysis and discussion of the finding***

The lack of critical resources for online teaching and learning is a huge challenge in managing online teaching and learning that needs to be addressed. Online teaching platforms are essential tools for lecturers to conduct and promote online teaching and learning. Without these platforms, lecturers are unable to upload learning material such as lecture notes, slides, videos, and other resources for the students. This limits the flexibility and convenience that e-learning provides.

Moreover, the findings indicate that students do not have the data and books for online learning. This is a challenge as online learning requires access to the internet and relevant learning materials. The lack of access to data results in the students being unable to access online learning platforms and other online resources. The shortage of books means that the students may not have access to the relevant information that is necessary for their learning. This presents a challenge in the management of online teaching and learning, as colleges require the necessary resources to facilitate online teaching and learning effectively. This includes providing online teaching platforms, data, and books. To address this challenge, colleges can consider various strategies.

#### **4.3.3 Theme 3: College management's response to online teaching and learning challenges**

The main question established here was to determine the college management's response to the existing online teaching and learning challenges. The following are the selected responses to the question:

#### **4.3.3.1 Presentation of the finding**

The study found that the college management responds to the existing online teaching and learning challenges through various strategies. These include pre-recording lessons, motivating students, and providing resources such as data. The participants demonstrate the resourcefulness and dedication of lecturers and campus management in responding to the challenges of online teaching and learning. Participant 10 stated that they *“usually pre-record a session instead of having an online session with the students and then upload it on YouTube.”* Participant 1 also noted that, *“during Covid-19, I still engaged with my students by making PowerPoint presentations and recording my lessons with that session.”* Pre-recording lessons provide the students with the opportunity to access the material at their own convenience. This strategy can help the colleges to overcome challenges with connectivity, and ensure that the students have access to the content even if they cannot attend face-to-face classes.

Other colleges respond to the existing challenges by motivating the students. For instance, Participant 6 explained that,

*“We assist them by trying to motivate the students to participate normally. As the management of the campus, we do class visits and talk to the students because we don’t support them in terms of data”.*

This is because they do not provide support in terms of data which could still be a challenge for some students who may not have access to internet connectivity.

The colleges make an effort to provide resources such as connectivity. Participant 2 said that they *“are also trying as much as possible to deal with the issue of connectivity.”* Participant 10 also stated that, *“when I go to class I use my own data to hotspot all of my students and I direct them to YouTube to download the videos and they will have the video in their offline YouTube Account.”* This indicates that efforts are being made to address connectivity issues, and it helps to respond to the challenge of limited internet access, and ensures that the students can access the learning material even without a stable internet connection.

#### **4.3.3.2 Support from the literature**

The findings reveal that the colleges' management responds to the existing online learning and teaching challenges by providing support to the students. This is supported by Lou and Xu (2022) who affirm that online students should be supported for positive and rewarding experiences. This is because learning through an online learning platform is a huge task since it necessitates a greater workload and requires a lecturer to go an extra mile, and that means an extra workload as well (Hew & Cheung, 2014). If the management does not assist the lecturers and students, technology probably will not be used effectively, and the learning objectives will be compromised (Winter, Costello, O'Brien & Hickey, 2021).

Wildana, Iffat, Eva and Zainur (2020) bring in a new dimension to the colleges' management response to the online teaching and learning challenges, stating that the procedures applied by the head of higher educational institutions are most important in the successful delivering of online teaching and learning. Regulations, which may be in the form of policies and procedures, will provide a framework which will govern the virtual teaching and learning activities in the colleges. Tondeur (2018) adds that a shared vision by both the school leaders and lecturers for the utilisation of online technologies in their teaching can motivate the lecturers to do better.

#### **4.3.3.3 Analysis and discussion of the finding**

The provision of technological devices by the college management is a positive step towards responding to the challenge of the lack of resources for online teaching and learning. However, it is important to note that simply providing devices is not enough. The devices need to be equipped with the necessary software and applications to facilitate online teaching and learning and be regularly maintained and updated to ensure their functionality. The fact that one college is in the process of responding to the challenge of connectivity is also applauded. Data connectivity refers to the ability of students to access the internet and online learning platforms. The lack of connectivity as a critical resource in virtual teaching and learning results in the students being not able to participate in e-learning.

The researcher realised that the college management is aware of the challenges faced in online teaching and learning such as the lack of resources and training, and is taking steps to address them. However, there is still room for improvement, particularly in terms of providing access to the internet and other resources such as books. Colleges can enhance the quality of online teaching and learning, and ensure that all students have equal access to education by responding to these challenges timeously.

#### **4.3.4 Theme 4: Transition from face-to-face to online teaching and learning**

The main question established here was to establish the transition from face-to-face to online teaching and learning. The following are the selected responses to the question:

##### **4.3.4.1 Presentation of the finding**

The study found that the switch from face-to-face to online teaching and learning was varied for the participants in the colleges visited, although the majority claimed that it was worth it. Participant 5 lamented that, *“the transition was frustrating because we had to read on it, upload and reload lessons.”* The participant expressed frustration with the transition to virtual teaching. This is evident in their mention of having to read, upload, and reload lessons, which suggests that the process was time-consuming and possibly challenging. This indicates the potential difficulties faced by both the lecturers and students in adapting to the new mode of instruction.

Participant 7 indicates that in certain aspects, the transition to online teaching and learning was beneficial. They noted that, *“in other areas the transition was worth it.”* However, without further context or specific examples, it is unclear what areas the participant was referring to, although it suggests that there were positive aspects to the transition. Moreover, Participant 9 also stated that, *“I believe that the transition was supposed to happen, and it is worth it.”* This indicates a positive perception of the transition from face-to-face to online teaching and learning.

