

Using Information and Communication Technology in teaching English at a Technical  
Vocational  
Education and Training college



by

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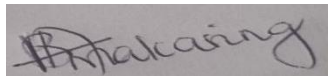
## DECLARATION

University of South Africa  
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I, Busisiwe Agnes Makaring declare that “Using Information and Communication Technology in teaching English at a technical and vocational training college” is my original piece, and all sources used in this study have been properly cited to the best of my ability. The research output is the outcome of my work, which I conducted at the University of South Africa (UNISA) with the help of the CEDU team and a recognised supervisor.

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A rectangular box containing a handwritten signature in black ink. The signature appears to be 'B. Makaring' written in a cursive style.

Candidate signature:

Date: 18 October 2022

## **DEDICATION**

This thesis is dedicated to my husband Magnificent Makaring, my mother Thokozile Josephine Simelane and my four children Nkateko, Tinstwalo, Ingiphile, and Hosana.

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## LIST OF ACRONYMS

AWE	Automated Writing Evaluation
EFL	English as a Foreign Language
DBE	Department of Basic Education
ES	Education Specialist
HOD	Head of Department
ICASS	Internal Continuous Assessment
ICT	Information and Communication Technology
MALL	Mobile Assistant Language Learning
NATED	National Accredited Technical Education Diploma
NC(V)	National Certificate Vocational
NQF	National Qualifications Framework
PDA	Personal Digital Assistant
RAM	Random Access Memory
SES	Senior Education Specialist
TELL	Technology Enhanced Language Learning
TPACK	Technological Pedagogical and Content Knowledge
TVET	Technical and Vocational Education and Training

## ABSTRACT

Information and Communication Technology (ICT) has been found as possibly dominant in teaching English. Most institutions are embracing the use of technology in teaching English. However, ICT integration at Technical and Vocational Education Training (TVET) colleges is still being adopted very slowly. There are problems challenging its uses. The NC(V) students at TVET colleges lack communication skills. The lack of these skills affects their overall performance. This study focused on the barriers that lecturers face in using ICT when teaching English for NC(V) students at a TVET college. The study investigated the positive influence of integrating ICT in teaching English for NC(V) students at a TVET college, and addressed the challenges associated with the use and implementation of ICT in teaching English for NC(V) students at a TVET college. A qualitative research approach was used in this research in order to explore and determine ways in which ICT can be used in teaching English at a TVET college. A thematic analysis approach was used to analyse the data. The study's participants were fifteen NC(V) lecturers offering English to NC(V) students at Nkangala TVET College. Semi-structured interviews and focus group interviews were conducted with Heads of Departments, Senior Education Specialists (SES), Education Specialists (ES), and NC(V) English lecturers in order to investigate and acquire findings for the research. This study found that there are barriers when it comes to integrating ICT in teaching and learning English and these were: teacher-level barriers, student-level barriers, and school-level barriers. Moreover, this study found that management acceptance is important in implementing ICT for teaching and learning. It is hoped that this study will contribute towards strategic ways that will ensure that ICT is integrated in teaching English at Nkangala TVET College as this will improve students' class attendance and enhance teaching and learning.

### Keywords:

Information and Communication technology (ICT), barriers, curriculum, ICT integration, retention, learning, language teaching

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

The purpose of conducting this qualitative research was to find out how ICT can be applied in English teaching for NC(V) students at a TVET college in Nkangala District in Mpumalanga province. This chapter serves as the introduction to the research project. It is made up of the background and introduction of the research, the rationale of the study, and the problem statement. The study's aims and objectives are discussed.

### **1.2 BACKGROUND TO THE STUDY**

Technical and Vocational Education and Training (TVET) colleges are regulated by the revised Continuing Education and Training Act (2006,16). The curriculum for TVET colleges is divided into two, namely, National Accredited Technical Education Diploma (NATED), and National Certificate Vocational (NC(V)). The NC(V) curriculum is intended for students pursuing the National Qualifications Framework (NQF) levels two through four. The NATED curriculum is for those students who have completed matric from the Department of Basic Education (DBE). Students who have finished at least grade nine at school level may participate in NC(V) programmes.

Numerous studies have been conducted on this topic but were focused on other sectors like basic education, adult learning, and universities, not specifically on TVET colleges. The NC(V) students at TVET colleges lack communication skills. The lack of these skills affects their overall performance. One of the minimum admission requirements for NC(V) programmes is that students must have passed at least grade nine. The majority of these students are still teenagers. They have low self-esteem and lack confidence. Technologically, they are able to type using a computer, as most of them have smart cellular phones. It is always said that students who speak, read, and write well, will perform better in other subjects too. This study attempted to find out ways of how the

use and integration of ICT in teaching English to NC(V) students can assist these students in improving their command of the language.

Through this study, the impacts and implications of ICT usage in English teaching and learning at a TVET college were identified. The NC(V) students' communication skills could be improved. The TVET college students' performance and substantial skills would be built. The retention rate at TVET colleges could be improved. TVET colleges would produce ICT-skilled students who are creative thinkers and analytical readers.

Since globalisation and technological changes are gaining strength in teaching, TVET colleges could not be left out. Globally, technology is creating a society where students are nourished with information and are gaining more knowledge. These changes had, to a certain extent, serious impacts and significance on the quality and function of educational institutions. ICT, which includes interactive whiteboards, projectors, televisions, computers, and the Internet had been found to possibly be dominant in teaching English. It could be an apparatus that can be used to gather more information for effective use in teaching English at a TVET college.

This study focused on the barriers that lecturers faced in using ICT when teaching English for NC(V) students at a TVET college, and tried to find out the positive influences, as well as the challenges, associated with integrating ICT with their methods of teaching their students. The researcher ensured that through literature and consultation with the participants, the solution was reached, and NC(V) students' communication skills could be improved. It was the belief of the researcher that through ICT integration in teaching English, students' overall academic performance might be improved.

### **1.3 SIGNIFICANCE OF THE STUDY**

NC(V) students' poor communication skills at Nkangala TVET College was the primary motivation for the researcher to carry out such a study. Improving NC(V) students' communication skills using ICT in the lecturers' teaching and students' learning was the reason for conducting this study.

Technology has transformed the way we live and do things. This transformation escalated to the education system. It is a fact that computers are a key part of this technology. Lecturers' knowledge of current ICT tools would help them to express and enhance the teaching and learning process (Hafifah & Sulisty 2020). ICT integration in education is seen to be gaining momentum. ICT plays a major role in teaching, administration, and learning. Because of this, there was a need to conduct this research. Lecturers need to be skilled in technology so that they can be able to employ it efficiently and meaningfully in their teaching delivery (Goh, & Sigala 2020, Ningsih 2021, Maja 2023).

It is expected that TVET institutions would generate ICT-savvy students who can be analytical readers, engage in close textual analysis, improve their convincing skills, be able to scrutinise information, and develop more creative and contradictory thinking. This study was essential to an extent that it assisted to identify the impacts and implications of ICT when used for teaching and learning English at TVET colleges. If the suggested and personal opinions proposed will be implemented, it will assist in boosting students' self-esteem and confidence to excel in life, thereby increasing their performance. Students' communication skills need to be improved, be able to communicate effectively with one another well, and express their ideas in a more meaningful and structured way. ICT can enhance students' learning. Students will be assisted to develop strategies that will assist them to learn independently, mainly in the study of vocabulary, but also for presentations and report-writing.

Lecturers' views about ICT in the teaching and learning of English at TVET colleges can be improved by the effective and diligent implementation of the recommendations from the study. The findings of this study will contribute to the body of knowledge in terms of understanding the challenges and barriers that lecturers face when incorporating ICT into their teaching. It also indicated the varieties of support that the academic committees can provide to campuses in order to improve their results. Curriculum developers will be provided with more information on the usage of ICT in the curriculum and assessments. It will further indicate if the English lecturers need in-service training for using ICT in teaching in order to improve their lecturing methods or not. Moreover, it will assist in ensuring that relevant resources and learning materials are provided as a turnaround strategy for the improvement of results.

The retention rate at TVET colleges will increase as poor performance in one subject affects the whole programme in terms of retention. Thus, the research work will be of great benefit to the following people: curriculum developers, college management, the deputy principal academic, the campus management teams that are: campus managers, senior education specialists (SES) and education specialists (ES), English language lecturers, and students at TVET colleges.

#### **1.4 PROBLEM STATEMENT AND RESEARCH QUESTIONS**

The Nkangala TVET College is facing the problem of students who lack communication skills. The lack of these skills affects both the students' pass rate and the retention rate of colleges. Intervention strategies like debates and speech contests are in place but few students will take part in these as they take place after class contact time. It is expected of TVET colleges to produce ICT proficient students who are critical thinkers and analytical reader. According to a study conducted by Parvin and Salam (2015) on the efficiency of technology use in government primary schools' English language classrooms, it was revealed that learners had the chance to increase their linguistic exposure in a significant manner and to acquire new knowledge using technology. On the other hand, Mullins & Sabberwal (2018) declared that with the help of online games, several students can enhance their English grammar. As indicated by Yaakob, Awang, Ismail, Zain, Kasim & Adnan (2020), effective ICT integration helps build TVET college students' performance and substantial skills.

The majority of students have smart cellular phones and show more interest in technology. However, their ICT skills need to be improved. Concurring with this, Naidoo & Dawuwa (2019) stated that TVET students' use of technology is limited due to the lack of poor connection between their schooling and vocational training. ICT has transformed the way we live and do things. This transformation has changed the traditional way of teaching and learning. Ahmadi (2018) asserted that computer technology has transformed English teaching methods. He further stated that these methods have changed from a traditional classroom where a teacher will stand in front of learners and give a lesson, to application of multimedia, using the Internet, print texts, and film to improve learners' linguistic understanding. ICT helps to reduce the common limitations of time and

distance experienced in traditional learning mode through the accessibility of learning materials from personal computers, smart phones, and mobile technology to allow learning to take place anytime and anywhere (Goh & Sigala 2020). The majority of governments and educational institutions around the world recognised the benefits of incorporating ICT into learning and teaching. However, the adoption of ICT at TVET colleges is progressing very slowly. Concurring with the above, Goh & Sigala (2020) maintained that regardless of ICT's advantages, many academics in the hospitality industry are hesitant to integrate it into their lesson plans and teaching materials. Agreeing with that, Naidoo & Dawuwa (2019) maintained that TVET colleges conduct their teaching and learning in a conventional manner (chalk and talk, and learn by memorising). Konayyuma (2019) claimed that ICT is not effectively used in TVET colleges, therefore, lecturers and managers need to be trained. With the lack of ICT skills, TVET college students will not be able to compete and cope in the fourth industrial revolution era.

## **THE RESEARCH QUESTION**

The research question was: How can ICT be used in teaching English at a TVET college?

The following sub-questions were related to the main question:

- What are the positive influences of integrating ICT in teaching English for NC(V) students at a TVET college?
- How do lecturers perceive ICT integration in teaching English for NC(V) students at a TVET college?
- What are the barriers and challenges that lecturers face in using ICT when teaching English for NC(V) students at a TVET college?

## **1.5 AIM AND OBJECTIVES OF THE STUDY**

### **1.5.1 Research Aim**

The aim of the study was to investigate how ICT can be used in teaching English at a TVET college.

### **1.5.2 Research objectives**

The following objectives were established:

- To explore the positive influences of integrating ICT in teaching English for NC(V) students at a TVET college.
- To determine lecturers' perceptions of ICT integration in teaching English for NC(V) students at a TVET college.
- To examine the barriers and challenges lecturers face in using ICT when teaching English for NC(V) students at a TVET college.

## **1.6 CLARIFICATION OF PERTINENT CONCEPTS**

1.6.1 Computer literacy: is referred to as the ability to utilise a computer to execute different work, such as accessing the Internet. (Kubey & Hobbs, 2019). In this study, computer literacy referred to the proficiency to use computers.

1.6.2 Curriculum: Sweetland (2018) referred to curriculum as the materials and techniques used by students in order to accomplish established educational outcomes. For this study, curriculum is referred to as a documented plan implemented by lecturers to achieve the set of subject outcomes as indicated in the subject and assessment guidelines.

1.6.3 ICT: Information and Communication Technology. Vijayalakshmi & Muruganand (2019) defined ICT as the technology that comprises of computerised gadgets and related interactive multimedia used for teaching and learning in addition to personal use. In this study, ICT refers to the technological tools that can be integrated into teaching in order to achieve the desired outcomes.



- 1.6.4 Barriers: Grenier (2015) referred to barriers to learning as personal attributes hindering one's learning. In this study, barriers refers to factors that stand in the way of lecturers using ICT effectively.
- 1.6.5 ICT Integration: defined as a way of using technological tools instead of the traditional approaches in assisting students to learn (Qurat-ul-Ain, Shahid, Aleem, Islam, Iqbal, & Yusaf, 2019). As related to this study, ICT integration is defined as the process of incorporating ICT tools into teaching to make it more meaningful.
- 1.6.6 Language teaching: Darancik (2018) referred to four fundamental linguistic abilities, namely, writing, speaking, listening, and reading as the indispensable parts of language teaching. For this study, language teaching refers to teaching English to students who are non-native speakers.
- 1.6.7 Learning: is defined as a process of changing a behaviour and knowledge (Pane & Dasopong 2017). In this study, the researcher referred to learning as a process through which students acquire new skills, knowledge, and values.
- 1.6.8 Management: Bauer, Erdogan & Short (2018) defined management as the art of getting things done through the efforts of people. For this study, management refers to the people who are at the highest rank of leading the college, for example: the council committee, chief executive officer, campus managers, HODs, and senior lecturers.
- 1.6.9 Retention: Crosling (2017) defined retention as the process of keeping students in their studies until completion. In this study, retention refers to the number of college students who continue to study at that college the following year.
- 1.6.10 Students: Zailani (2019) referred to students as educated people who are trained, mentored, coached, and taught to become psychologically mature and possess good cognitive and physical development. In this study students refers to learners enrolled at a TVET college.

## 1.7 DELIMITATION OF THE STUDY

The current study was carried out at one out of the three TVET colleges in the province, which is Nkangala TVET College in Mpumalanga Province, South Africa. Although the college has five campuses, due to time and geographical location of the campuses, only three out of the five campuses were involved. The campuses that were involved in the study offers NC(V) Business Studies, NATED Business Studies, NATED Engineering, and NC(V) Engineering. In the future, the study can be taken further by including the other two colleges in the province. Focus was on lecturers who are lecturing English at the selected campuses.

Even though a number of studies were conducted on this topic, not much has been done specifically for TVET colleges in South Africa. The focus was on schools, universities, and adult education, and excluding the TVET sector. The information that was used in the study was gathered from the participants.

## 1.8 CHAPTER DIVISION

The research consists of five chapters, as outlined below.

### **Chapter 1**

This chapter serves as the introduction to the research project. It is made up of the background and introduction of the research, the rationale of the study, and the problem statement. It is in this chapter that the aims and objectives of the research are discussed.

### **Chapter 2**

This chapter provides a literature review and related theories.

### **Chapter 3**

In this chapter, the research methodology and design are explained.

## **Chapter 4**

This chapter provides the results and findings of the research and also presents the data analysis and the interpretation of the research.

## **Chapter 5**

This chapter provides the summary, conclusions, and recommendations.

### **1.9 CHAPTER SUMMARY**

This chapter dealt with the background and introduction of the research, the rationale of the study, and the problem statement. The aims and objectives of the research were discussed. Pertinent concepts were clarified, and the delimitation of the study was discussed. The next chapter deals with the literature review related to the study and the theory that underpinned the study.

## **CHAPTER 2**

### **LITERATURE REVIEW AND RELATED THEORIES**

#### **2.1 INTRODUCTION**

In this chapter, different literature sources were reviewed to explore ICT integration at a TVET college. This chapter outlines the benefits of using ICT, as well as discusses challenges associated with ICT integration. The chapter is concluded by discussing Roger's Diffusion of Innovation as a theory that underpinned the study.