#### **4.3.4.2 Support from the literature**

The findings reveal that the switch from face-to-face to online teaching and learning was effective, although with some frustrations. This is supported by Wasserman and Migdal (2019) who argue that the accomplishment of change in any online education is possible. However, it depends on numerous issues such as the attitude of the lecturers towards online learning to a large extent. Additionally, Gorghiu, Lamanauskas, Makarskaitė-Petkevičienė, Manea and Pribeanu (2021) echo that the transition to online teaching and learning is frustrating, adding that the change has side effects such as frustration, which is viewed as a negative perception. This is because the more lecturers respond positively to technology, the more likely they are to integrate and promote it (Machaba & Bedada, 2022).

Similarly, Naylor and Nyanjom (2021) echo that frustration is a negative emotion. They also note that the frustration experienced by the lecturers is when the technology impacts the students' assessments, and how the students do not engage in e-learning. However, the absolute frustration is when the lecturers are not able to see or contact the students who enrolled into the subjects, or do not engage in or read the content uploaded on the online platforms. This leaves the lecturers wondering if the students knew enough as the lecturer wanted them to.

#### **4.3.4.3 Analysis and discussion of the finding**

The transition from face-to-face to online teaching and learning was beneficial, although with challenges, particularly for the lecturers. The findings reveal that the transition, for some colleges, brought about enormous benefits such as creativity with learning material, flexibility, and convenience. It is important to note that the benefits of online teaching and learning are not automatic. They require appropriate implementation and skills training for both the lecturers and students. It is, therefore, apparent that the colleges did not have adequate training programmes for their lecturers and students to ensure that they are equipped with the necessary skills and knowledge to effectively participate in online teaching and learning, hence training should be considered to this effect. However, the frustration experienced by the



lecturers during the transition is understandable, given that they had to adapt to a new mode of teaching that required new skills and knowledge.

The findings also suggest that the lecturers' positive response to technology is key for its integration and promotion in the classroom. This is consistent with previous research by Machaba and Bedada (2022) that has shown that lecturers who have positive attitudes towards technology are more likely to use it in their teaching. Therefore, a positive attitude towards technology among the lecturers goes a long way in ensuring an effective transition from contact to virtual teaching and learning, and its effective integration and promotion.

#### **4.3.5 Theme 5: Training lecturers in online teaching and learning**

The main question established here was to assess the type of training offered in assisting the lecturers with online teaching and learning. The following findings emerged in response to this question:

##### ***4.3.5.1 Presentation of the finding***

The training of lectures in online teaching and learning is vital in education. The researcher found out that the colleges provide training in online teaching to the lecturers. Participant 9 stated that, *“we were taken through digital literacy training where we were promised that there was a learning management system that was going to be launched but to date, we have never used it nor have we seen it working.”* The fact that the promised learning management system was never launched or utilised indicates that there is an absence of follow-through in the implementation of online teaching and learning in TVET colleges. This can result in a sense of unfulfilled promises among the lecturers, and it jeopardises their ability to fully embrace and utilise digital tools in teaching. However, the training in digital literacy will be beneficial if the system is introduced, and the lecturers are able to conduct online teaching. These findings are echoed by Participant 2 who noted that,

*“We train them continuously and consistently through development programmes because some are still comfortable in their traditional methods of*

*teaching and learning. Most of the training is informed by the findings on the ground. People bring out the issues that they are not comfortable with and we take the matters to the suppliers or service providers who then organise trainings”.*

This approach to training the lecturers ensures that they are equipped with the necessary skills and knowledge to effectively utilise online teaching platforms. The training is based on the fact that some of the lecturers are still resistant to change, which is a challenge that was highlighted earlier in the study. Through providing targeted and tailored training in an effort to address specific challenges such as resistance to change, the lecturers can become more confident, versatile, and competent in their online teaching.

Participant 7 stated that, *“we support them [lecturers] through training but I don’t think that we are supported sufficiently. But the old ones struggle to use laptops.”* While training on specific platforms such as Google Classroom is provided, there is a challenge in supporting older lecturers who may struggle with computer literacy. This suggests the need to offer tailored digital literacy training to ensure that all the lecturers can effectively use online tools and resources in their teaching. Insufficient or the lack of targeted support negatively impacts the implementation of online teaching and learning, particularly for lecturers who may already be less comfortable with technology.

#### **4.3.5.2 Support from the literature**

The findings reveal that the colleges train the lecturers in online teaching and learning. Mavhundutse (2014) is of the view that experience is one of the important factors contributing to effective teaching. DeFuria (2021) also encourages lecturers to go for training before they conduct virtual lessons because online teaching differs from contact teaching, hence the lecturers should be trained online in the same environment they will be teaching in. Training promotes confidence in technology usage, hence inadequate training is one of the reasons that may result in lecturers not conducting online teaching and learning, as Ozdamli and Cavus (2021) have found out. Howe, Chen, Heitner and Morgan (2018) have reported that institutional

satisfaction in learning outcomes was significantly higher for educators who received mentoring and training for software and hardware, than those that did not.

The Department of Education (2012) found out that lecturers who had recently been trained, although with less experience, are more skilled than the more experienced. According to the Reimers, Schleicher, Saavedra and Tuominen (2020), training focuses on how to conduct effective online teaching and learning, finding good sources of educational content, allowing for communication and collaboration online, and creating and sharing unique educational content online. Therefore, continuous professional training for the lecturers, as well as students is essential to bridge the digital skills gap in online teaching and learning.

#### ***4.3.5.3 Analysis and discussion of the finding***

The findings suggest that one college is aware of the importance of training in digital literacy for online teaching and learning, and has taken steps to provide ongoing training to its staff. This is a positive development as it ensures that the staff are equipped with the necessary skills to effectively teach and support students in a virtual environment. The training covers a range of IT skills, such as creating online learning material, recording lessons in a studio, creating and conducting online teaching sessions, and using technological devices such as tablets. However, the findings also reveal that not all lecturers possess these skills, which reveals that they may not have been trained in digital literacy.

It is encouraging to note that the college provides training to its lecturers in digital literacy and the use of computers based on research and its findings, which indicates that it is evidence-based and effective in addressing the gaps in knowledge and skills. However, one participant highlighted that they do not believe that the support rendered to the lecturers in their training is sufficient. This shows that there is room for improvement in the training provided to the lecturers. The older lecturers struggle to use laptops which reveals some generational differences or divide in digital literacy. This suggests the need to tailor the training to the needs of different groups of staff based on their current skills and age groups.

#### 4.4 SUMMARY

This chapter provided a detailed analysis and interpretation of the findings of the study. The findings emerged from the data collected through interviews, and were supported by the literature review in Chapter Two. The findings are outlined as follows:

Online teaching and learning in TVET colleges is conducted through online learning platforms. Some colleges use online meeting platforms such as Microsoft teams, while other lecturers use social media platforms, including WhatsApp. These platforms are effective, given that they are functional in their purpose that allows the lecturers to share the learning material, and the students to access it.

The colleges face various challenges in managing these online platforms. These include the lack of resources such as technological devices, network connectivity and data. Other challenges include the lack of skills and confidence in using the online platforms, and the lecturers' negativity towards online teaching. These challenges hinder successful virtual teaching and learning in TVET colleges, which impacts the colleges' performance, evident in student results.

The colleges' management responds to the challenges through motivating the students. This cultivates rich grounds for the participation of the students in e-learning where they may feel that they should take charge of their education.

The change from face-to-face to online teaching and learning was effective, although it came with frustration. It was established that the lecturers are provided with training in digital skills for online teaching and learning. Most of the training is informed by the findings on the ground, hence it can be said it is effective since it is tailored according to the needs of the lecturers. Literature reveals that this training is about teaching and learning effectively online, finding reliable educational resources, enabling online communication and collaboration, and creating and sharing educational content online.

The next chapter summarises and concludes the study, and proffers recommendations based on the findings.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

The previous chapter presented, analysed, and discussed the findings from the study, with support from literature in Chapter Two. This chapter gives a summary of the study's key findings, offers suggestions, conclusions, and recommendations based on the findings. This chapter is designed to integrate the various aspects of the study to derive a broad conclusion, and recommend a course of action for resolving the research problem. In addition to connecting the study findings to reality and outlining future research paths, conclusions and suggestions should take into account the aim of the study and the research topic. The purpose of this research was to investigate how online teaching and learning is managed in TVET colleges in the Mpumalanga Province. The following are the study secondary questions:

1. How is online teaching and learning managed in TVET colleges in the Mpumalanga Province?
2. What are the challenges experienced in managing online teaching and learning in TVET colleges in the Mpumalanga Province?
3. How does the TVET college management respond to the existing online teaching and learning challenges?
4. What strategies can be suggested to enhance the quality of online teaching and learning?

#### **5.2 OVERVIEW OF THE STUDY**

Chapter One introduced the study by outlining the research problem. The chapter articulated the problem statement, the purpose of the study, and research questions. It provided justification for the study, defined key theoretical concepts, provided the conceptual framework and preliminary literature review, and outlined the research methodology roadmap.

Chapter Two reviewed literature on theoretical and empirical studies, based on the conceptual framework developed for this study. The chapter discussed the arguments

for and against managing online teaching and learning in TVET colleges. Educational policies and framework were also discussed, including the challenges and benefits of virtual teaching and learning, and the strategies to enhance its quality.

In chapter Three, the discussion was based on the research approach, paradigm, and methodology employed in the study. The chapter also defined the research design, population, sampling procedures, and the data collection and analysis techniques employed in the study. The ethical considerations and trustworthiness techniques were also discussed. The study provided justification for the methodology choices by the researcher.

Chapter Four presented and analysed the findings from the study in line with the secondary research questions. The chapter also discussed the findings, and supported them with literature. The findings were obtained through the empirical investigation, and analysed and presented according to the themes which were developed from the data from the interviews.

Chapter Five summarises the research, and draws conclusions. Based on the findings, the researcher gives recommendations to improve the quality of online teaching and learning in TVET colleges and suggestions for future research.

### **5.3 SUMMARY OF THE FINDINGS**

This section provides a summary of the findings of the study. The findings were obtained through semi-structured interviews with campus managers, e-learning managers, and lecturers, and were analysed and presented in the Chapter Four with the aim of reporting all study responses accurately to answer the research questions through the logical use of core themes developed from the study outcome. As a result, this section is arranged in accordance with the secondary questions of the study.

#### **5.3.1 How online teaching and learning is managed**

TVET colleges in the Mpumalanga Province provide remote instruction and learning using online learning platforms such as Student Hub, Google Classroom, Microsoft

Teams, WhatsApp, and learning management systems (LMS). Additionally, the colleges have put in place a management system to facilitate online instruction. There is a system in place at one institution that allows the lecturers to post videos and other educational resources for the students to access and download. The online learning process is streamlined and organised with the aid of this management system. In order to expose the lecturers and students to online learning experiences, and to teach them the proper use of online learning platforms and technologies, the colleges also provide training courses and resources. This guarantees that the lecturers have the skills and knowledge required to provide excellent virtual teaching.