The concept of "ICT" refers to the technological apparatus that can be integrated in teaching in order to accomplish the desired outcomes. This concept was introduced in the early 1990s when education was initiated to promote the uses of computer technology, the Internet, as well as other forms of communication media into academic contexts, particularly English language teaching (Hafifah & Sulisty, 2020). Vijayalakshmi & Muruganand (2019) defined ICT as the technology that comprises of computerised gadgets and related interactive multimedia that are utilised in education in addition to personal use. According to Patwary, Chowdury, Mohamed & Azim (2020), these technologies include computers, the Internet, wireless networks, cellular phones, telephones, television, personal digital assistants (PDAs), and audio-visual equipment. ICT integration is defined as a way of using technological tools instead of the traditional approaches in assisting students to learn (Qurat-ul-Ain et al., 2019). ICT integration is the process of incorporating ICT tools into teaching to make it more meaningful.

Embedding ICT in education provides several benefits: peer-to-peer learning, the promotion of shared learning, distribution of resources and learning environments, and also a broad change towards higher learner self-determination (Padayachee 2017; Sabiri, 2020; Goh & Sigala, 2020). Incorporating technology into the classroom, on the other hand, entails more than just having an Internet connection and computers; it also entails using ICT-based teaching approaches (Zheng, Kim, Lai, & Hwang 2020; Mereku & Mereku, 2015).

It is acknowledged that ICT usage in teaching will significantly contribute to enhancing the teaching and learning process. Many developing countries (including South Africa) have made

large investments in the employment of ICT in education. In South Africa, the government appointed the private sector to assist in providing adequate support, including building and distributing of ICTs in schools (Mbambo 2017). In Tanzania, the national policy in education gave ICT a great preference in the advancement of its educational system (Mashala 2019). The curriculum was designed such that it accommodated for the heightened function of ICT in community and education. Turkey made a major investment in education on ICT policy, including ICT infrastructure and human resources (Tinmaz & Ozturk 2019).

The South African Department of Education's draft white paper on e-education outlines the following goal for the e-education policy (Department of Basic Education, RSA, 2004:17):

*“By 2013, every manager, educator, and student in South Africa's general and higher education and training bands will be ICT-capable, meaning they will be able to confidently and creatively use ICT to help them develop the skills and knowledge they need as lifelong learners to achieve their own goals and be fully engaged members of society.”*

## **2.2 BENEFITS OF USING ICT**

It is generally recognised that ICT usage for instructional goals has greatly revolutionised both teaching and learning. Many benefits have been illustrated by ICT in various forms in English language teaching (Hafifah & Sulistyono, 2020). Ahmadi (2018) noted that improving learners' technological intelligence and capacities ensures equal opportunities for all students, regardless of their background. When adequately integrated, ICT devices can improve students' learning progress, ranging from stimulating cognitive learning, increased participation, aiding cooperative works, to promoting authentic assessments (Waluyo, 2020). According to Ramavath (2020), ICT can contribute to a key global approach to education, the delivery of valuable learning and teaching, fairness in education, teachers' professional advancement, and more adequate education management, law, and administration.

Using ICT in teaching English at a TVET College will have a positive impact on students as they will have a knowledge of how various computer equipment works, and the courage to use new tools that will boost their learning of new software applications. Literature has also revealed that the support and capabilities provided by technology will help students do more difficult assignments and perform better with high-order skills. ICT has the power to play a progressively dominant part in education, be it in training, management, and online or other exercises (Lawrence & Tar, 2018).

According to Bilyalova (2017:181), the following academic problems can be solved by integrating Internet information resources into educational practice:

- To use materials of various levels of difficulty to form learning skills and abilities.
- To enhance listening ability using accurate sound texts from the Internet.
- To advance both active and passive vocabulary by using terms from today's many languages that indicate a particular phase of community cultural, social, and political system expansion.
- To get abreast with cultural education including language amenities, specifically speech conduct of different people in terms of communication, perception, and beliefs of the country of the studied language.

When a lecturer or teacher uses ICT to teach English, students are pushed to work collectively when they are assigned work. Students who had comprehended precise computer skills generally acquire pleasure and appreciation from assisting others as they also improve in applying those skills. Concurring to the above, Silviyanti & Yusuf (2015) have detected blogging advancing students' analytical reasoning skills by inspiring them to provide peer remarks on their work, share ideas, and do personal and peer reflection and evaluate it. Integrating ICT in teaching promotes collaborative writing (Sabiri, 2020). ICT implementation in teaching not only enables students to collaborate in groups, but it also helps them to take initiatives and work independently (Lasut & Bawengan, 2020). Both students and teachers are allowed to share information, knowledge, audio, video and larger data. Integrating ICT in teaching aid the learner and educators in putting together essential abilities and applying them for their explicit exercise (Sabiri 2020). ICT usage boosts

educational achievement and promotes students' results in various language skills, including reading, listening, writing, and speaking respectively (Karpova 2021, Lasut & Bawengan, 2020). In a study conducted by Ammanni & Aparanjani (2016) about the role of ICT in English teaching and learning, ICT is viewed as an engine that brings about transformation in education, making students more innovative, and motivating them learn whilst directing their learning. However, the study emphasised that lecturers need proper guidance on the appropriate application of the ICT tools and that the infrastructure must be good.

When compared to traditional teaching, ICT integration in vocational schools can be applied to speed up instruction, inspire teaching and learning, develop lively learning, and stimulate student-centred learning (Ramadan, Chen & Hudson 2018). Integrating ICT into teaching aids a learner-centred approach as it changes the emphasis from the teacher as a resource of information to the teacher as a subject-matter specialist and learning facilitator (Hubbard, 2019). Concurring with this, Sabiri (2020) indicated that ICT integration has made teaching and learning more exciting as lessons are no longer teacher-centred but have rather become student-centred. This meant that lecturers at TVET colleges should come up with more appealing methods and means to present their lessons, instead of the traditional method of talk-and-chalk. Furthermore, Yunus (2018) illustrated that technology transformation has productively altered the functions of teachers by allowing them to carry out more learner-centred activities. This indicated that ICT maintains a constructive outcome on education by affording students adequate time to track their own academic progress. Hafifah & Sulisty (2020) maintained that since citizens could easily access the Internet and social media at a very reasonable price, the result is that computers and Internet technology are now used on daily basis in the activities of students and teachers. ICT integration into teaching prepares students for real-life situations. Undeniably, based on these benefits, ICT should be integrated in teaching English at a TVET college.

### **2.3. LECTURERS' PERCEPTIONS OF ICT INTEGRATION IN TEACHING**

Technology integration is significantly influenced by teachers' perceptions (generally: computers, videos, hardware, software, and networks) in rural primary schools to enhance the teaching of English as an additional language (Maja 2023). Ventouris, Panourgia, & Hodge (2021) assert that

the integration of technology is centred on teachers' perceptions of technology's value as a tool in teaching English first additional language (EFAL). This implies that lecturers must have a positive attitude towards ICT integration and see the value of its integration in teaching English.

According to a study by Rahayu and Wirza (2020), 59.4% of EFAL teachers had a good opinion of the use of technology in their lessons and acknowledged its value for teaching. Teachers claimed that their utilization of various approaches and digital abilities improved through the use of technology, which led to better educational outcomes.

Chisango, Marongwe, Mtsi, & Matyedi (2020) found that teachers showed a good perspective toward technology adoption and were ready to integrate technology into teaching and learning though there were barriers that challenged the process.

### **2.3.1 THE ROLE OF ICT IN TEACHING ENGLISH**

For TVET colleges, the role of ICT is now perceived as massive and excessive. According to Onolan & Kurt (2020), teachers use technology for instructional preparation and instructional delivery, while students use it as an educational tool. For this reason, all teachers, including vocational technical high schools' teachers are anticipated to employ ICT in their didactic exercises (Khan & Markauskaite, 2017). In a study conducted by Ventouris, et al (2021) about "Teachers' perceptions of the impact of technology on children and young people's emotions and behaviour", the results showed that teachers recognised the importance of technology as a learning and teaching tool, as long as it is applied in a balanced way.

#### **ICT as an educational tool**

ICT is seen as a tool to send information to students. Currently, ICT serves as an educational tool regardless of the different functions it provides to make peoples' lives easier. Elaborating on this, Stockwell (2012) described ICT as beneficial equipment that complements teaching and learning. Muslem, Yusuf & Juliana (2018:5) indicated that by supplying accurate materials, ICT supports learners in expanding their writing, and verbal, auditory, and learning skills. Ojo & Adu (2018)



reiterated that from being a tool for technology of information alone, ICT has changed to be a pilot of curriculum modernisation and a transmission scheme for both students and teachers.

Learning through play is said to be the most preferred way of learning for students. The creation of games has changed from being a form of entertainment to becoming an educational tool (Hashim, Rafiq & Yunus, 2019). Online games were found to be helpful to students in education. There are many classes and kinds of digital games, ranging from a single player to big groups, and from academic to delusion accordingly (Kim, Song, Locke & Burton, 2018). Language games introduced the meaning of a competitive stage into a game by including grammatical concepts such as etiquette and grammatical goals that are agreed upon by the participators. Using games in learning English would benefit TVET college students by giving them an opportunity to participate fully in the game, thereby aiding their learning.

According to Rafiq, Hashim, Yunus, & Pazilah (2019) gamified learning, in learning English grammar, is preferred by nearly all students because it is interesting, encouraging, advances the learning experience, and gives a clearer comprehension of the grammar concepts. Learning through play is crucial to youngsters, as there is no pressure placed on them. To them, learning becomes spontaneous as they freely engage in playing. When students are curious about playing, their rate of confidence and their morale in learning language advances. Online language games had been found to improve students' results when learning grammar. Games are thought to be able to cause pupils to be better-mannered and indulged in class, in addition to increasing their academic achievement (Homer, Hew & Tan, 2018). Games were aimed at benefiting players with fun while playing. Based on that reason, utilising games in the classroom indicated that learners will be able to study while having fun. Games proved to be persuasive equipment as they can foster real-world concepts and experience (Hashim, Rafiq & Yunus, 2019; Santhanam, Liu & Milton Shen, 2016). With all the changes brought about by technology, it is the researcher's belief that TVET college students' learning could be enhanced by using games.

For students, ICT acts as a motivational source for learning, providing opportunities for more effective communication and developing learning skills, including skills in analytical learning (Poudel, 2018). It directs students' learning, thereby increasing their quality of learning. It is a

beneficial tool for researching, composing, and responding in English. Gilakjani (2017) maintained that integrating ICT into teaching assists students with accessing information that their teachers are unable to deliver. This implied that students could get more information from various sources on their own. According to Shettar, Lathiwale & Kulhalli (2021), incorporating ICT into teaching and learning makes learning more student-centric, as lecturers solely act as judges and mentors, giving students their undivided attention.

Besides students being motivated and engaged in learning, ICT integration gives them independence in learning (Sabiri, 2020). Students could schedule their own time and learn anytime, anywhere. Dash & Kuddus (2020) found that mobile assistant language learning (MALL) and technology enhanced language learning (TELL) give students freedom to learn autonomously at their own space, speed, and time. Computer and Internet use in educational activities is supposed to inspire students to study more autonomously and efficiently by utilising their inherent strengths and capabilities (Mahdum, Hadriana & Safriyanti, 2019). Similarly, Azmi (2017) states that with the integration of technology, positive language learning can be achieved.

Karpova (2021) found that computer-assisted online tools for automated writing evaluation (AWE) helps students to develop and boost their practical writing abilities. He further indicated that the AWE systems are considered to have visible advantages when compared to correction and assessment by a human being. Students could test their writing skills and get immediate feedback. This feedback assisted them to direct and manage their own progress in learning. According to Palermo & Wilson (2020), the immediate and helpful feedback provided to students allows them to focus on different aspects of language expertise. Ghufron & Rosyida (2018) maintained that corrective feedback educates students inductively by giving them constructive criticism and providing comments on their work. This enabled them to make self-correction and self-reformation (Karpova, 2021). Zhang (2020) asserts that the AWE programmes save teachers from the burdensome task of marking students' essays. Employing ICT-based assessment minimises a lot of logistics and paperwork. Concurring with the above, Shettar, et al. (2021) noted that ICT brings a radical change in the conduct of the assessment from manual to online.

## **ICT as an instructional tool**

The integration of ICT into the educational system has ushered in a new way of thinking about teaching and how it is delivered (Reséndiz-Balderas, 2020). Technology usage has transformed the methods from teacher-centred to learner-centred ones (Ahmadi, 2018). Technology has changed the role of lecturers, the nature of education, and its delivery modes. Lecturers are at the centre of these changes as they are the ones implementing them. Scherer, Siddiq & Tondeur (2019) stated that the most efficient elements in merging technology into teaching and learning are the teachers themselves. With all the changes brought about by advances in technology, TVET colleges could not be left behind. TVET college lecturers should conform to the transitional education to assure that students accomplish a maximised learning experience.

According to Onolan & Kurt (2020), teachers use technology for instructional preparation and instructional delivery. They further stated that using technology for instructional preparation involves preparing classroom activities such as creating teaching materials, finding material resources related to the lesson, preparing presentations, an online discussion board on language teaching, writing lesson plans, or collaborating with peers. TVET college lecturers should infuse ICT into their teaching by engaging teaching exercises in adopting an interdisciplinary method and integrated-skills approach. An integrated-skills approach is effective in a classroom language acquisition environment that is aimed at prioritising accurate communication and integrating English naturally. This approach promoted one goal of language acquisition which is to boost students' communicative competence.

Poudel (2018) stated that for teachers, ICT is an efficient means: a form of classroom delivery, a source of accurate and profitable text types. Integrating ICT into the classroom had been proven to be an excellent teaching approach since learners prefer a more comfortable environment of learning (Azmi, 2017). ICT integration in teaching accommodates the demands of all students synchronously, as the apparatus can be altered according to the speed, intelligence degree, and necessity of the learners (Sabiri, 2020). The inclusion of audio-visuals in teaching improved teaching and learning. This is because most students would recall better something that they heard and saw. Radianti, Majchrzak, Fromm & Wohlgenannt (2020) identified the benefits of using immersive virtual reality applications for higher education as: intrinsic motivation, living

experiences closer to reality, developing learning outcomes, expanded degrees of enthusiasm in learning, and enhanced abilities. Kuddus (2018) identified multimedia as a technological tool that uses class time effectively and enhances teachers' teaching proficiency.

In a study conducted by Krokos, Plaisant & Varshney (2019) concerning the immersive virtual applications for higher education, students are found to remember more information and apply what they have learnt more effectively after taking part in virtual exercises. It is crucial that lecturers must have high adaptability to change as changes open up new avenues for learning (Ling & Yunus, 2017).

Nowadays, the generation of students in the education system have grown up in a technological environment and have associated with technology since their birth. They cannot be divorced from the use of technology in their life. Hashim, Rafiq, & Yunus (2018) stated that for these students, technology is viewed as a way of life rather than an addition to it. Their improved ability and competences in the use of digital technologies should be positively applied for academic purposes. They need a classroom setting that might be different from a traditional classroom (Machmud, 2020). The classroom should be designed such that it caters for the integration of technology so as to attract these students. The classroom that is designed for ICT integration had been found to make lecturers improve the delivery of information. It is said that change is good and that students appreciate a change in their usual day-to-day routine. These students find it very appealing to interact with numerous technologies and that changes their level of motivation (Tinmaz & Ozturk, 2019). Concurring with the above, Sabiri (2020) maintained that using ICT in teaching causes learning to be more fascinating and encouraging for the learners. Moreover, because these millennium students are familiar with technology, according to Zheng et al. (2020), teachers must use new methodological paradigms which include ICT in order to promote students' positive attitude. From the students' viewpoint, the only way through which academics could remain relevant today is to go online (Gudmanian & Sydorenko, 2020).