A strong technical foundation is essential for online teaching and learning. The study emphasised the importance of having reliable internet connectivity and access to devices such as laptops or tablets in conducting online teaching and learning. Online teaching and learning may not be as successful if there is insufficient technological infrastructure. In some instances, the colleges employ gamification strategies to enhance student engagement and motivation in online learning. These strategies include the provision of boards to encourage student participation and improve academic achievement. Students may find e-learning to be more engaging and dynamic with this gamified approach.

### **5.3.2 Challenges experienced in the management of online learning**

According to the study, there are numerous challenges experienced by the TVET colleges in the Mpumalanga Province, such as inadequate resources, lecturers' negativity, and a lack of training for both the students and lecturers. The absence of dependable internet connection and technological devices are other challenges which the colleges are experiencing. It might be challenging for some students to engage in online learning activities as they do not have internet connection at home. Due to their inability to access devices and the internet, some students experience a digital gap that prevents them from participating fully in online learning and teaching.

The inability of certain colleges to provide their students with e-books for online courses restricts their capacity to participate completely in online learning. The issue of insufficient funding to invest in the infrastructure, software, and training programmes

required for efficient online teaching and learning is the cause of the limited resources and financing for online teaching and learning in the colleges. The implementation and viability of virtual teaching and learning projects are threatened by this lack of resources.

Further, the lecturers' resistance to change stems from a mind-set perspective. Some lecturers lack the confidence or the abilities to teach online, while others are still at ease using the traditional methods. This is a result of both the lecturers' resistance to change, and their lack of training. In a similar vein, some students lack the digital literacy necessary to engage in e-learning.

### **5.3.3 Effects of the transition from face-to-face to online learning on the college**

The research concluded that it was both essential and advantageous to switch from face-to-face teaching to online teaching. Some of the colleges found the shift less difficult since they received assistance and instruction on how to utilise the online platforms. This suggests that providing resources and advice to both the lecturers and students might ease some of the challenges involved with adjusting to a new style of instruction, and that sufficient support and training can enable an efficient transition to online teaching and learning.

On the other hand, other colleges found the shift more difficult at first as they faced challenges, although they gradually adjusted to the new way of teaching. This is because while there could be a learning curve involved in online teaching and learning, lecturers can eventually grow more used to the platforms with time and experience.

### **5.3.4 College management response to existing online teaching and learning challenges**

According to the study, the college management in the province of Mpumalanga is actively addressing the challenges related to online teaching and learning. To ensure that the students can access the material and take part in online learning activities, the colleges use strategies such as pre-recording classes, motivating students, and providing resources. Through pre-recording the lessons, lecturers may overcome



connectivity problems, and guarantee that the students can still participate in the lessons, even if they are unable to attend in-person classes. This allows the students to access the information anytime, and anywhere. This strategy indicates the colleges' capacity to be flexible and adaptive in meeting the requirements of their students.

Motivating the students is another strategy that the college management uses. Even in the absence of data provision, the goal of visiting classes and interacting with the students is to sustain their interest and promote active engagement in e-learning. This strategy acknowledges the value of student involvement, and works to remove any obstacles that could stand in the way. The college management also places a high premium on connectivity. In an attempt to fix connection problems, the students are being directed to download YouTube videos for offline viewing and have their devices hot-spotted by the lecturers. Ensuring that the students access the learning materials even in the event of an unstable internet connection helps to address the issue of the lack of internet access.

### **5.3.5 Type of training offered in assisting lecturers with online teaching and learning**

The research found that colleges educate their lecturers in online instruction. Through development programmes, one college provides its lecturers with regular, ongoing training. The identified the problems expressed by the lecturers themselves, which served as the impetus for these training programmes. Enhancing the lecturers' self-confidence, adaptability, and proficiency in online instruction was the goal of the focused and tailored training strategy.

On the other hand, challenges with the execution and continuation of the training programmes were found. One college promised to provide training to the students in digital literacy and introducing a learning management system, but the lectures never used the system, neither did they see its implementation. The results also showed that despite the assistance being provided, its adequacy was questioned. It was also noted that the senior lecturers have difficulties welcoming digital technologies and using computers.

## **5.4 CONCLUSIONS**

The aim of the study conclusions is to draw attention to the key elements and noteworthy findings, as well as to advise the readers of the strengths and weaknesses of the findings. The secondary research questions of the study provide the foundation for the conclusions.

### **5.4.1 How online teaching and learning is conducted**

According to the findings, TVET colleges in the Mpumalanga Province are dedicated to improving the quality of online learning environments. This is evident in the colleges' use of different online learning platforms, which may help with the efficient delivery of online education. Examples of these platforms include Student Hub, Google Classroom, Microsoft Teams, and LMS.

The use of management systems in the colleges, which facilitates the efficient access to learning resources for both the lecturers and students and helps to arrange and simplify the online learning process, is another indication of the colleges' dedication. The commitment and efforts in improving the quality of online teaching and learning are reflected in the resources and training programmes which the colleges provide to support the lecturers and students in online learning, the reliable technical infrastructure that includes internet connectivity and device access, and the use of gamification strategies to increase student engagement and motivation.

### **5.4.2 Challenges experienced in the management of online learning**

The research concludes that TVET colleges in Mpumalanga face numerous challenges in managing online teaching and learning. Among these is the absence of training for both the students and lecturers, which leads to a lack of confidence and negativity among the lecturers. Additionally, there is a severe lack of resources such as e-books, technology, and reliable internet access, which contributes to the digital divide and restricts the students' capacity to participate fully in e-learning. The implementation and sustainability of online teaching and learning activities are further hampered by the funding and resource limitations. The difficulties in overseeing online

teaching and learning are partly a result of the students' low digital literacy and lecturers' resistance to change.