The classroom is not the only important element in teaching today's generation, but the curriculum, teaching materials, and the methods are equally important. Onalan & Kurt (2020) maintained that technology can improve and strengthen the teaching and learning processes when used jointly with

strong teaching approaches. According to the Department of Higher Education and Training (DHET) 2017 English First Additional Language Subject Guideline for Level 2 to Level 4, ICT integration is mentioned, but how it should be integrated is not clearly explained. As a result, NC(V) English lecturers are uncertain on how to advance with ICT integration in their teaching. This calls for the curriculum designers to revisit the NC(V) English curriculum and update it such that it fits under the 21<sup>st</sup> century umbrella.

## **2.4 CHALLENGES AND BARRIERS TO ICT INTEGRATION**

Although numerous studies have demonstrated the benefits of integrating ICT to advance the standard of learning, this technology is not used in every lecturer's classes. There are still problems challenging its uses. Evidence has shown that for different reasons, lecturers usually do not fully employ the capability of ICT, such as the quality of equipment which can affect the teaching and learning process, and the lack of basic skills in operating the technologies. Ogurlu & Sevim (2017) asserted that a lot of teachers are reluctant to incorporate technology in their teaching activities. According to Wang, Jacob, Blakesley, Xiong, Ye, Xu & Lu (2020), there are two kinds of barriers to ICT integration: external, which includes shortage of time and assets, training, restricted technical assistance, and neglected technical difficulties; and internal, which demonstrates teachers' beliefs such as lack of confidence, conventional attitude, insufficient insight of the values of technology, commitment, and skills. Dinh (2015) asserts that extrinsic and intrinsic barriers are the two types of barriers to ICT integration. Insufficient ICT sources for lecturers, out-of-date software, inadequate time for preparing activities using ICT, and insufficient backing from management and the technical side are extrinsic barriers. Intrinsic barriers as found by Dinh (2015) are approaches and ideologies to technology, using ICT in teaching, and resistance to change.

### **2.4.1. LECTURERS' PROFESSIONAL DEVELOPMENT**

The literature review has indicated that there is a problem with lecturers' professional development in TVET colleges, when compared to teachers in the Basic Education sector. There are no workshops or training aimed at developing lecturers in their profession. Lecturers do not receive any training on ICT integration into teaching. According to Naiker & Makgato (2018) in "*The Integration of ICT in TVET College Classroom*", there was no training for lecturers at TVET

colleges, and no attempt made to establish a plan for training new lecturers. Agreeing with this, Mbanga & Mtembu (2020) maintained that not all lecturers at TVET colleges were trained to use digital learning. Colleges do not take any steps to train lecturers on the pedagogical use of digital learning. As a result, ICT is not fully embedded into education.

Lecturers at TVET colleges need to know how to utilise the ICT tools in order to effect change in English language teaching and learning. Ramavath (2020) indicated that teachers require opportunities for professional development in order to improve their capacity to use ICT for formative learning assessments, individualised instruction, and gaining access to online resources. ICT integration into teaching English will only be a success when both students and teachers effectively use ICT tools in the classroom (Khan & Kuddus 2021). ICT training and workshops for English TVET lecturers would help in this regard. Concurring with the above, Hafifah & Sulisty (2020) maintained that to improve teachers' ICT skills, more structured and regular ICT application training is needed. ICT can improve students' learning when teachers are computer-savvy and know how to incorporate it into the curriculum (Ramavath 2020).

TVET cadres (students, teachers, school managers, and even classrooms), ought to be equipped in technology usage so that they can be in line with the technology demands for education in the 21<sup>st</sup> century (Chai, Tan, Deng, Feng, Hwee & Koh, 2017; Göksün & Kurt, 2017). This is an indication that there is a need for TVET college lecturers to be trained on ICT integration into teaching English. Since lecturers are key in improving and upgrading students' learning and achievement, they must be skilled in ICT usage.

For effective instructional practices, teachers must be skilled and competent in creating classes and implementation techniques that integrate technology (Singh, 2019). The integration of ICT into educational activities for TVET colleges requires lecturers to be equipped with the essential information and abilities. To effectively integrate ICT and promote learning in particular content areas, teachers need to be able to employ curriculum materials that are technologically advanced (technological pedagogical content knowledge) (Voogt & McKenney, 2017). However, with a lack of professional development at TVET colleges, lecturers are not equipped with such skills. According to Voogt & McKenney (2017), teachers have difficulty in incorporating technology

into their didactic operations. It is therefore crucial that TVET college lecturers are trained in ICT integration to overcome these hardships. To resolve ICT-related challenges and encourage improved ICT integration into education, especially in the teaching of English language, it would be beneficial for the institution and government to provide additional operational training in ICT and more policy backing (Hafifah & Sulisty 2020). Although most teachers have a positive perspective towards the advancement of technology for language learning, they lack the ICT pedagogy that they can employ in their classrooms (Febriani & Hafifah, 2019). This indicated a dire need for professional development in ICT usage for TVET college lecturers. In a study conducted by Olofsson, Lindberg & Fransson (2017) concerning the impact and the result of teachers' professional development in ICT and Technological Pedagogical and Content Knowledge (TPACK), it was revealed that teachers received help in expanding their technology knowledge and ICT proficiency in order to raise educational quality. It was the belief of the researcher that professional development would improve lecturers' pedagogical knowledge while sharpening their technological skills.

Most lecturers who were trained during their time at their college of education lack ICT skills as it was not part of their curriculum then. Now lecturers are produced by universities after the closure of colleges of education. All universities are hoped to have stable ICT infrastructure. As a result, all lecturers produced by universities must have ICT skills, which will empower them to effectively incorporate ICT into their teaching. These lecturers should also keep abreast of technological advancements, or risk falling behind.

Nkangala TVET College rolled out a plan to issue laptop computers to all lecturers as a way of assisting them in their lesson planning and administrative duties. However, it was noted by the researcher that some lecturers are not utilising their laptops, as they lack skills to utilise them. They still believe in their traditional way of planning and keeping information and records. The researcher strongly believed that professional development in ICT for lecturers at TVET colleges will ease many problems while equipping lecturers.

#### 2.4.2. Lack of time

Lack of time is one factor that influences ICT usage in language teaching. Integrating ICT into teaching is found to be an extra task for TVET college lecturers as they will be behind schedule or are already overloaded with work. Lasut & Bawengan (2020) reiterates that teachers should be the initiators of ICT's implementation at school as ICT has the potential to advance, enhance, and reinforce students for lifelong learning in this information community important era. However, integrating ICT into teaching is seen as an extra task for teachers as the focus is mainly on daily tasks; delivering teaching, managing lesson plans; conducting assessments, and giving feedback to learners. Some teachers perceive technology integration as a tiring exercise (Kilinc, Tarman & Aydin, 2018). Goh & Sigala (2020) indicated that as a result of this challenge, many academics are using technology solely for demonstrating, displaying, saving, and offering learning content.

#### **2.4.3 Teachers' demographic characteristics**

Several studies showed a number of demographic variables that had been linked to lecturers using technology. Teaching experience (Mbambo, 2017), gender (Islahi, 2019), and previous experience with technology (Ifinedo, Rikala & Hämäläinen, 2020) as factors that indicated ineffectiveness in technology usage.

In the context of technology use, teaching experience is quite valuable. Lecturers with a lot of teaching experience would experience problems when integrating ICT into their teaching as opposed to lecturers with less teaching experience. Teaching experience also correlated with age, as lecturers with a lot of teaching experience are older. These older lecturers are used to the old teaching methods of chalk and chalkboard for many years, unwilling to change, while young lecturers with less years of experience in teaching, might be more anxious to incorporate technology in their instruction. This further implied that older lecturers have more difficulties integrating ICT into their teaching, compared to younger lecturers. Previous experience with technology had an impact on technology integration in teaching. If lecturers are familiar with technology, integrating it into teaching will not be that much of a problem.

#### **2.4.4 Beliefs and attitude**

Teachers' beliefs are one of the most important aspects impacting ICT integration into education. Regardless of the challenges of any technology, teachers must have the necessary abilities, skills, beliefs, and attitudes to implement it in the classroom (Spiteri & Rundgren, 2020). For ICT to be



effectively integrated into teaching English at a TVET college, lecturers need to adopt positive beliefs about it. When lecturers retained a favourable mentality towards ICT and its incorporation in bettering students' achievement in learning English, ICT success will be more assured. This idea is supported by a study carried out by Nelson & Hawk (2020) that disclosed that beliefs about the usefulness of technology were discovered to be a significant predictor for technology use. Nonetheless, if lecturers hold a low degree of beliefs towards ICT implementation in teaching, the ICT integration into teaching and learning of English will be unsuccessful.

Dogan, Dogan & Celik (2020) identified instructors' perceptions of their own competence for a particular technology as an important factor in determining how teachers use technology. They operationalised teachers' technology skills to contain capability beliefs indicating how proficient and competent teachers are in using particular technologies. This implied that the more positive beliefs lecturers have about a particular skill in using a particular application or software, the more likely they are to use it. More frequent use of technology in the classroom is connected with teachers' perceptions of their own competence or self-efficacy (Li, Garza, Keicher & Popov, 2019).

The attitude that lecturers possess towards ICT usage has a significant impact on how quickly technology is adopted and incorporated. This idea is supported by a study carried out by Mwila (2018) that revealed that the frequency of ICT use and instructors' attitudes towards ICT integration are positively correlated. When teachers adopt a positive attitude, their desire and efforts to use technology in their lessons increases (Onalan & Kurt, 2020). ICT integration into teaching depends highly on teachers' positive attitude towards its integration into language teaching (Khan & Kuddus, 2021). This indicated that lecturers with a positive attitude towards ICT usage would integrate it into language teaching with ease as compared to lecturers with a negative attitude.

#### **2.4.5 Availability of and access to technology**

Access to and availability of technological resources including Web 2.0, hardware, instructional software, and the Internet applications are all critical to effective technology integration (Onolan & Kurt, 2020). Availability and accessibility to technology negatively influence the lecturers' eagerness to merge improved or existing technology into their teaching. For example, if lecturers

were using new technologies for the first time, they needed to have access to the computer room in order to practice and familiarise themselves with the new technologies before they can integrate it into their teaching. If they do not have access to the technologies, they will not be willing to embed it into their teaching. The lack of access to computers or inconvenient location of ICT equipment can act as a barrier in the integration of ICT in classrooms (Goh & Sigala 2020).

According to Mbambo (2017), availability and accessibility to computer laboratories for English lecturers at TVET colleges is a major problem, as these computer laboratories are allocated for computer subjects, and not for English. Lecturers offering English have to request for free time from Computer lecturers in order to use their laboratories. This is time-consuming as lecturers had to move from their classes to the computer laboratories and spend instructional time connecting and setting up the equipment. Sometimes lecturers would make arrangements, then find that on that day there is no Internet access in that computer laboratory, or there is an insufficiency of computers due to a larger number of students. As a result, some lecturers do not integrate ICT into teaching English. This implied that TVET college lecturers need to be provided with enough technological accessibility and backing so that they can feel free and secure in integrating ICT into their classroom instruction. In a study conducted by Lasut & Bawengan (2020) concerning the effectiveness of ICT's integration in enhancing student motivation in learning English, it is revealed that though some schools have already provided the ICT facilities, there were teachers who did not include ICT in their teaching.

#### **2.4.6 Lack of confidence in using technology**

Some lecturers are not comfortable to integrate ICT into their teaching. This challenge might be due to the reason that they do not commonly employ it in their daily teaching. Mahdum, Hadriana, & Safriyati (2019) stated that the teacher who is an ICT expert is one who uses computers effectively in all aspects of their work, including teaching preparation, performing their teaching approach, evaluating and analysing students' learning outcomes, and conducting remedial or enrichment activities. Lecturers who are familiar with technology enjoy infusing technologies into their teaching as they feel more self-competent and confident with the technologies that they are using, and also feel more open to test and delve into new technologies. The more often teachers use ICT, the more knowledgeable and self-assured they will become (Hafifah & Sulisty, 2020).

The TVET college lecturers are afraid that they might have technology glitches during the lesson, or make errors in front of students. As a result, certain lecturers will avoid using it completely. This requires colleges to conduct occasional training for lecturers on ICT usage. Constant engagement with technology boosts lecturers' confidence when teaching. Spireti & Rundgren (2020) argued that one's level of comfort with technology is proportional to how much of it one uses.

#### **2.4.7 Limited competences and knowledge of ICT**

One of the most valuable components of communication skills in language teaching is ICT competency. It is through ICT integration that information is shared amongst students and TVET college lecturers. However, most lecturers at TVET colleges do not have enough understanding and competences to incorporate ICT into their teaching. As a result, they preferred to not use it for educational purposes. This idea is supported by Ojo & Adu (2018) who revealed that due to hindered knowledge and skills, ICT was not utilised in the classroom by teachers, regardless of having enough resources. Despite having acceptable ICT skills, teachers do not incorporate technology into their instruction due to a lack of supporting infrastructure or methodological expertise (Muslem et al., 2018).

Limited competences and limited knowledge of ICT are the main aspects that influence the teachers' use of ICT (Hassan & Mirza 2021). Lecturers' competences and knowledge of ICT needed to be improved. Therefore, lecturers at TVET colleges are required to empower themselves with ICT abilities and keep up with technological applications to increase their professional work's quality. Ahmadi (2018) stated that regardless of whether teachers have studied technology or are computer specialists, they should find ways to utilise technology as a helpful teaching aid for their students. Therefore, if English teachers are knowledgeable about ICT and new educational innovations, they will be able to seamlessly incorporate the 21<sup>st</sup> century abilities like teamwork, cooperation, creativity, critical thinking, and communication, which are essential qualities for educating English as a foreign language (EFL) today (Mohammad & Sandaran, 2020).

#### **2.4.8 Lack of technical support**

Many studies pointed out that technical support is one of the challenges that is associated with ICT integration when teaching English. Technology support is a fundamental element to technology application for teachers (Nelson, Voithofer & Cheng, 2019). Technical backup from staff or administrators had a substantial influence on technology integration (Razak, Jalil, Krauss & Ahmad, 2018).

For ICT to be effectively integrated into teaching English at TVET colleges, lecturers need technical support from the technical staff. Lecturers might experience problems while integrating ICT in their teaching, such as a computer screen that ‘freezes’. Lecturers do not have the technical skills to fix the technology that they are using. In such instances, lack of technical assistance may mean that the computer will not be utilised for a longer period of time. Once a computer gives problems, fixing it will take a long time, since there is no technician who is readily available to assist and support lecturers. This implies that technical staff in each TVET college campus is essential in such cases, as lecturers lack technical skills to do it themselves. Machmud (2020) asserted that most teachers lack motivation in gaining the knowledge of technical and pedagogical ability.

Technical problems experienced by lecturers in integrating ICT into their teaching include the following: limited storage on hard drives, connecting to the Internet, fragmented hard drives, printers not responding, computer not connected to the printer, viruses resulting in corrupt files, slow processing from Random Access Memory (RAM), outdated software, and many more.

### **2.5 THEORY UNDERPINNING THE STUDY**

In this study, the Diffusion of Innovation Theory (Rogers, 2003) was applied. The usage of technology is described by Roger's Diffusion of Innovation as an action where an innovation is disseminated through certain routes “over time among the participants in a social system” (2003: 5). Its aim is to simplify why, how, and the degree at which new ideas and practices of technology escalate. This study made use of the Diffusion of Innovation Theory because through technology

usage, TVET college students are prepared to be creative and create fresh concepts, accept them, and allow others to use those ideas.

Sasidhar (2020) defined innovation as a concept, behaviour, or thing that is seen as novel or an improvement over the actual one by the individual or members of a social system. There are three types of Rogers's Diffusion of Innovation, namely, discontinuous innovation, dynamic continuous innovation, and continuous innovation. A *discontinuous* innovation involves the establishment of a new product in the strictest sense (Anderson & Ortinau 1988) and the establishment of new behaviour patterns. A dynamic continuous innovation has more disrupting effects than a continuous innovation. It may involve the creation of a new product or the alteration of an existing product. A continuous innovation has the least disrupting influence on established patterns. Alteration of a product is involved, rather than the establishment of a new product. The intended theory for this study was continuous innovation, as it is more relevant to ICT usage in teaching English at a TVET college. Lecturers need to embrace it in order to overcome barriers associated with ICT usage in teaching English at a TVET college. Students have to accept it and know how to apply it in their learning activities. Once adopted, students can improve their communication skills. Goh and Sigala (2020) declared that persuasive and important people to the academics (e.g., colleagues, students, and school officials) must promote the right attitudes about technology integration and embrace it.

According to Rogers (2003:77), adoption refers to the decision to completely implement an invention as the most effective action to take, whereas rejection refers to the choice not to use it. The diffusion of innovation is comprised of four major components, namely: social system, innovation, time, and communication channels.

According to Rogers (2003), before absorbing any ICT innovation into their frame of reference, the adopter, in this case, the English TVET college lecturers, goes through five phases. The decision process relates to the decisions and actions taken by an individual where a suggested idea is assessed and thought-out for adoption (Rogers 2003). The following are the five steps involved in the innovation decision-making process:

- Knowledge relates to the lecturers learning about the presence of the innovation and being aware of what it is, how and why it functions.
- Persuasion pertains to the situation where a favourable or unfavourable perspective is formed towards the innovation.
- TVET college lecturers decide whether to adopt or reject the innovation after trying it in their own situation.
- Implementation occurs when the new innovation is put into practice by the TVET college lecturers.
- Confirmation is taken when TVET college lecturers seek support from peers for the decision taken, and the decision can be overturned if the individuals receive conflicting messages about the innovation.

According to Rogers (2003), the adoption rate is the pace at which participants in a social system adopt an innovation. For example, the number of persons who embraced the innovation during a particular period of time can be used to calculate the adoption rate. Supportive subjective norms, or reference groups that are crucial to the person and are in favour of the behaviour, can speed up the adoption of revolutionary technologies (Ajzen, 1991). This implied that lecturers, students, and the college management must develop and possess a clear perspective towards the integration of ICT into teaching English at a TVET college. According to Rogers (2003), the adoption rate for new innovations and technologies depends on five elements:

Relative advantage - is described as the extent to which a particular innovation is seen to be superior to the notion it replaces. For instance, if lecturers perceive the usefulness of technology in their teaching, they will employ it. This is when a lecturer perceives an innovation as having greater advantages than the current methods. For example, if lecturers perceive a USB flash drive to be better than a disc, they will then prefer using the new technological tool.

Compatibility - means the extent to which a novel concept is thought to be coherent with potential consumers' existing beliefs, experiences, and needs. An innovation that is in harmony with an individual's demands decreases confusion and increases the rate of acceptance of that innovation. According to Goh & Sigala (2020) compatibility means lecturers will perceive the innovation to

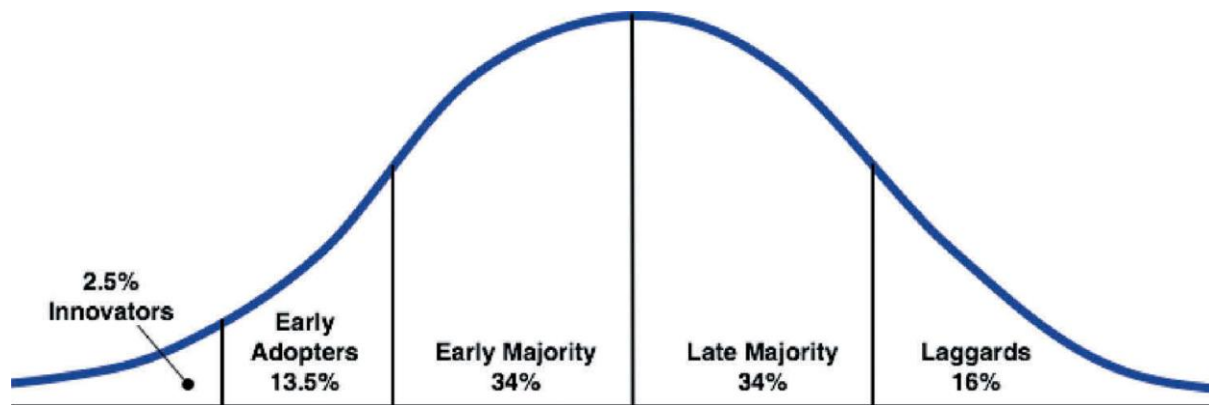
be more relevant to their needs, values, and culture. As an example, lecturers who were born after the advent of ICT will experience less problems integrating ICT into their lessons when compared to lecturers who were born before the advent of ICT.

Complexity - is described as the extent to which an innovation is seen as comparatively difficult to comprehend and apply. The adoption rate is inversely correlated with complexity. Therefore, an innovation that is too difficult to use and understand is a barrier to its adoption. For example, if lecturers know and understand how slides work, they will readily adopt and use it as they find it to be more advantageous.

Trialability - is the degree to which a concept can be tried on a small scale. The rate of adoption is positively connected with trialability. The more times an invention is tried, the more quickly it gets adopted. For example, if lecturers can be given a chance to practice, explore, and experiment an advanced technology, they will be more secure and fearless to adopt the innovation. Rogers asserted that the trialability characteristics of an innovation are valued more highly by early adopters than by later adopters.

Observability - describes the extent to which the effects of an innovation are visible to others. The rate at which an innovation is adopted is related to its observability. For example, if the results are observable, like observing an increase in grammar results, the students' level of motivation and attendance, after experiencing the latest technology, other lecturers are more inclined to infuse it into their classes.

Rogers (2003) argued that for an innovation to be adopted faster than other innovations, it must have more comparative benefit, adaptability, simplicity, trialability, and detectability. According to Rogers (2003), the categorisation of members of a social structure based on their innovativeness is known as adopter categories, and innovativeness is the extent to which a person or other group of adopters adopts new concepts faster, compared to other members of a system. For Rogers, recognising the purpose and primary behaviour in the innovation-decision process was an advantage of innovation. As stated by Rogers (2003), there are five types of innovation adopters (Figure 2.1). Individuals in each adopter category are comparable in terms of their innovativeness.



**Figure 2.1. Various types of adopters.**

Source: Rogers (2003)

Innovators are the first category of adopters. These lecturers are willing to experience new ideas. They constitute the first 2.5% of the population that embrace an innovation and are willing to understand how it works. Rogers (2003) stated that the gatekeepers who bring innovation in from outside the system are known as innovators. They are thought to be chance-takers who are prepared to cope with confusion about the innovation and are enthusiastic to acknowledge failure of the innovation.

Early adopters are the second category of adopters. They make up 13.5% of the people who follow the innovators in adopting an innovation. Rogers (2003) argues that since early adopters are often in leadership positions, other members come to them for advice about the innovation. In this case, senior lecturers and HODs can be regarded as the early adopters. This group of lecturers decreases uncertainty about the innovation as they offer information and advice to other lecturers about the new technology and innovation. Their attitude towards an innovation is crucial as they are seen as role models. By accepting a novel idea, early adopters "put their stamp of approval" on it (Rogers 2003:283).

The early majority is the third group of adopters. Following the innovators and early adopters, this group comprises the remaining 34% of people who accept an innovation. These lecturers realise



the importance of integrating ICT into their teaching at an early stage and immediately grab it, known also as the “early majority”. These lecturers ensure that they keep themselves updated with the new technology by gaining new technological skills through workshops and short courses. Rogers (2003) maintains that the early majority interacts well with other people in the community, but they do not possess the early adopters' level of leadership. Their social chains are still vital in the innovation-diffusion process. This group of lecturers contemplate when adopting an innovation and it takes more time for them to completely adopt a new idea than it takes innovators and early adopters. Most lecturers fall into the early majority and the late majority categories.

The late majority is the fourth category of adopters. They make up the next 34% of the population after the early majority. This group of lecturers have a lot of uncertainty about new ideas and innovation. As a result, they delay until the majority of their colleagues have adopted the innovation. They ignore new innovations and are forced by the education system to equip themselves. Through interpersonal networks and pressure from peers, they are persuaded to adopt an innovation, which reduces their doubts about the innovation. Then, the late majority believes that adoption is safe.

The laggards are the last group to adopt a new concept, making up the final 16% of the population. As stated by Rogers (2003), laggards hold a traditional viewpoint and are less accepting of innovations and change-makers than the late majority. This group of lecturers do not have a leadership role. Several individuals of the social system from the same classification make up their interpersonal networks. These lecturers have insufficient resources and lack knowledge about technology. They want to be certain that an innovation functions before they can adopt it. Based on these characteristics, their decision-making process for innovation is lengthy.

Rogers (2003) further divided the five types of adopters into two classifications: early adopters and late adopters. Innovators, early adopters, and early majority form part of the early adopters. The late adopters consist of the late majority and the laggards. These two types were differentiated according to their personality variables, socioeconomic status, and communication behaviours.

According to Rogers (2003), when few lecturers accept a new innovation, the adoption curve starts to rise swiftly to a peak until fifty per cent of the employees in a TVET college have approved the innovation, it is called an S-shaped curve. This stage of rapid growth is vital because "critical mass" is reached with a sufficient number of people in the system who have embraced the invention for the innovation's adoption to become self-lasting. (Rogers, 2003:343). Whenever this crucial group phase is not attained, the innovation has not been accepted, and change has not come to pass.

## **2.6 CHAPTER SUMMARY**

This chapter dealt with a literature review relating to the key concepts of the study. These included the benefits of ICT in teaching English, ICT as a learning tool for students, and ICT as an instructional tool for lecturers. The challenges associated with the use and integration of ICT were discussed. Lecturers' professional development was discussed. Finally, the Diffusion of Innovation Theory (Rogers, 2003) which underpinned the study, was also discussed. The next chapter presents the methodology and the research design used in conducting the study.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

The previous chapter dealt with literature that relates to the integration of ICT in teaching English at a TVET college. The benefits of using ICT were explored. Lecturers' perceptions of ICT integrations were determined. Challenges associated with ICT integration were discussed. It also discussed Roger's Diffusion of Innovation as a theory that underpins the study. This chapter presents the methodology of the study, including the research design, setting, population and sampling, instrumentation and data collection techniques, and ethical considerations.

#### 3.2 RESEARCH APPROACH AND DESIGN

According to Keenan (2020:1), research methods are techniques used to conduct scientific investigations using systematic processes. Qualitative research, mixed method research, and quantitative research are the three main approaches used in research.

**Figure 3.1 Research Approaches and Research Designs**

Quantitative	Qualitative	Mixed methods
1. Experimental designs 2. Non-experimental designs such as survey	1. Narrative research 2. Phenomenology 3. Grounded theory 4. Ethnographies 5. Case study	1. Convergent research design 2. Explanatory sequential and 3. Exploratory sequential research design

Source: Creswell (2014:12)

The research approach chosen for this study is qualitative research in order to explore and determine ways in which ICT can be used in teaching English at a TVET college.

### **3.2.1 Qualitative Research approach**

The qualitative research method makes extensive use of case studies, narrative research design, ethnography, grounded theory, and phenomenology (Creswell 2014:13). Phenomenology research design was suitable for this study. According to Creswell (2014:14), in phenomenology research designs, the researcher explains individuals' lived experiences about a phenomenon as explained by participants.

As stated by Rahman (2016), a qualitative research strategy necessitates an in-depth understanding of the human experience in particular holistic contexts. A qualitative research approach was used in this research in order to explore and determine ways in which ICT can be used in teaching English at a TVET college. Qualitative techniques helped in providing verbal descriptions that depicted the richness and difficulty of events that take place in natural environments from the viewpoints of participants (Mantshiyane, Setlalentoa & Phindane 2020). Edmonds and Kennedy (2019) maintained that the qualitative method seeks to uncover and comprehend phenomena within a specific context without intending to infer any association between variables.

The qualitative research approach seeks to answer the “why” and “what” questions. Martínez, Slack & Martínez-Schuldt (2018) maintained that qualitative researchers interrogate the social phenomenon from the perspectives of the participants. Lemon & Hayes (2020:604) indicate that qualitative research captures people's actual lived experiences, resulting in a thorough and solid understanding of phenomena. It is through this qualitative method that challenges associated with ICT usage were identified and ways to overcome them were realised. Rahman (2016) indicated that instead of focusing on numbers and statistics, qualitative research examines the social construction of problems, events, and practices, as well as the deeper meanings they carry. According to Rahman (2016), qualitative research is non-statistical and it encompasses a wide range of realities.

### **3.3 RESEARCH PARADIGM**

Kivunja & Kuyini (2017:26) described the term paradigm as the worldview. He further states that this worldview is the viewpoint, a style of thinking, school of thought, or group of shared views

that directs how study findings should be interpreted. The word paradigm determines how the world is viewed. A paradigm is defined as a way of looking at the world that is based on philosophical presumptions regarding the nature of social truth and reality (Ebohon, Ganiyu, & Ajayi 2021:64). Our reasoning, ideologies, and speculations that we make about the world are affected by the opinions we have about what is truth and knowledge. Post-positivism, constructivism, advocacy / participatory, and pragmatism are the four worldviews as indicated by Creswell (2014:6). This study was conducted through the constructivism paradigm with an emphasis on understanding the participants' interpretations of their lived experiences on ICT usage in teaching English at a TVET college.

### **3.3.1 Constructivism / interpretivism**

Constructivism, also known as interpretivism, is a qualitative research method that aims to comprehend participants' perspectives and perceptions of social realities (McMillan & Schumacher 2014:32). The constructivist paradigm was suitable for this study since it emphasises learning as an active and constructive process (Radianti, Majchrzak, Fromm & Wohlgenannt 2020). Although the constructivist viewpoint on the nature of learning has a long history in educational theory, in its modern incarnation, it serves as a foundation for how people interpret their daily experiences (Taber 2012). It is through this paradigm that the researcher engaged the participants to share their practices and points of view about ICT usage in teaching English at a TVET college. As they shared their practices and experiences about ICT usage, they also learned from each other. Using the constructivism approach, the researcher perceived reality as subjective and seen through the eyes of the subjects in the study. This philosophy believed that people are interested in understanding "the world in which they work and live." (Creswell 2014:8). Applying this paradigm aided the researcher to have direct interaction with participants and gain an understanding of how ICT can be used in teaching English at a TVET college. Booyse & Du Plessis (2014) maintained that social interaction is essential for lifetime development and promotes cognitive growth. The goal of the research was to depend on the opinions of the participants of the situation under investigation. The constructivism paradigm helped the researcher to explore participants' feelings and thoughts about ways in which ICT can be used in teaching English at a TVET college, and not just their behaviour.

This paradigm aided the researcher to clarify the process of interpersonal interaction in order to “make sense of or interpret the meanings they have about the world or situation” (Creswell 2014:8). As participants shared their lived experiences, they promoted good interactions among members and made sense of meanings they possessed about ICT usage at a TVET college. Pham (2018) maintained that with using their diverse perspectives on phenomena, constructivist researchers not only define the things, individuals, or narratives, but also fully comprehend them in their social context. The constructivist paradigm enabled the researcher to comprehend “different people’s voices, meanings and events” Rahman (2016:104). The constructivist paradigm allowed participants to speak freely and openly exchange their thoughts, and benefit from or compare one another's points of view. As stated by Ashkrof, Correira, Cats & van Arem (2020:2), this made it possible for the researcher to consider the different points of view, the generation of fresh concepts as well as prospective solutions, the evolution of concepts during the conversation, and the evaluation of the discussed subject in order to record the key themes. It was the intention of the researcher to apply the constructivism paradigm in order to explore barriers faced by lecturers when using ICT in teaching English at a TVET college and attempt to overcome them.