#### **5.4.3 Effects of the transition from face-to-face to online learning on the colleges**

According to the findings, the change was beneficial as it kept the colleges open for teaching and learning. However, a major obstacle to the shift to online teaching and learning was the absence of training for both students and lecturers. This led to a lack of confidence and negativity among the lecturers, which may have an effect on the quality of education and student engagement. The shift was further hampered by a shortage of resources, including e-books, gadgets, and reliable internet access, which led to a digital gap in the students' capacity to participate fully in e-learning. The difficulties encountered in shifting from online teaching and learning were further exacerbated by the lecturers' resistance to change and the students' lack of digital competence.

#### **5.4.4 College management response to existing online teaching and learning challenges**

According to the study, the colleges' management is taking proactive initiatives in overcoming the existing challenges in online teaching and learning. These techniques reflect a commitment to providing students with equitable access to educational materials and the ability to actively participate in online learning activities. The usage of pre-recorded lectures provides flexibility and convenience, allowing the students to access the information at their own pace and overcome connectivity challenges. The attempts to motivate the students through class visits and engagement activities, as well as ensuring connectivity, show a commitment to closing the digital gap by establishing a supportive and engaging learning environment. These responses ensure that the students have access to the relevant learning resources, even when they experience challenges.

#### **5.4.5 Type of training offered in assisting lecturers with online teaching and learning**

The research concludes that several colleges in the Mpumalanga Province offer lecturers with training. This is demonstrated in the constant and regular training provided to the lecturers through development programmes, which are motivated by the identified issues and concerns raised by the lecturers. The goal of the focused and specialised training strategy is to boost the lecturers' confidence, adaptability, and competence in online teaching. However, in some colleges, lecturers are not provided with the training.

### **5.5 RECOMMENDATIONS**

The recommendations are derived from the findings of the study, the above-mentioned conclusions, and the literature reviewed. These suggestions are critical for TVET colleges and policymakers in enhancing the quality of online teaching and learning. Based on the results of the research, the following recommendations are made:

#### **5.5.1 Compulsory training on the use of ICT devices**

It is recommended that mandatory training in computer and smartphone use be a part of basic education to enable the efficient use of technology in the classroom. Lecturers should be trained to record videos using diverse technology such as cameras and personal mobile phones, and these recordings should be uploaded to the colleges' YouTube page. However, the necessity for professional videos that are similar to those shown on television is important. Colleges will find it simpler to switch to online teaching and learning if the students have knowledge in the use of technology.

To guarantee the effectiveness of online teaching and learning, students should be appropriately prepared and familiarised with the relevant platforms and software. It is critical to introduce students to online classes before adopting them, since it may be difficult to teach topics when students are unfamiliar with the technology involved. Encouragement and support for the students' use of ICT is also crucial, since many may be hesitant or afraid to use technology. While avoiding making false promises, it

is critical to illustrate to students how these platforms may help and offer them with essential tools for e-learning. Furthermore, emphasising the ease of use and accessibility of the platforms on phones and computers might assist to engage the students.

### **5.5.2 Provision of resources**

Colleges should also make an effort to provide the students with access to data both on campus and at home, following the lead of other colleges in this regard. Additionally, the resources and infrastructure required for training programmes should be upgraded and maintained.

### **5.5.3 Employing Specially Trained Lecturers**

It is not practical for the college administration to expect the lecturers to teach both full-time online courses and full-time physical classes. Rather, the colleges should employ lecturers who are specially trained to teach online.

### **5.5.4 Forming alliances with service providers**

Forming alliances with network providers may help in providing the students with information to reduce the challenges which they may face in accessing course materials. As a result, colleges should communicate with the service providers on a regular basis to ensure that their offerings correspond with the demands of the training programmes.

### **5.5.5 Forming an administrative staff**

Furthermore, it is crucial to form an administrative staff which is tasked with being in charge of the student affairs, including assigning students to the appropriate classes and lecturers. With this administrative assistance, the administrative facets of online learning will be streamlined, and seamless operations for the lecturers and students will be guaranteed. Although the decision-making power for online education policies

is at a higher level, colleges should completely support any innovative initiatives for teaching and learning.

### **5.5.6 Benchmarking with other colleges**

In academic environments, learning from other colleges or benchmarking with them is seen as important. It is usual practise to return and revisit other colleges to observe policies and practices that may be learnt from.

### **5.5.7 Lecturers' ownership of the teaching process**

It is also recommended that if lecturers have a feeling of ownership over the teaching process, they will be encouraged to take the required steps towards success. As a result, it is recommended that lecturers advocate for online learning, and see the potential advantages for both themselves and the students.

## **5.6 SUGGESTIONS FOR FUTHER RESEARCH**

This study offers a number of suggestions for further research on managing online teaching and learning in TVET colleges. The areas for future study include:

- i. Funding framework for online teaching and learning.
- ii. Models and practices for online teaching and learning.
- iii. Stakeholders in the decision-making process in online teaching and learning.
- iv. Policy and regulatory framework for online teaching and learning.
- v. Hiring specialised lecturers for online teaching.
- vi. Enhancing student behaviour and training in digital literacy.

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## ANNEXURES

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## ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE



### UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2022/06/08

Ref: **2022/06/08/46582193/37/AM**

Name: Mrs NNT Mhlongo

Student No.:46582193

Dear Mrs NNT Mhlongo

**Decision:** Ethics Approval from  
2022/06/08 to 2025/06/08

**Researcher(s):** Name: Mrs NNT Mhlongo  
E-mail address: mcebomthe@yahoo.com  
Telephone: 073 207 0573

**Supervisor(s):** Name: Prof RN Marishane  
E-mail address: nmarishane@gmail.com  
Telephone: 061 523 3871

**Title of research:**

**MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES**

**Qualification:** MEd Education Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2022/06/08 to 2025/06/08.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2022/06/08 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.