### **3.4 RESEARCH SETTING**

The setting for the research is the area where data is gathered. In this study, data was gathered at the three out of the five campuses of the Nkangala TVET College in the Nkangala Region of Mpumalanga Province, South Africa. These campuses were: Witbank campus, which is situated at Emalahleni Central Business District; Mpondozankomo campus, situated in Ackerville township at Emalahleni; and Middelburg campus, situated in central Middelburg. The reason for selecting these campuses was that they had a high number of students enrolled for the NC(V) courses. Moreover, there were many lecturers offering English to NC(V) students from these campuses compared to the other two campuses. Gathering data from these campuses aided the study.

### **3.5. POPULATION AND SAMPLING PROCEDURES**

### **3.5.1 Population**

According to Sileyew (2020) population describes the entire set of people (subjects or events) who share the characteristics in which the researcher is interested. As stated by Sekaran & Bougie (2016), population is defined as the whole group of individuals, events, or interesting objects that the researcher plans to study.

The population for the study was lecturers offering English to NC(V) students at three different campuses. Participants from these campuses were selected because the most students in the college were enrolled in NC(V) courses at these campuses. As stated by Chai, Gao, Chen, Duangthip, Lo & Chu, (2021: 5), eligibility criteria define the qualities that members of the population must have in order to take part in the study. In this study, participants were lecturers offering English to NC(V) students as they provided relevant and more pertinent data required regarding utilising ICT in teaching English at a TVET college.

### **3.5.2 Sample**

According to Sharma (2017), sampling is the technique through which a researcher methodically chooses a limited selection of representative items or individuals from a predetermined population to be used as observational participants or experimentation in accordance with the study's objectives. Researchers employ either probability or nonprobability sampling approaches (Creswell 2014). Random sampling is another name for probability sampling. It is any sample design where the probability of selecting each individual is the same or easy to predict, allowing it to be mathematically changed (Sharma (2017:749). Non-probability sampling is completely based on judgement. The two nonprobability sampling techniques used to choose a sample of subjects from a population are convenience sampling and purposive sampling.

A convenience sample is the one that is derived from a source that is conveniently accessible to the researcher (Andrade 2021:86). It is possible that the convenience sample doesn't accurately reflect the general population. Research using convenience samples could only be applied to the population that was easily accessible when the sample was taken. Purposive sampling is also

known as selective, judgemental, or subjective sampling. Purposive sampling is when the researcher deliberately chooses the individuals and locations from which to learn or understand the phenomenon. Andrade (2021:87) defined purposive sampling as having characteristics that are outlined for a specific purpose relevant to the study.

In this study, purposive sampling was employed since it was suitable. It is the intentional choice of participants because of the characteristics the participants have. In this instance, the lecturers sampled in the study were experts in the subject. They were proficient and well-informed about using ICT in teaching English at a TVET college. They were capable of communicating their experiences and opinions on ICT usage in teaching English at a TVET college. According to Johnson, Adkins and Chauvin (2020:141) purposive sampling is the deliberate selection of study subjects in order to maximise the data source for addressing the study's questions. According to Etikan, Musa & Alkassim (2016:2), by using purposeful sampling, the researcher is able to pinpoint the information needed and then look for individuals who can and are available to supply relevant information based on their experience and knowledge. Employing purposive sampling for the current study aided the researcher to get knowledgeable participants who were able to provide useful data on the use of ICT in teaching English at a TVET college. As stated by Bradshaw, Atkinson, & Doody (2017:3), accessible participants are available through purposive sampling, but it also has the benefit of making it easier to choose people with the characteristics or backgrounds needed for the study.

### **3.5.3 The sample size**

The sample constituted 15 NC(V) English lecturers from the three different campuses of Nkangala TVET College. Interviews were conducted with five lecturers from each campus. Sampling lecturers from these campuses provided suitable, necessary, and more relevant data required regarding ICT usage in teaching English at a TVET college. These lecturers had been teaching English at a TVET college for more than five years. As managers in their classrooms, these lecturers interact with students on a daily basis thus having first-hand information and experience. Their experience aided in generating views and ideas on how ICT can be integrated in teaching English at a TVET college. They were selected because they had certain intelligence and



proficiency in ICT usage in teaching English at a TVET college. Individual interviews were also conducted with one HOD and one education specialist per campus. This was due to their management practice, skills, knowledge, experience, and understanding they possessed about ICT usage in teaching English at a TVET college.

### **3.6 INSTRUMENTATION AND DATA COLLECTION TECHNIQUES**

Interviews are one of the most common methods used in qualitative research to gather information. In an interview, questions are asked in order to gather information or data (Yates, Clarke, & Thurstan, 2019). Structured, semi-structured, and unstructured interview methods can all be used to gather this data. Researchers gather information using a planned set of questions while using the structured interview method. They employ the same set of questions for every interview, allowing them to compare transcripts while preventing the interviewee from directing the conversation (St. John, Freya A. V, Keane, Jones, Milner-Gulland, & Cadotte, 2014). The interviewee is unable to talk in-depth about a subject he is interested in because of this approach. In contrast, in an unstructured interview, the researcher bases his or her questions on the interviewee's response. They don't employ a series of predefined questions in this strategy to gather the data (Drury, Homewood, & Randall, 2011). This technique enables the interviewee to go into great detail about the topic that he thinks is most significant (Mannan & Afni 2020). In an unstructured interview, many crucial topics frequently go unaddressed. Since both structured and unstructured methods have drawbacks, researchers frequently employ a hybrid strategy to gather data. The term "semi-structured interview strategy" is used to describe this midway method. The researcher uses a predetermined set of questions in the semi-structured approach to gather data. Yet, if an intriguing or novel line of inquiry emerges throughout the interview process, it enables the researcher to ask additional questions (Young, Rose, Mumby, Benitez-Capistros, Derrick, Finch, Mukherjee, 2018). Under Semi-structured interviews, the researcher (i.e. interviewer) and participants (i.e. interviewee) take part in formalized dialogues, giving the interviewer the opportunity to follow interview guide and also digress if the need be (Adedoyin 2020). This versatility in questioning aided the researcher in having in-depth discussions on ICT integration in teaching English at a TVET college. That is why the researcher opted for the semi-structured interview method for collecting data for this study.

Kivunja (2016:168) defines research design as the method by which the study is approached, designed, and conducted in order to respond to the research questions. The designs are used as an overall plan to gather, analyse, and interpret data. In this study, semi-structured interviews and focus group interviews were used. Semi-structured interviews provided the researcher with detailed information about the participants' opinions or assumptions of the topic. As indicated by Groenland & Dana (2020:30), through semi-structured interviews, qualitative researchers collect and interpret a thorough explanation of the individuals' emotions, experiences, and viewpoints. Rahman (2016:103) maintains that qualitative research grants the researcher an opportunity to learn about the participants' inner experiences, behaviours, and emotions, as well as how meaning is shaped through and within culture. In the focus group interviews a large volume of information was gathered within a short period of time. Focus group interviews also assisted the researcher to get a deep understanding into how ICT can be used in teaching English at a TVET college.

Data was gathered using the semi-structured interviews with 15 NC(V) English lecturers because they interacted with students on a day-to-day basis. Individual interviews were conducted with one HOD and one education specialist per campus, as they were experts in the subject. An interview schedule was followed. For the participants to be relaxed and be able to express themselves openly, interviews were conducted in a form of a conversation. Guest, Namey, Eley & McKenna (2017:694) maintained that interviews are the most useful methods of gathering information for raising more ideas. Sileyew (2020:6) states that the benefit of using interviews as a technique is that it allows respondents to bring up issues that the interviewer may not have anticipated. All the responses were recorded using a recording tablet. Summative notes of important aspects were taken to compliment the interviews. If there was a need, additional questions were asked throughout the process. Participants had the option to elaborate or offer more pertinent data if they so desired. It was important to record the responses during an interview for replay. This was done in consultation with the participants in order to protect their right to privacy.

Focus group interviews were used with the same NC(V) English lecturers who did the semi-structured interviews. The conversation was facilitated by using open-ended questions. The researcher ensured that a conducive environment was created where all members were engaged in

the debate and the discussion was supervised. As indicated by Adler, Salantera & Zumstein-Shaha (2019:1), participants in focus group interviews are free to narrate their own tales and voice their viewpoints without having to follow a strict set of questions. Participants shared their practices and points of view about ICT usage in teaching English at a TVET college. In this way, information-rich data about ICT usage in teaching English at a TVET college was collected. Flynn, Albrecht & Scott (2018:1) maintained that focus groups produce an enormous amount of qualitative data and maximise participant-researcher face-to-face contact. Every response was audio recorded and notes were recorded as a backup system. Woolley, Edwards & Glazebrook (2018:2) maintained that focus groups are considered to be less time-consuming. Moreover, it might be easier to discuss some delicate issues with a group than with individual interviews. It also assisted in exploring thoughts and feelings of the participants and not just their behaviour.

### **3.7 DATA ANALYSIS**

Qualitative data analysis is the classification and interpretation of linguistic (or visual) material to make claims about implicit and explicit dimensions and structures of meaning-making in the material and what is depicted in it (Mezmir 2020).

Data analysis is regarded as an essential and energetic procedure for recognizing and knitting together of the evolving subjects, fundamental concepts or components of connotation and material gotten from academic writings (Adedoyin 2020). Qualitative content appears in several means such as transcripts from open ended questions, structured, semi-structured interviews, observation, and focused groups that are exploratory in nature (Adedoyin 2020). There are different types of data analysis methods used for qualitative research, namely, content analysis, thematic analysis, textual analysis and discourse analysis. As stated by Bhandari (2020), content analysis is used to describe and categorize common words, phrases, and ideas in qualitative data, thematic analysis is used to identify and interpret patterns and themes in qualitative data, textual analysis is used to examine the content, structure, and design of texts, while discourse analysis is used to study communication and how language is used to achieve effects in specific contexts.

According to Johnson et al. (2020:143), the gathering of data and its processing take place concurrently in many qualitative investigations. A thematic analysis approach was used to analyse

the data. This was because thematic analysis employs analytic practices that are reasonably common in other qualitative analysis approaches. For example, when conducting a thematic analysis, sorting and sifting through the data set to find related phrases and/or relationships is a common practice across many qualitative analytic methods (Miles & Huberman, 1994).

The researcher adhered to the six steps listed by Braun and Clarke (2019:87) for thematic analysis:

- becoming acquainted with your data,
- making initial codes,
- searching for themes,
- reviewing themes,
- naming and defining themes, and
- producing the report.

The semi-structured interviews were reproduced verbatim and then categorised and thematically arranged. Based on the study's objectives, the interview questions served as the basis for these categories and themes. The interviews were recorded using a recording tablet.

For better capturing of data, the researcher repeatedly listened to the tapes and studied the interview recordings multiple times. This assisted the researcher to get a better perception of the data and ensuring accuracy. As indicated by Bradshaw et al. (2017:5), regardless of the analytical framework utilised, transcriptions of the interviews and repeated listening to the participants' voices enable the search for themes and subthemes to bring the transcriptions to life. Nowell, Norris & Moules (2017:5) maintain that effective repeated reading of data, seeking for meanings and patterns, causes one to be familiar with it. The participants' responses were paraphrased in order to reduce the volume of the responses. For the focus group interviews, only the most important material was taken, because a lot of irrelevant data can be included in focus group transcripts.

The interviews were supplemented by summative notes of major aspects that were taken during the proceedings. The audio data was used along with these notes. Turale (2020:290) maintain that it is always preferable to collect and analyse data concurrently so that mistakes and omissions can

be corrected as soon as possible. Concurring with that, Arifin (2018:31) maintains that in qualitative research, collecting and analysing data are simultaneous activities. Data was analysed using the data collected from each participant. This data served as the main source of creating and managing concepts, themes, and categories. Using focus groups, the gathered information was classified into three categories: ICT barriers, the positive influences of ICT integration, and lecturers' challenges. Interview questions were created using the various themes that were employed in each classification. Data was analysed using different questions in each theme from the interviews schedule.

### **3.8 TRUSTWORTHINESS OF THE STUDY**

Trustworthiness is the quality, correctness, and accuracy of the research findings. It describes the level of trust, or confidence that readers have in the outcomes. Bradshaw et al. (2017:5) argue that issues of trustworthiness, such as the values of credibility, dependability, confirmability, and transferability, are significant to qualitative researchers because they help to illustrate the quality of the data. To ensure trustworthiness, the researcher developed the guidelines and procedures required to be deemed deserving of readers' consideration.

Credibility defines the trustworthiness and believability of the data. To achieve credibility, participants were selected using purposive sampling. They were selected because they had certain intelligence and proficiency in ICT usage in teaching English at a TVET college. Korstjens & Moser (2018:121) maintain that persistent observation, continued engagement, triangulation, and member check are strategies to ensure credibility. Credibility was also attained through triangulation, which is using more than one data collection instrument to validate data. Hence, semi-structured interviews and focus group interviews were used. Credibility was achieved by engaging participants in the conversation and giving them room to tell a story in their own way (DeCarlo, 2018). Follow-up questions were asked, if necessary, and the participants were urged to provide examples to back up their claims.

Transferability is an external validity that confirms the research can be generalised to a different context even though it is performed by another researcher (Sibisi, 2019:17). Transferability of the

study was achieved by defining the background of the research to help the reader in being able to generalise the conclusions and administer them accordingly.

Dependability affirms that results are specific to a given period and location, and that interpretations are consistent across data (Lemon & Hayes, 2020:605). Dependability was achieved by recording the views of participants verbatim so that they were able to confirm that their responses were accurately reflected. The records of the research path were kept throughout the study. This process established that all findings were based on the responses from participants and not on the researcher's own biases and preconceptions.

Conformability outlines how strong the actual information gathered supports the research findings when scrutinised by other researchers. Conformability was reached by writing down the views of participants verbatim and in italics to separate them from the analysis and to represent the voice of the participants.

### **3.9 DATA STORAGE**

The study's data was saved on a computer in the researcher's office for five years so that it can be applied to academic or future research endeavours. Electronic records were kept on a password-protected computer at the researcher's workplace, while the digital storage device and hard copies were kept in a safe that is locked. All tangible copies of data will be destroyed and burned if they are not used in the future, while all electronic records will be permanently deleted by using the recommended software program as listed in the University of South Africa (UNISA) Guidelines and Examples for CEDU REC Applications (2018:12).

### **3.10 ETHICAL CONSIDERATION**

Parveen & Showkat (2017:3) define research ethics as the practice of conducting research that is appropriate and legally correct. The research conformed to all acceptable norms and values. Consent to take part in the study was requested and acquired from all participants, namely, UNISA ethics committee, and the Nkangala TVET College management and lecturers. To obtain

permission to carry out the research, the researcher provided these parties with a short, explicit, concise, and accurate research profile.

### **3.10.1 Permission to conduct the study**

Permission to collect data was requested from and approved by the University of South Africa ethics committee, Department of Higher Education and Nkangala TVET College, (see Appendix B and C). A written permission letter was issued to the researcher from these organisations. All 15 lecturers were informed about the study and their consent to participate was requested (see Appendix D). The researcher assured them that there will be no disruption to the functions of the campuses when collecting data. Throughout the data collection procedure, the values of goodness and respect for human dignity were maintained. Participants' rights to confidentiality was maintained.

### **3.10.2 Principle of beneficence**

As all possible situations that may arise during an investigation cannot be foreseen and ruled out beforehand, the principle of beneficence was observed as emphasised by Varkey (2021:18) to ensure the well-being of participants, who had a right to protection from discomfort and harm. Participants were assured by the researcher that they would not be in danger of harm to their bodies, mental distress and discomfort, social disadvantages, harm to financial status, exploitation, or any form of coercion during the research study.

Deceptive practices were avoided, and consent forms were obtained from all participants. Participants were given an opportunity to ask questions or seek clarity if there was anything that they do not understand.

#### **3.10.2.1 Principle of respect for human dignity**

As stated by Kivunja & Kuyini (2017:24), all people have a basic human right to make decisions that must be acknowledged by researchers, as well as a dignity that must be upheld. Ethical principles like respect, privacy, and anonymity were adhered to by the researcher. Information

about participants was treated with the strictest discretion, their identities were not revealed, and their right to anonymity was respected. Real names and identity of participants were not mentioned anywhere in the study. Data was processed anonymously, and pseudonyms were used if needed. Identifiers like vernacular terms, names, and geographical cues were removed. It was emphasised that collected data will be used exclusively for the research and not for commercial purposes or any other use. The purpose of the research was extensively reviewed and thereafter, a consent letter was given to the participants to read, and sign voluntarily without any victimisation, whether or not to take part in the study. In this way the participants' right to self-determination was honoured.

The right to full disclosure was observed as the researcher presented an information letter to all participants, describing the nature of the research and the freedom of the study's subjects to participate or not. The principle of voluntary participation was discussed in the first stage of the research so that participants may decide to partake voluntarily or decline participation without fear of victimisation. The researcher let participants understand why they were engaged in the study and what they had to do based on the research. This allowed participants to take part in the research without being lied to or bullied. As stated by Bradshaw et al. (2017:4), participants in studies must be treated as autonomous agents with the freedom to accept or decline participation in any study and to withdraw consent whenever they want.

### **3.11. CHAPTER SUMMARY**

The methodology of the study was presented in this chapter. The research approach and design were discussed. The research setting was also presented. The population and sampling of the study was discussed. Instrumentation and data collection techniques for the study were discussed. Data analysis was covered. Trustworthiness of the study was presented. Data storage was discussed. The chapter concluded by discussing the ethical consideration of the study. The next chapter provides the outcomes and conclusions of the study and also presents data analysis and the interpretation of the research.



## **CHAPTER 4**

### **DATA PRESENTATION AND DISCUSSION OF RESULTS**

#### **4.1 INTRODUCTION**

The study's methodology and research design were described in the previous chapter. This chapter presents data analysis, presentation, and findings obtained from the data collection. The data was collected from the 15 NC(V) English lecturers in three out of the five campuses of the Nkangala TVET College in Mpumalanga. These campuses are presented as Campus A, Campus B, and Campus C. This was done in order to cater for anonymity and for easily differentiation of data. All HODs were recorded as HOD 1 for Campus A, Hod 2 for Campus B and HOD 3 for campus C. Education Specialists were recorded as ES1 for Campus A, ES 2 for Campus B and ES 3 for Campus C. All lecturers were recorded as Lec 1, Lec 2 and Lec 3 for Campus A. Lec 5, Lec 6 and Lec 7 for Campus B. Lec 8, Lec 9 and Lec 10 for Campus C. Qualitative data collected from all the participants is presented and discussed.

This study was aimed at acquiring a thorough knowledge of ICT usage in teaching English at a TVET college. The themes that originated from the analysis were conceptualised while some participants' responses were quoted verbatim. Qualitative data analysis, according to Lester, Cho & Lochmiller (2020), is a method for giving meaning to data that is both rigorous and rational. Mezmir (2020) described qualitative data analysis as the categorisation and analysis of language-based (or visual) content to draw conclusions about subjective and objective dimensions as well as its underlying meaning-making mechanisms.

#### **4.2 DESCRIPTION OF THE DATA ANALYSIS PROCESS**

Face-to-face structured interviews were used to collect data for this qualitative study, in accordance with Covid-19 regulations, where applicable. After being recorded, the interviews were transcribed. The research questions served as a foundation and a guide for the themes and sub-themes. Data analysis, according to Turale (2020), is the act of giving meaning to a large amount of data in a correct and rigorous manner. It was further supported by Selvan &

Balasundaram (2021), who defined data analysis as a process of researching, eliminating redundant information at the view level, and transforming to required patterns for sub-decisions in order to establish a consolidated judgement.

According to Lester et al. (2020), data analysis techniques allow researchers to organise and interpret large volumes of data. The researcher used a content (thematic) data analysis technique, which is defined as the process of reducing data, organising data, creating concepts or categories, and ultimately describing the phenomena under study and responding to the research questions (Kyngäs, 2020).

### **4.3 THEMATIC ANALYSIS**

The qualitative data was explored for addressing the three questions of the study. One, what are the positive influences of integrating ICT into teaching English for NC(V) students at a TVET college? Two, how do lecturers perceive ICT integration into teaching English for NC(V) students at a TVET college? Three, what are the barriers and challenges that lecturers face in using ICT when teaching English for NC(V) students at a TVET college?

Theme analysis was applied to give a detailed account of the interviewees' perspectives, perceptions, and experiences on ICT usage in teaching English at a TVET College. Thematic analysis is a suitable approach to utilise when trying to understand the experiences, concepts, or behaviours present in a data collection (Kiger & Varpio, 2020). Thematic analysis, according to Roberts, Dowell & Nie (2019), is a pattern-recognition method employed in content analysis, where the categories for analysis are themes (or codes) that develop from the data. The four themes that developed from the data are indicated in table 4.1 below.

Table 4.1 Themes

Theme	Sub-theme
1. ICT integration in teaching English	a. Positive influences of ICT integration at TVET Colleges
2. Lecturers' perceptions in integrating ICT for teaching	a. ICT integration challenges b. ICT integration successes
3. Barriers lecturers face in using ICT	a. Lack of ICT training b. Lack of ICT resources c. Lack of lecturer confidence d. Poor connectivity
4. Challenges associated with implementing ICT for teaching	a. Distribution of resources b. Lack of data and smartphones

Table 4.1 Source: Researcher (2022)

#### **4.3.1 Theme 1: ICT integration into teaching English**

The ICT integration into teaching English theme has one sub-theme. This theme was aimed at addressing question one which sought to find out the positive influences of integrating ICT into teaching English for NC(V) students at a TVET college. This theme has one sub-theme; positive influences of ICT integration at TVET Colleges. This one sub-theme was aimed at addressing question one and the results thereof are detailed below.

##### **4.3.1.1 Positive influences of ICT integration**

The results from this study showed that the participants had the same perspective on what the positive influences are of ICT integration at the TVET College. The positive influences of ICT integration were that it is able to motivate students to take part in learning and helps in introducing new teaching methods that the students find interesting. The study found that students are more engaged in the classroom when ICT is integrated as opposed to when it is not.

Lecturers also find integrating ICT into their teaching very exciting as it offers them different methods of teaching, particularly in the Fourth Industrial Revolution. The integration of ICT was

found to have a positive influence on both learning and teaching at the TVET college. The quotes from the participants that explained the positive influences of ICT are shown below:

*“ICT is a good thing that can help our students and can motivate our students to make sure that they enjoy our lessons because nowadays students - our youth they prefer technology more than standing in front of them and doing the talking theoretically”*  
[Participant 15, Lec1 campus A]

*“I think it can motivate students to take part in learning because technology is leading nowadays. Learning would be enjoyable if we can use ICT”* [Participant 15, Lec1 campus A]

*“it can improve student learning and it can help us lecturers with better teaching methods. Uhm the paper work will be less Mem and then I think it will be easy to manage time for the students you can assist them at anytime, anywhere, it will depend on their availability. It can also help me with new teaching method and it will also help the students because we will also be using new learning methods.”* [Participant 14, Lec5 campus B]

*“I think the use of ICT for across the curriculum I mean it is for a good course because it advances the scope of teaching and learning for both the educator and the learner remember we are in the Fourth Industrial Revolution where ICT is taking the capacity of everything most of the things becomes easier for the students if it is computer orientated.”*  
[Participant 12, Lec7 campus B]

*“Uhm I think our students they will find it easier to learn the curriculum if we integrate it with computers because most of them they more acclimatised to use the computer they chat every day, they are always on WhatsApp they are always on Facebook so it will help a lot and I think it will also improve their English language if they are exposed to that not only reading from the textbook itself but also showing them something that is live that they can relate to because the Internet has a lot of information so I think it will really help*

*a lot in that instance and our students can also connect while they are at home I mean you can be able to send them work while they are at home and ask them to do something or to research projects even during school holidays so I think that would help a lot.*  
[Participant 11, ESI campus A]

*“I think it will simplify uhm the work for both lecturers and students because in most cases like for an example whenever you want to teach students about spelling it is easy for them to pronounce the word but when it comes to spelling they are using the e-tools they can even notify that the spelling is wrong and they search for the correct spelling I think it simplifies the work for the lecturers.”* [Participant 10, Lec2 campus A]

*“Uhm! It would help in making everything accessible easier right and most of the students that we have are from maybe the oldest I have so far in my class are from 1997 and 1998 so the fact that they are so young they are born in the age of technology so it would help in class and it would make learning fun”* [Participant 9, Lec6 campus B]

*“I think more than anything it makes learning easier and more palatable to digest it brings fun to the education scenario. It feels like entertainment to them but it’s actually learning and because there is always something to look forward to it’s not you being in front and opening the textbook. So, they are always wondering what are we going to watch today.”* [Participant 9, Lect6 campus B]

*“During the learning process is very much effective because our learners our children they like ICT when you speak of computer, laptops and online learning is what they love so it’s good they like it they enjoy actually being taught online. In terms of integration it works well with them because they are able attend the lessons they are able to make friends online they learn what I can say they socialise and learn at the same time”*  
[Participant 7, Hod3 campus C]

*“Uhm the impact from the student’s side is very good they like it once they engage on the lesson online, they are more productive than face to face provided you take them to a lab*

*wherein all of them are seated in a computer that is connected but if you are going to give them to do at home they are not motivated and, in this case, they say we don't have data.”*  
*[Participant 7, Hod3 campus C]*

*“Students like ICT approach and during the process of teaching remember it exposes them to things which are even outside the learning content. Students don't only want to learn about verbs in class bring a text which speaks to Corona virus for example but when you read that or when you watch that movie you know you are addressing the issue of verbs and nouns. They learn verbs but also, they learn something about Corona virus. So on their side is what they want provided we can be supported in order for us to effectively deliver.”* *[Participant 7, Hod3 campus C]*

*“ICT will boost the confidence of our students.”* *[Participant 4, Lect8 campus C]*

*“It makes lessons more interesting by using technology in the classroom.”* *[Focus Group Discussion, fgd1 campus C]*

#### **4.3.2 Theme 2: lecturers' perception of integrating ICT for teaching**

The perceptions of integrating ICT for teaching and learning at a TVET College theme has two sub-themes. This theme was aimed at addressing question two which sought to find out how lecturers perceive ICT integration into teaching English for NC(V) students at a TVET college? This theme has two sub-themes; one, ICT Integration challenges and ICT Integration successes. These two sub-themes were aimed at answering question two and the results thereof are detailed below:

#### 4.3.2.1 ICT Integration challenges

The results from this study showed that there are several challenges when it comes to ICT integration at the Nkangala TVET college. These challenges are affecting both teaching and learning through ICT. One of the notable ICT integration challenges experienced at Nkangala TVET college was the lack of approval by management when it comes to using ICT for teaching and learning at the college. Participants noted that the lack of approval by management for using ICT which was said to affect the college in operating in the digital world that requires the use of ICT. The quotes from the participants that explained the ICT integration challenges experienced at Nkangala TVET College are shown below:

*“Uhm! After attending some uhm! College functions it is always said that the college supports. I think the college they do want to support the management they feel that they are supporting but I think more effort is required because the support they are talking about they don't come to class maybe the senior management to see the difficulties that we are facing because if they can be hands on they would see that this has a real impact on our lessons. In theory they say they are supporting but practically so their involvement is very minimal.” [Participant 4, Lec8 campus C]*

*“I would say the college is struggling but let me just say the problem might be with the leaders not having much interest because practically uhm we don't have equipment's but theoretically when they are saying it at any time we might have those to show that they do want to proceed but they just fail to uhm get equipment's for lecturers.” [Participant 10, Lec2 campus A]*

*“They (the management) are married to the method of doing things and not what works. It is hard for them to move forward hence I think the only time they will remind us that we have the laptops is when we have to do the ICASS. So, they cannot see their use beyond punching in marks”. [Participant 9, Lect6 campus B]*

*“When teaching our English, I would say the problem goes back to shortage of equipment’s because if we have enough equipment’s and lecturers are trained I don’t think there would be a problem.” [Participant 10, Lect2 campus A]*

Another challenge that affects the integration of ICT at the college was that some learners are unable to use a computer, which hampers prospects of integrating ICT into learning and teaching. Furthermore, some of the lecturers lack knowledge of using the ICT tools for teaching and learning. The quotes from the participants that explained the lack of knowledge of using ICT tools for both students and lecturers at Nkangala TVET College are shown below:

*“first time NC(V) students and business studies N4 students most of them have little knowledge to use computer. They lack the skills for typing, they don’t understand the components like when you talk of the keyboard, you talk of the monitor, you talk of the mouse, is all new jargon for them and also you have to train them to follow instructions and that in time helps them to improve.” [Participant 8, ES3 campus C]*

*“Another problem the lack of technology knowledge or computer knowledge per say they will tell you sir we don’t know how to so those are the challenges that we have.” [Participant 13, Lec3 campus C]*

*“Majority of our student lack basic computer literacy, so they struggle to respond accordingly in terms of ICT implementation in the classroom.” [Participant 3, Lec9 campus C]*

*“The students maybe they don’t know how to operate the equipment or technology so I will first have to teach them how to use that technology before I focus on the content on my lesson that will be the challenge.” [Focus Group Discussion, fgd2 Campus B]*

*“Uhm we have physical factors I will start with physical factors, for instance, if there is load shedding like we can’t continue with classes because of load shedding or maybe there is no network. The second one might be that maybe you find that the students they*



*don't know how to operate the equipment or technology so I will first have to teach them how to use that technology before I focus on the content on my lesson that will be the challenge.” [Participant 13, Lec3 campus C]*

*“You will be surprised, there was a lecturer who was using ICT in an English class and then had to run around to ask someone to come and help him on how to project you know bring a picture in place which is not what he displayed that is time consuming on its own because not enough training was given to lecturers” [Participant 7, Hod3 campus C]*

Load shedding was also mentioned as a challenge to successful integration because ICT usage for teaching and learning is reliant on electricity. The quotes from the participants that explained the ICT load shedding challenges experienced at Nkangala TVET College are shown below:

*“if there is load shedding you can't continue with classes because of load shedding or maybe there is no network.” [Focus Group Discussion, fgd2 Campus B]*

*“Uhm we have physical factors I will start with physical factors for instance if there is load shedding like we can't continue with classes because of load shedding or maybe there is no network.” [Participant 13, Lec3 campus C]*

*“Another thing is resistance to change. We are used to manual learning for technology it frustrates us we don't want to change we want to use the old way of teaching” [Participant 14, Lec5 campus B]*

#### **4.3.2.2 ICT Integration successes**

This sub-theme was divided into two parts, one being academic performance and class attendance. These two parts were aimed at understanding the success of integrating ICT into teaching English at Nkangala TVET college.

### **4.3.3 Theme 3: Barriers lecturers face in using ICT**

The barriers lecturers face in using ICT theme has two sub-themes. This theme was aimed at addressing question three which sought to find out what are the barriers that lecturers face in using ICT when teaching English for NC(V) students at a TVET college? This theme has four sub-themes; one, lack of ICT training; two, lack of ICT resources; three, lack of lecturer confidence and four, Poor connectivity. These four sub-themes were aimed at answering question three and the results thereof are detailed below.