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3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2025/06/08**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

*Note:*

*The reference number **2022/06/08/46582193/37/AM** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,



**Prof AT Motlhabane**  
**CHAIRPERSON: CEDU RERC**  
motlhat@unisa.ac.za



**Prof Mpine Makoe**  
**ACTING EXECUTIVE DEAN**  
qakisme@unisa.ac.za



## ANNEXURE B: REQUEST FOR PERMISSION TO CONDUCT STUDY



### Request for permission to conduct research at your institution

Title of the title of your research:

MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES.

Date:

Name of the person to who you address the request

Department of the person

Contact details of the person (telephone and email address)

Dear \_\_\_\_\_

I, Mrs Nokuthula NT Mhlongo, am doing research under supervision of Prof R.N Marishane, a Professor in the Department of Educational Leadership and Management towards a Masters Degree (M Ed) at the University of South Africa. We are inviting you to participate in a study entitled: MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES.

The aim of the study is to find out how online learning is managed in TVET colleges in order to overcome online teaching and learning challenges that are faced by TVET colleges globally.

Your college has been selected because we believe that, information sharing in different colleges will assist other colleges to do better and succeed in online teaching and learning.

The study will entail in-depth interviews with senior management and lecturers where opinions will be shared through experiences and challenged faced in the implementation of online teaching and learning.

The benefits of this study are that if challenges are bigger than success on how college Managers are managing online teaching and learning, participants will assist in overcoming them for future successful online teaching and learning. There are not potential risks envisaged in this study.

There will be no reimbursement or any incentives for participation in the research. Feedback procedure will entail through communication via email, telephone and by giving back the full findings to the participants.

Yours sincerely

\_\_\_\_\_  
Mrs Nokuthula NT MHLONGO  
RESEACHER



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# ANNEXURE C: Letter of approval to conduct research – Gert Sibande TVET College



higher education  
& training  
Department:  
Higher Education and Training  
REPUBLIC OF SOUTH AFRICA

**Our Vision:**  
To be the leading  
College Brand in South Africa.

**Our Motto:**  
Where Quality meets  
potential in creating  
your tomorrow today.

**CENTRAL OFFICE:**  
PO Box 3475  
18a Beyers Naude Street,  
Standerton,  
2430  
Tel: 017 712 9040  
Fax: 017 712 9050  
Email: jmhlabane@gsc4u.com

**STANDERTON CAMPUS:**  
Private Bag X 2042  
2 Kruger Street,  
Standerton,  
2430  
Tel: 017 712 2190  
Fax: 017 719 1417  
Email: greeffs@gscollge.co.za

**EVANDER CAMPUS:**  
Private Bag X 1007  
37 Rotterdam Road,  
Evander  
2280  
Tel: 017 632 2388  
Fax: 017 632 1863  
Email: marscha@gsc4u.com

**ERMELO CAMPUS:**  
Private Bag X 9048  
Mel Mentz Street,  
Ermelo, 2350  
Tel: 017 811 5824  
Fax: 017 819 2570  
Email: officeman@gsc4u.com

**SIBANESETFU CAMPUS:**  
Community Road  
Stand E1368,  
Glenmore, Dundonald  
Tel: 017 887 9980  
Email: pmthuli@gscollge.co.za

**BALFOUR CAMPUS:**  
110 Minnaar Street,  
Balfour, 2410  
Tel: 017 200 0785  
Email: winnie@gscollge.co.za

**PERDEKOP CAMPUS:**  
Plot 40, Koppie Allen  
Tel: 017 200 0787  
Email: william@gscollge.co.za

**SKILLS ACADEMY:**  
2 Tambourin Ave,  
Standerton, 2430  
Tel: 017 714 1594  
Email: mswart@gsc4u.com

**E-LEARNING UNIT:**  
Private Bag X 9048  
Mel Mentz Street,  
Ermelo, 2350  
Tel: 017 811 5814  
Fax: 086 578 5184



## CONFIRMATION LETTER

The Office of the Principal

12 August 2022

Dear Mrs Mhlongo


### Confirmation to Contact Research of Masters

This is to confirm Mrs Nokuthula NT Mhlongo has been granted permission to contact a Masters Degree under the topic "Managing Online Teaching and Learning in Mpumalanga TVET Colleges" at the College.

The College will give you all the necessary support needed. We wish you all the best. Hoping the findings and recommendations will help the TVET sector in this regard.

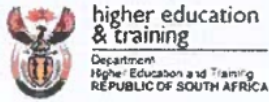
For any queries or further details, please contact my office.  
[rathaba.p@gscollge.edu.za](mailto:rathaba.p@gscollge.edu.za)

Yours sincerely,



**MI Mabe**  
Acting Principal  
Gert Sibande TVET College

## Annexure D: Letter of approval to conduct research – Nkangala TVET College



Enquires Ms Thato Ramaphakela  
[ramaphakela.t@nkangalafet.edu.za](mailto:ramaphakela.t@nkangalafet.edu.za)  
013 658 4824  
Ref: R0002/2023

To: Ms. N Mhlongo

MEd Education Management: University of South Africa (UNISA)

**Re: Request for permission to conduct Research at Nkangala TVET College.**

We refer to your request received on 04 February 2023.

You have requested permission to conduct a research for postgraduate study under the following topic:

***Managing online teaching in Mpumalanga TVET Colleges.***

Please take note that all permissions granted for research must be aligned to the College's performance mandate and legislations, therefore providing meaningful outcome for the College. Importantly, you should note that approvals are made on the condition that the findings and recommendations of the research will be shared with the College through the research unit. As a researcher/s, you need to commit to conducting research taking into considerations and implementing the best research ethics/practices.