#### **4.3.3.1 Lack of training and lack of resources**

The findings from this study revealed that most of the English lecturers at Nkangala TVET college lack formal training in using ICT for teaching and learning. Some of the participants expressed not using ICT in their teaching because they attested to not being trained. On the other hand, lecturers who are integrating ICT into their teaching were struggling with the implementation because of lack of training. The study found that lecturers who were using it without being trained had part of their lessons affected as they struggle with troubleshooting when they face ICT challenges.

The lack of training was found to be a barrier for some lecturers using ICT in their lessons. Some English lecturers at the college attested to only attending one training session that covered how to use Google Classroom but they never got an opportunity to practice what they were taught. The quotes from the participants that explained that they were not trained to use ICT in the classroom are shown below:

*“I don’t use it at all because I haven’t been trained to use it.” [Participant 15, Lec1 campus A]*

*“If I can get enough time to be trained I can do it because I have learned to use technology on my own, I am better than five years back now.” [Participant 14, Lec5 campus B]*

*“Training lecturers on how to use ICT in a proper way. And another thing most of the teachers when it comes to ICT our competency there is lack of teacher’s competency because you want to do something you know. This day we are using technology, but they are trying, today they teach you this, tomorrow you forgot what they were teaching you because you don’t have enough time to practice.” [Participant 14, Lec5 campus B]*

*“Uhm not really, I don’t recall anyone calling me for training but then like I said I am always willing to learn new things so I try to train myself.” [Participant 13, Lec3 campus C]*

*“Uhm first one we have no adequate trainings” [Participant 13, Lec3 campus C]*

*“For us who are teaching English we were not trained” [Participant 12, Lec7 campus B]*

*“Definitely no training at all for lecturers, no training at all uhm or I didn’t attend any training am not sure if there was a time I was busy with the exams they were trying to teach lecturers how to teach online how to teach students online but am not sure if it was training to teach them I am not really sure I can’t say it for sure but I don’t remember so there is no training.” [Participant 11, ES1 campus A]*

*“Uhm the challenges like I said no training on our part the lecturers we are not given training so that is a very serious challenge not knowing how to operate the computers the overhead projectors so it is very difficult but if you use a phone it is easier because you are used to it. So that would be one other challenge and also some of our students who are not used to having computers like if I teach Level 2 some of them are not exposed to laptops, computers, tablets they don’t have smartphones so that would be another problem. So uhm I think lecturers and students should be exposed to that more especially our students they need exposure on how to operate a computer how to operate if you have a laptop, how to operate how to take data from it to send it all those things.” [Participant 11, ES1 campus A]*

*“The only thing am looking for is just to get trained in most things so that I can be 100% sure that I won’t keep on consulting other lecturers time and again before I go to class”*  
[Participant 10, Lec2 campus A]

*“The factor that I have seen influencing negatively in our teaching is the lack of training on the side of lecturers. Remember I will speak of language lecturers, language lecturers are teachers for language they are not computer literate. In order for me to use ICT effectively I must have gone through an intensive programme wherein I have been trained to use ICT or the computer so lack of effective training is a mammoth influence here.”*  
[Participant 7, Hod3 campus C]

*“The issue of training basically we cannot start implementing this approach if everyone in the college is not trained and it has to be a robust, a very deep training so that it is going to be effective. All of us we are willing to adopt the new approach because your students they like this technology so we want to support them we want to match our age with theirs [laughing] but how do I merge myself as old as I am with a teenager who is advance if am not trained so my main concern here is I wish the college can come up with trainings deep one’s effective ones on ICT.”* [Participant 7, Hod3 campus C]

*“lack of proper training on how to integrate ICT into teaching and learning English for NC(V) students which then dents my confidence as a lecturer.”* [Participant 3, Lec9 campus C]

*“I don’t recall anyone calling me for training but as I said I am always willing to learn new things so I try to train myself.”* [Focus Group discussion; fgd2 campus B]

This sub-theme was divided into two parts, one part focusing on the lack of ICT resources for the college and second part on the lack of resources for the students. These two parts were aimed at understanding the lack of resources for successfully implementing ICT in teaching and learning.

#### **4.3.3.1.1 Lack of resources for the college and the students**

The findings from this study have shown that Nkangala TVET College lacks ICT resources to successfully integrate ICT into teaching English at the college. The study participants expressed that the college lacks computers, projectors, and reliable Wi-Fi. The study found that the lack of these resources were barriers for lecturers to use ICT for some of the lessons. Some of the study participants expressed using their own money to buy some of the necessary resources because of the positive impact ICT has on teaching and learning.

The study also found that there is poor support from the college management in providing resources to ensure that ICT is implemented successfully at the college. The study also found that the college has computer rooms, but they lack sufficient computer infrastructure to help all of the lecturers. The quotes from the participants that explained the lack of resources at the college are shown below:

*“That I don’t have I have never been trained to use it and I don’t have the resources.”*  
[Participant 15, Lec1 campus A]

*“we have only computers and they are not enough.”* [Participant 14, Lec5 campus B]

*“we don’t have computers for English and even and even those computers for LO some are very slow they are not enough for the number of students we are having in this campus.”* [Participant 14, Lec5 campus B]

*“computers we don’t have enough computers”* [Participant 14, Lec5 campus B]

*“Uhm due to limited resources so we don’t always use technology in our lessons especially for English I don’t want to lie but we do use it for some videos uhm maybe we conduct research we sent them for research yes it does happen but not always.”*  
[Participant 13, Lec3 campus C]

*“we do have a computer room like in the campus but at times you go there but it is only two computers for the whole staff and will not accommodate everyone. We are like close to 100 but we only have two computers for the whole staff.”* [Participant 12, Lec7 campus B]

*“Uhm the availability of resources and the willingness of people to learn how to use it.”*  
[Participant 9, Lec6 campus B]

*“we have limited resources we don’t always use technology in our lessons especially English I don’t use it but we do use it for some videos maybe we conduct research we send them to research if it does happen but not always.”* [Focus Group Discussion; fgd 2 campus B]

*“Now we don’t have enough resources to make sure that teaching and learning takes place.”* [Focus Group Discussion; fgd 3 campus A]

*“We don’t have equipment which is necessary to facilitate lessons using ICT or things such as projectors uhm! And other resources which are necessary in the classroom Wi-Fi access we don’t have all those things and the support is very poor from the structures of the college.”* [Focus Group Discussion, fgd1 campus C]

*“And at the same time when you check on like YouTube lessons which are conducted in English. They are there and are very good lessons. You can’t give it to your learners because you don’t have resources because sometimes I can listen to presentation and I feel like it is good and I want to share with my students but the barrier is no resources.”*  
[Focus Group Discussion, fgd1 campus C]

The results from this study have shown that the students are highly interested in learning through the use of ICT. However, this study found that their interest is hampered by their lack of resources. The study found that some students don't have smartphones that would help them participate when lecturers use ICT in their lessons. However, the students who have smart phones were reported to have challenges with data and the college does not have Wi-Fi in some of the classrooms. The lecturers that took part in this study expressed that the lack of smartphones and laptops by some of the students has been a barrier for integrating ICT into teaching English as some students would be left behind. This was said to force some of the lecturers to resort to the traditional methods of teaching which negatively impacts students' attendance and performance. The quotes from the participants that explained the lack of resources for the students are shown below:

*“The challenges are these students will tell you that they cannot afford data we do not have funds like they need incentives like making sure that they got data, they got the gadgets and all that because we know they are from different family backgrounds.”*  
[Participant 12, Lec7 campus B]

*“As lecturers we do but our students most of them they don't have during lockdowns when I was giving them work to do at home they would send me messages complaining that not all of them have data, not all of them have smartphones, so its limiting.”* [Participant 11, ES1 campus A]

*“Some are so highly motivated they do have interest but because of not having enough equipment they end up losing interest.”* [Participant 10, Lec2 campus A]

*“It takes more time because as entry students they haven't yet received their laptops or iPad that they can practice after lessons and their typing skills will improve during due cause only you as a lecturer have created time to close the gap that you see then they practice and improve.”* [Participant 8, ES3 campus C]

*“Another obstacle that I can mention here not like if we are going to use our gadgets not all students have user friendly gadgets so some of them are not using cell phones that are not supported by Android so it’s a challenge you expect them to use cell phones, you expect them to use laptops and they are not supported by Android” [Participant 7 Hod3 campus C]*

*“So whenever you refer students to something they can’t, the problem is they don’t have the data. Integration is quite difficult sometimes you are not able to do it at the time you need, it has to be something you postpone or decide for particular venues but it is not something that is there all the time.” [Participant 4, Lec8 campus C]*

*“we want to use it as lecturers but you think about the students who are on the disadvantage side because they don’t have the necessary resources.” [Focus Group Discussion, fgd3 campus A]*

*“On the learners’ side, these learners don’t have these devices because one would like to use PowerPoint presentation they don’t have the laptops or any other gadgets that they may use to view these PowerPoint presentations.” [Focus Group Discussion, fgd3 campus A]*

*“I just want to add on what was said, uhm! Sometimes we will decide that we will have a group discussion on WhatsApp and then it is hard to guarantee the attendance of students in those groups compared to classes. You know that they are twenty so when they are attending on WhatsApp you find maybe they are only ten which is half of the class don’t have data others will tell you we don’t have network here many challenges like that.” [Focus Group Discussion, fgd1 campus C]*



#### 4.3.3.2 Lack of lecturer confidence

The results from this study showed that the majority of the English lecturers at Nkangala TVET College are not confident in relation to integrating ICT into their lessons. The study found that the lack of confidence stems from lack of resources to successfully integrate ICT in the classroom. Moreover, most of the participants alluded to not having been trained on the use of ICT that dents their confidence. The study participants alluded to always rely on an IT specialist at the college to help them set up tools for lessons that involves ICT. Other participants mentioned that they would not even take the chance of standing in front of the students to use ICT as they are not trained, which results in them lacking confidence. The quotes from the participants that explained the lack of lecturer's confidence are shown below:

*“Uhm coming to that I am not sure about my confidence.” [Participant 15, Lec1 campus A]*

*“Yoh Mem for me technology is a nightmare but I am trying [laughing] yes, I am trying Mem but just that you know eish it is difficult it is a bit difficult” [Participant 14, Lec5 campus B]*

*“No Mem I am not confident I will always need someone to assist me I can do some things but not everything on my own” [Participant 14, Lec5 campus B]*

*“Number one lack of teacher confidence, my confidence is not that but I still try to use it but I will not be sure of what I will be doing I will always need someone to assist me.” [Participant 14, Lec5 campus B]*

*“it makes you feel like eish! Your self-confidence or your self-esteem is becoming and then you can even end up dodging the classes [laughing] if you stand in front of students and you know what you are doing it makes life easier for you.” [Participant 14, Lec5 campus B]*

*“To answer correctly there [laughing] honestly, I am not confident at all because I have never used it and I am afraid that if I use it I might make blunders so I need training on that.” [Participant 11, ESI campus A]*

*“I will cite that what makes me not to be confident it is lack of proper training and maybe lack of resources. It just makes me not to be confident to implement but I think with training and having all the resources and support my confidence will improve.” [Participant 4, Lect8 campus C]*

*“Uhm! My confidence is very very low due to inadequate training and exposure to implementing ICT in the classroom.” [Participant 3, Lect9 campus C]*

*“I would say mine is very low because of lack of training and exposure to an environment where maybe there is a mentor on how to integrate ICT in an English classroom.” [Focus Group Discussion, fgd1 campus C]*

*“Ya also my confidence is low because I am not an ICT specialist so we definitely need to be trained thoroughly so. So that as a lecturer when you are standing in front of them kids you should know what you are doing and it boost your confidence.” [Focus Group Discussion, fgd1 campus C]*

#### **4.3.3.3 Poor connectivity**

The results from this study showed that the majority of the English lecturers at Nkangala TVET College mentioned poor connectivity as a barrier to integrating ICT. The study found that lecturers that have tried to integrate ICT into their English lessons experienced poor connectivity coverage in the classrooms. The study found that this resulted in some of the lecturers to use their own mobile data in order to ensure the lesson continues as planned. The study found that poor connectivity at the college is an impediment for successfully incorporating ICT in teaching English. The quotes from the participants that explained poor connectivity as a barrier for integrating ICT in teaching English are shown below:

*“Uhm okay, network connection is a problem and limited technical support if something is broken.” [Participant 14, Lec5 campus B]*

*“Like I have already said poor connectivity at time you find that you cannot be able to connect because of the internet coverage where you are.” [Participant 12, Lec7 campus B]*

*“I think the connectivity hence the location like with this college is in the locations sometimes there is poor connectivity.” [Participant 12, Lec7 campus B]*

*“if there is no Wi-Fi there is no connection which means I should use my own data so that means if I don't have money that is part of the effect on me I cannot afford or I don't have the money to buy data or my data is finished so as a lecturer myself if I want to use the internet it is a challenge for me. So, it will greatly impact on my teaching and learning.” [Participant 11, ES1 campus A]*

*“your lessons won't run smoothly you will always pick up some problems more especially if time and again there is no internet.” [Participant 10, Lec2 campus A]*

*“Sometimes there will be a problem of no network sometimes you find that there is no electricity while you have planned a lesson so it becomes a problem and you have to now switch back to the old system of using a chalkboard.” [Participant 10, Lec2 campus A]*

*“Uhm it is connection from my side.” [Participant 9, Lec6 campus B]*

*“At times we have problems with network connectivity which in most instances is outside the lecturer's powers to can attend to that. For that day you will be stuck or the period will be stuck until connectivity is sorted or data is available for the students.” [Participant 8, ES3 campus C]*

*“Network, yes, we have wherein our network is congested and everyone is on the network and we don't have connectivity you have prepared maybe to let the students play or see something maybe it can be uhm [thinking] a novel or a film let's talk about a film and*

*there is load shedding there is no network that on its own will have a negative impact on the lesson.” [Participant 7, Hod3 campus C]*

*“The challenges that I indicated earlier lack of connectivity for now or not all classes are connected so if connectivity was there the lecturer would share with the learners the slides and the learners would be on their cell phones referring to what’s on the lecturer laptop but it can’t happen.” [Participant 7, Hod3 campusC]*

*“Obstacles connectivity is a challenge we are not forever connected sometimes we are without network and so on and it becomes time consuming to sort yourself out in terms of connectivity.” [Participant 7, Hod3 campusC]*

*“Uhm! The internet is the most stumbling block in our college because the students don’t have access to internet. Uhm! I might have as a lecturer or as the personnel but not the whole campus has internet.” [Participant 4, Lec8 campus C]*

*“Connectivity that would be also one of the factors.” [Focus Group Discussion; fgd 3 campus A]*

*“We don’t have Wi-Fi you know apart from Wi-Fi maybe there could be lines or telephone lines which access the internet but it’s not there we are still in the “bundu” as such in this regard here so to say [laughing] I am sorry maybe am political. All these years that I have been here, I mean the only achievement I can say is the laptop no connectivity. When will the connectivity come?” [Participant 1, ES2 campus B]*

#### **4.3.4 Theme 4: Challenges associated with implementing ICT for teaching English**

The challenges associated with implementing ICT for teaching theme has two sub-themes. This theme was aimed at addressing question four which sought to find out to what extent are the challenges associated with the use and implementation of ICT in teaching English at a TVET college? This theme has two sub-themes; one, distribution of resources at the college and two, lack

of data and smartphones. These two sub-themes were aimed at answering question four and the results thereof are detailed below.

#### **4.3.4.1 Distribution of resources at the college**

This sub-theme was divided into one part, being the lack of data and smartphones. This was aimed at understanding the challenges that are associated with implementing ICT for teaching English at a TVET college.