I therefore, with all above mentioned to be considered by yourself, have pleasure informing you that your request is approved on the condition that the above mentioned are fully complied with.

The research unit will assist you with introduction and arrangement of interviews with the targets participants

I would like to wish you the very best of luck with your studies.

Mr. C M Maimela

Principal: Nkangala TVET College.

14/03/2023

Date

ISO 2001 2008 Certified College

*"Skilling the Nation for Excellence"*

## ANNEXURE E: Letter of approval to conduct research – Ehlanzeni TVET College



higher education  
& training  
Department:  
Higher Education and Training  
REPUBLIC OF SOUTH AFRICA

# Ehlanzeni TVET College

## Corporate Centre

29 Bell Street, NELSPRUIT 1200  
Private Bag X11297 NELSPRUIT 1200

Tel: 013-752-7105/5817/7527/5070/4752 Fax: 013-752-4902



ISO 9001: 2008 Certificated

EFETC1

### CONFIRMATION LETTER

The office of the Principal

18 July 2023

Dear Mrs NNT Mhlongo

#### **Confirmation to conduct Research for Masters**

This is to confirm that Mrs Nokuthula NT Mhlongo has been granted permission to conduct her Masters Degree under the topic "Managing Online Teaching and Learning in Mpumalanga TVET Colleges" at the College.

The College will give you all the necessary support needed. We wish you all the best. Hoping the findings and recommendations will help the TVET sector in this regard.

For any queries or further details, please contact my office.

Yours sincerely

Mr Mbuyane EM  
College Principal

## ANNEXURE F: Participant information sheet



Date: 19 MAY 2022

Title: MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES.

### DEAR PROSPECTIVE PARTICIPANT

My name is Mrs. Nokuthula NT Mhlongo. I am doing research under the supervision of Prof R.N Marishane, a Professor in the Department of Educational Leadership and Management towards a Masters Degree (M.Ed) at the University of South Africa. We are inviting you to participate in a study entitled:

### MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES.

#### WHAT IS THE PURPOSE OF THE STUDY?

This study is expected to collect important information that could assist TVET colleges on improving their methods of managing online teaching and learning.

#### WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because I believe you are the right participant based on your experience of online teaching and learning. Your experience will assist colleges in improving online teaching at their TVET colleges specifically Mpumalanga TVET colleges.

I obtained your contact details from your college website. I sampled you because I feel that your position at your college makes you well suited to answer questions and give successful advises on matters of online teaching and learning in TVET colleges. You are one of the 12 participants sampled in this study.

#### WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study involves an interview that will be audio recorded to assist the researcher with data analysis. You will be involved in semi-structured interview. As a participant you will be asked open-ended questions imploring your opinions and views on the management of online teaching and learning at your college. The interview will not take long, it will not last more than 30 minutes

#### CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to



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Telephone +27 12 429 3111  
[www.unisa.ac.za](http://www.unisa.ac.za)

keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

### **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

The aim of this study is to gather different views and suggestions on how to improve management of online teaching and learning in TVET colleges. Participants get a chance to contribute towards the improvement of managing online teaching and learning in order to promote successful online teaching and learning in TVET colleges.

### **ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?**

The inconvenience that may affect the process of interview is the time issue. You will be required to put some of your daily activities on hold and participate in a study which has no remuneration. In overall there are no foreseeable risks of physical harm or side-effects. There are no foreseeable risks that may come from others after identifying our participation in this study. The results of this study will be kept in a safe place for confidentiality.

### **WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?**

For confidentiality you have the right to insist that your name will not be recorded anywhere and that no one, apart from myself as the researcher and identified members of the research team, will know about your involvement in this research. For anonymity, your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

The collected data will be accessed by the researcher, the supervisor and the transcriber. The transcriber will sign a confidentiality agreement. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. However the anonymous collected data in this research may be used for other academic purposes such as journal articles or research report. A report of the study may be submitted for publication, but no individual participants will be identifiable in such a report.

### **HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?**

Hard copies of your answers will be stored by the researcher in a locked cupboard/filing cabinet *at my office in Ermelo* for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/ or electronic copies will be



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permanently deleted from the hard drive of the computer through the use of relevant software programme.

**WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

There will be no payment or reward associated with participating in this research, financial or otherwise. Participants will be interviewed in the comfort of their own place, there are no expected costs.

**HAS THE STUDY RECEIVED ETHICS APPROVAL**

This study has received written approval from the Research Ethics Review Committee of the Collage of Education, UNISA. A copy of the approval letter can be obtained from the researcher if you so wish.

**HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?**

If you would like to be informed of the final research findings, please contact Mrs Nokuthula N.T Mhlongo on 073 207 0543 or email [mcebomthe@yahoo.com](mailto:mcebomthe@yahoo.com). The findings are accessible for a period of five years after data collection.

Should you have concerns about the way in which the research has been conducted, you may contact Professor R.N Marishane on 061 523 3871 or [nmarishane@gmail.com](mailto:nmarishane@gmail.com).

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

---

MRS Nokuthula N.T MHLONGO

**ANNEXURE G: Consent form**



**CONSENT/ASSENT TO PARTICIPATE IN THIS STUDY (Return slip)**

I, \_\_\_\_\_ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the in-depth interview.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname (please print) \_\_\_\_\_

Participant Signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher's Name & Surname (please print) MRS NOKUTHULA MHLONGO

Researcher's signature \_\_\_\_\_ Date \_\_\_\_\_



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## ANNEXURE H: Interview schedule for campus managers

APPENDIX F: INTERVIEW QUESTIONS FOR COLLEGE MANAGERS (CAMPUS MANAGERS)



1. How do you implement online teaching and learning at your college?
2. Have you ever faced challenges in the implementation of online teaching and learning?
3. How did you overcome those challenges?
4. Do you experience any online teaching and learning challenges as the management of the college?
5. Lecturers at the college are there to teach students. How do you assist them in promoting online teaching and learning?
6. Do you make follow-ups to find out the lecturers feeling towards online teaching and learning?
7. How do you support lecturers in ensuring that online teaching and learning is conducted successfully?
8. What are the online teaching and learning future goals of the college?
9. Is there any strategy that the college use to enhance quality online teaching and learning?

## ANNEXURE I: Interview schedule for e-learning managers

APPENDIX G: INTERVIEW QUESTIONS FOR E-LEARNING MANAGERS



1. What programs do you offer at your college to manage online teaching and learning?
2. Are these programs successful?
3. Are there any strategies that you use to promote online teaching and learning at your college?
4. How do you work with college managers in promoting online teaching and learning?
5. What are the challenges that you face towards online teaching and learning?
6. How do you overcome these challenges?
7. Have you ever failed to implement online teaching strategies, if yes how has it affected your college?
8. Is there any support and guidance that you provide in your college for best online teaching and learning strategies?
9. What are your strategies in ensuring successful online teaching and learning?
10. If the strategies fail, how do you come up with new strategies for quality online teaching and learning?

## ANNEXURE J: Interview schedule for lecturers

APPENDIX H: INTERVIEW QUESTIONS FOR  
LECTURERS



1. How is your college promoting online teaching and learning?
2. How do you promote online teaching and learning as a lecturer?
3. Do you think online teaching and learning is the best method of teaching and learning?
4. What challenges are you facing as lecturers in conducting online learning?
5. Is your management available in assisting you with those challenges?
6. Online teaching and learning came as big change as it requires the use of technology, how did you welcome such change?
7. Was the change worth it?
8. How do you promote online teaching and learning in your classrooms?
9. How do you handle students with online learning challenges?
10. Is there any strategy that you can propose for the management that can assist in promoting successful online teaching and learning?

## ANNEXURE K: Declaration of editing



# EDITORIAL Certificate

This Certificate is Proudly Presented to

*Nokuthula N.T. Mhlongo*

**"MANAGING ONLINE TEACHING AND LEARNING IN MPUMALANGA TVET COLLEGES"**

It is certified that the above-mentioned dissertation is edited by professional editors at Saight Scholarly Publishing for accuracy in language, grammar, style, tone, tense, and punctuation use, including the technical formatting. The certificate attests the fact that the editor did not alter the idea and aim of the researcher. It is further certified that the above-mentioned dissertation, unless further adjusted, is of a satisfactory editorial standard.

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## ANNEXURE L: Interview transcript

**How is online teaching and learning managed in TVET colleges in Mpumalanga province?**

**Campus manager:** We implement it via Google Classroom so that's where the lecturers are able to upload question papers, lesson plans and even videos. We have also a YouTube platform where we record lecturers their lessons when they teach students we upload those videos there we then encourage students to download them.

**E-learning manager:** Online learning is conducted through a student portal called the LMS which has all the features for virtual class, resources for sending messages or communicating with and among the students and lecturers.

**Lecturer:** They want to introduce LMS where students will be able to get information online. And one of our campuses has full IR facilities, so they want to have pre-recordings of lessons and students will be able to access it.

**What are the challenges experienced in managing online teaching and learning in TVET colleges in Mpumalanga province?**

**Campus manager:** We are facing the lack of participation by the both students and educators or the lecturers because they complain about data you know. You find that in a class of 35 even if you are implementing this Google Classroom but the students that are participating are probably 50% or less. Some complain that they don't have smartphones.

**E-learning manager:** The major challenge is of mindset change or change management. Both lecturers and students need to adapt to a new way of learning but the youth are more open to change than most lecturers are. We have a problem with infrastructure for connectivity such as WiFi on campus and the students do not have data. Lecturers also see online learning as an extra add-on to what they have to do and they don't have time for that.

**Lecturer:** Lecturers are not trained. Some of them are afraid to use technology even if they have the equipment, and others are not familiar with how to use them.

**How does TVET college management respond to the existing online teaching and learning challenges?**

**Campus manager:** The problem has not been solved at this stage so we use physical textbooks for those subjects that don't have e-books. The service provider is still sourcing the preferred books. We provide the students with resources and the lecturers with training.

**E-learning manager:** I usually pre-record a session instead of having an online session with them and then upload it on YouTube. When I go to class, I use my own data to hotspot all of my students and I direct them to YouTube to download the videos.

**Lecturer:** The management can assist with getting proper WiFi and on the promises by NSFAS on capturing the students correctly into the systems so that they get the equipment that they should get.

**What strategies can be suggested to enhance the quality of online teaching and learning?**

**Campus manager:** The strategy is training of lectures to enhance, we also encourage them to record videos we have cameras, some they use their own cell phones and they upload the videos on our YouTube channel as a college. We encourage all students to be a part of the WhatsApp groups which are fully functioning.

**E-learning manager:** I believe that if lecturers have ownership, they will do anything that needs to be done in order to realise success. I would like to advocate for getting our lecturers to a point where they take ownership of online learning, that they feel that they and the students can benefit from. Benchmarking with other colleges is very important, visiting the colleges and revisit and revise the policies and if there are other strategies that you can learn from other colleges.

**Lecturer:** The management should be comfortable with technology, and also train the staff to use IT. The biggest part is to encourage the students because most of them are scared and unfamiliar with using IT, they need to be shown how to use IT and what these platforms can provide them with. Promote what you are going to give them and what they are going to get, not promising false hope. The students should also be showed the fun side to it, especially how they can use the platforms on the phone and on a laptop.