#### **4.3.4.2 Lack of data and smartphones**

The study found that one of the challenges associated with implementing ICT for teaching English at the college was lack of mobile data and smartphones for the students. Some of the English lecturers who have tried to use ICT expressed that the lack of smartphones and mobile data for the students was a challenge in integrating ICT into their teaching. The study found that some lecturers who wanted to implement ICT into their lessons had to stop in order to accommodate students who do not have smartphones or mobile data. Another challenge was found to be the lack of literacy by the students to use ICT tools. The quotes from the participants that explained the lack of mobile data and smartphones as a challenge to the implementation of ICT are shown below:

*“Most students don’t have data and smartphones but for those students who have we can work with WhatsApp or Bluetooth.” [Participant 14, Lec5 campus B]*

*“Okay uhm data issues or should I say internet issues that is the one that is mainly common because you will ask them to join or to check you online to check your videos online and they will tell you sir we don’t have data and others will say we don’t have gadgets to actually access the videos.” [Participant 13, Lec3 campus C]*

*“Data sometimes it will be limited uhm sometimes we have to go to the lab or computer classes and that one might even disturb my classes.” [Participant 13, Lec3 campus C]*

*“With blended learning students might not be able to attend your online classes because they do not have data or they do not have devices that allow them.” [Participant 12, Lec7 campus B]*

*“Uhm Its both negative and positive because some they will have access some they will not have access to ICT so it disadvantages those who don't have access and it advantages those who have access so it becomes pointless because at the end of the day you need to go back with these ones have traditional classes with them go back to the very same things that you already did with those that have access. It is two phased those who have access to gadgets data and everything they are motivated they would like to have online classes and all that but those who have no access and cannot afford them then it's a problem for them to use it.” [Participant 12, Lec7 campus B]*

*“The challenges are these students will tell you that they cannot afford data we do not have funds like they need incentives like making sure that they got data they got the gadgets and all that because we know they are from different family backgrounds.” [Participant 12, Lec7 campus B]*

*“last year I was trying to incorporate students to use their phones in class obviously they would complain about data and not having smartphones. But I would tell them if you don't have a smartphone you can check the meaning of this name on the dictionary or you can look for more information. It was not on a daily basis as such.” [Participant 11, ES1 campus A]*

*“Data availability one more especially for the students.” [Participant 8, ES3 campus C]*

*“Data issues or should I say internet connection that is the one that is mainly common because you will ask them to join or text you online or to check your videos online they will tell you sir we don't have data and others will say okay we don't have gadgets to actually access the videos. Another problem yes, the lack of technology knowledge*

*computer knowledge per say they will tell you sir we don't know how to so those are the challenges we have.” [Participant 6, Lec10 campus C]*

*“like I said also the data if you give them something you have 80% of the students not having data to implement or assist them the impact is huge.” [Participant 4, Lect8 campus C]*

*“The first one is expensive data which affects both the lecturer and the students. Limited access to laptops and smartphones by both the lecturer and the student.” [Participant 3, Lect9 campus C]*

*“Some of them don't even have smart phones they still have old cell phones can only make calls they can't even be on the WhatsApp group something as basic as that not to mention more other things that we need to do using smartphones or laptops also those who have been provided with laptops they still lack basic computer literacy they still need to be taught things like how do you open just your screen on the laptop and stuff like that.” [Participant 3, Lec9 campus C]*

*“Well for NC(V) students at a TVET college it is a bit difficult because these learners that we are having currently don't have the necessary data for ICT learning. Yes, we want to use it as lecturers but you think about the students who are on the disadvantage side because they don't have the necessary resource.” [Focus Group Discussion, fgd 3 campus A]*

*“The first one, maybe sometimes I will ask the students to go and maybe use their cell phone devices in the classroom and then they will tell you that they don't have access to the internet so it's a challenge on its own access to the internet in the classroom uhm! Difficult challenge.” [Focus Group Discussion, fgd1 campus C]*

#### **4.4 DISCUSSION OF FINDINGS**

This study investigated the impact of ICT usage in teaching English at the Nkangala TVET College. Furthermore, the study provided empirical evidence and insight on the positive influences of integrating ICT in teaching English and its barriers.

This research found that ICT is integrated into teaching English by some lecturers while some lecturers do not integrate it at all. Integrating ICT into teaching and learning has been found to be a difficult process and one that may experience a variety of challenges (Ghavifekr, Kunjappan, Ramasamy & Anthony, 2016). This study found various reasons why some lecturers were in favour of integrating ICT into teaching English while some were against integrating. Some of the notable barriers for poor ICT integration in teaching English was found to be lack of training, and lack of resources.

Some of the lecturers who were not integrating ICT into their lessons mentioned that it was difficult to do so when they were not trained and they regard themselves as incompetent. A study has shown that another barrier, which was closely related to teacher confidence, was teachers' ability to effectively incorporate ICT into educational practice (Bingimlas, 2009). Lecturers who were using ICT in their lessons mentioned that they were restricted by a scarcity of resources.

The lack of resources barrier is extrinsic to the lecturer and includes time, access, and technical support (Ghavifekr et al., 2016). Another study noted that participants were extremely vocal about how existing barriers to implementing ICT in their classrooms adversely affected the use of technology in the classroom, with negative effects for learners (Munje & Jita, 2020). This study also found repercussions for the lack of ICT use for English classes, which was poor class attendance, and poor academic performance.

Apart from its repercussions, this study also found that there is a positive influence when ICT is integrated into teaching English at the Nkangala TVET College. This included high class attendance and an improvement on concentration and participation in the subject matter. Assessments which were done for some lessons that integrated ICT found that students performed well. A study also found that whenever ICT was integrated into teaching it was seen to improve engagement, knowledge retention and encouraged individual learning (Kler, 2014). This study



found that the prospects of integrating ICT into teaching English at Nkangala TVET college are challenged by the lack of support from the management structures at the college.

## **4.5 MAIN FINDINGS**

Given the significance of ICT in society and the future of education, acknowledging the potential difficulties in integrating these technologies into schools would be a vital step toward improving teaching and learning standards. It was imperative to unearth views from the participants who were asked to share their perspectives in using ICT in teaching English at a TVET college.

### **4.5.1 ICT integration in teaching English**

The results from this study showed that there are negative and positive impacts of integrating ICT into teaching English at the Nkangala TVET College. When it comes to the positive influences of using ICT in teaching English, this study found that students were more engaged in the lessons. Furthermore, ICT usage in the classroom was found to foster students' collaboration and engagement in the classroom. This was further found to improve lesson attendance and academic performance. This finding was consistent with a previous study that reported good student engagement and collaboration whenever ICT was used in the classroom (Kler, 2014). Using ICT to improve the process of teaching and learning has been found to give students access to an array of materials that improves their knowledge of the subject matter (Hidayati, 2016).

This study found that English classes at the college struggle with student attendance as most of them do not take the course seriously since it is not the major course. However, this study found that whenever a lecturer announces that a particular lesson will integrate ICT, the attendance was found to be 100%, meaning, integrating ICT into teaching is able to improve students' attendance. This finding was consistent with a study that showed a positive correlation between ICT usage in the classroom and students' attendance and commitment (Dineva & Nedeva, 2013).

This study also noted that integrating ICT into teaching English at the college comes with negative impacts. This study found that partly integrating ICT into some lessons results in poor attendance of the classes that do not use ICT. A reason for not using ICT in all the classes was said to be a lack of resources from the college and students. Another study found that the partial use of ICT was a result of the lack of resources (Ghavifekr et al., 2016). This study has found positive and negative impacts of integrating ICT into an environment that is challenged by lack of resources.

#### **4.5.2 Lecturers' perceptions in integrating ICT for teaching**

This study found that most lecturers regard ICT integration into teaching as a positive one, more especially now in the Fourth Industrial Revolution. The study found that the lecturers who participated in this study found the use of ICT as important, more especially when the students are young people who are fascinated by ICT. Though some of the lecturers have never used ICT in their lessons, their perception was positive mainly because of the benefits that come with it. This study's findings were consistent with results from a study that showed the majority of lecturers had favourable attitudes regarding technology, however the biggest challenges for responders when integrating ICT into teaching were their inadequate knowledge and poor grasp of how to do so (Bansa & Asrini, 2020).

The results from this study showed that failure in integrating ICT into teaching English by some lecturers was a result of accommodating students who did not have resources. A study has shown that understanding the various sorts of unique technology-mediated learning activities that students can engage in, as well as how these activities can be used for assessment, is essential for anybody involved in education and training in the 21<sup>st</sup> century (Bansa & Asrini, 2020). Overall, this study found positive perceptions by lecturers in integrating ICT into their English lessons, and they were only deterred to implement by lack of resources.

#### **4.5.3 Barriers to integrating ICT into teaching and learning**

This study found that there are several barriers that affect the integration of ICT into teaching English at Nkangala TVET College. The barriers that the study participants mentioned the most

were lack of training and resources, which greatly affected lecturers' confidence to incorporate ICT into teaching and learning. Literature has shown that the most frequently perceived obstacles were: investment in time and training, technical problems, lack of resources, inappropriate use, insufficient knowledge, and loss of time spent on physical activity (Villalba, González-Rivera, & Díaz-Pulido, 2017). This study also found lack of competency from the lecturers to use ICT tools in the classroom as a barrier to ICT integration into teaching. This study noted that lecturers who were part of this study expressed failure to deal with the technical problems. This affected their confidence to integrate ICT into teaching and learning.

This study found that the lack of resources was not only from the college, but the students also lack resources such as smart phones or laptops to participate in lessons that integrated ICT. This finding on lack of resources from students was an addition to the existing literature. Many studies focused on how the lack of resources from the institution affects the integration of ICT and not necessarily on the lack of resources from the students (Dinh 2015; Villalba et al., 2017; Wang et al., 2020). This is a critical finding because the institution might have resources to carry out lessons, but this might affect the learning aspect when students are at home. This means that learning will be limited and thus might affect how the students study and retain what they were taught.

Poor connectivity was discovered to be another barrier to the integration of ICT into teaching and learning in this study. The study noted that some of the lessons that the lecturers planned to integrate ICT were affected by poor connectivity as there were some classrooms without Internet coverage. Studies that focused on the barriers of integrating ICT into the classroom found that there are barriers at both the teacher and school levels. The school-level barriers focused on poor connectivity that was reported to affect the integration since ICT is reliant on Internet connectivity.

#### **4.5.4 Challenges associated with implementing ICT for teaching English**

This study found that there are challenges that are hindering the successful implementation of ICT into teaching English at Nkangala TVET College. The study participants expressed that one of the challenges that affected the implementation of ICT in teaching was lack of backing from

management. This study found that the management do not seem to have a clear plan on how lecturers will be trained and how resources will be procured and distributed. Literature also showed that lack of management support in integrating ICT into their lessons discouraged teachers from implementing ICT (Nelson et al., 2019; Raman & Yamat, 2014).

This study found that another challenge that affected the implementation of ICT at Nkangala TVET College was the unequal distribution of ICT resources among the campuses. The participants expressed that some of the campuses are unable to integrate ICT in one lesson because they lack resources such as Internet connectivity and computers while other campuses have some resources. Moreover, this study found that the classrooms at Nkangala TVET College are not conducive to implement ICT into the lessons. Literature shows that conducive classrooms are important in having a successful implementation (Machmud, 2020). This study found that the lack of management support and shortage of resources were the major challenges affecting the implementation of ICT into teaching and learning at Nkangala TVET college.

#### **4.5 CHAPTER SUMMARY**

This chapter presented the research findings from interviews that were conducted with English language lecturers at Nkangala TVET College. The transcribed interviews with all participants were used to construct the research findings. The research findings were checked against the literature. There was an agreement with regard to ICT having a positive influence in teaching and learning, and the lack of resources affecting the successful implementation of ICT. The following chapter provides the answers to research questions. The conclusions are presented, and this is followed by recommendations and suggestions for further study.

## **CHAPTER 5**

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

#### **5.1 INTRODUCTION**

The previous chapter presented findings from data collected from research participants. The findings were analysed and some participants' perceptions were quoted verbatim to amplify the meaning provided. This concluding chapter provides a synopsis of the findings in line with the research questions. Identified themes formed the basis of the discussion. Throughout the analysis process, four themes were discovered, and the results thereof are detailed below. The following themes were used to discuss the findings:

- ICT integration into teaching English
- Lecturers' perceptions in integrating ICT for teaching
- Barriers lecturers face in using ICT
- Challenges associated with implementing ICT for teaching English

The discussion of answers to the questions are provided. Furthermore, major findings in line with research questions are outlined.

#### **RESEARCH QUESTIONS**

The study was aimed at answering the following questions:

- What are the positive influences of integrating ICT in teaching English for NC(V) students at a TVET college?
- How do lecturers perceive ICT integration in teaching English for NC(V) students at a TVET college?
- What are the barriers and challenges that lecturers face in using ICT when teaching English for NC(V) students at a TVET college?

## **5.2 SUMMARY OF FINDINGS IN LINE WITH RESEARCH QUESTIONS**

These results are discussed in line with identified questions:

### **5.2.1 What are the positive influences of integrating ICT in teaching English for NC(V) students at a TVET college?**

The first question sought to find out what the positive influences are of integrating ICT into teaching English for NC(V) students at a TVET college. Participants expressed that integrating ICT into teaching English for NVC students at a TVET college had a positive influence. The participants noted an improvement in students' engagement and collaboration in class whenever ICT was integrated into lessons. Moreover, the participants noted that one of the positive influences of integrating ICT into English lessons was its ability to motivate students, which also improves their class attendance. Data from participants showed that the positive influences of integrating ICT at the college was an improved climate of teaching and learning. However, it is worth mentioning that the lecturers also noted negative influences of integrating ICT into teaching English for NC(V) students at a TVET college.

### **5.2.2 How do lecturers perceive ICT integration in teaching English for NC(V) students at a TVET college?**

The second question was to find out how lecturers perceive ICT integration into teaching English for NC(V) students at a TVET college. The participants' perception was positive when it comes to integrating ICT into teaching English. However, the positive perception was affected by the participants' lack of training in incorporating ICT into their instruction. Moreover, the lack of resources from the college also affected how the participants perceive the integration. When the participants consider the availability of resources, they had a positive perception.

### **5.2.3** What are the barriers and challenges that lecturers face in using ICT when teaching English for NC(V) students at a TVET college?

This question was to find out what the barriers are that lecturers face in using ICT when teaching English for NC(V) students at a TVET college. The findings were that training, and lack of resources were the common barriers lecturers face in using ICT when teaching English for NC(V) students. These barriers were found to also affect the lecturers' confidence. One of the barriers lecturers mentioned for using ICT when teaching English was the poor internet connectivity at the college. Moreover, the lack of resources from the students was also mentioned as a barrier for using ICT when teaching English. This study found that the lack of management support was mentioned as one of the challenges that affects ICT integration into teaching English at Nkangala TVET College. Another implementation challenge was the lack of conducive classrooms, as most of them were not designed for ICT teaching and learning, but for the traditional method of teaching and learning.

## **5.3 DISCUSSION OF THE FINDINGS IN RELATION TO THE THEORETICAL FRAMEWORK**

What are the positive influences of integrating ICT in teaching English for NC(V) students at a TVET college?

The results from this study showed that there are negative and positive impacts of integrating ICT into teaching English at the Nkangala TVET College. When it comes to the positive influences of using ICT in teaching English, this study found that students were more engaged in the lessons. Furthermore, ICT usage in the classroom was found to foster students' collaboration and engagement in the classroom. This study found that English classes at the college struggle with student attendance as most of them do not take the course seriously. However, this study found that whenever a lecturer announces that a particular lesson will integrate ICT, the attendance was found to be 100%, meaning, integrating ICT into teaching is able to improve students' attendance. As indicated by Orr (2003), firm attitudes are developed through communication exchanges about the innovation with peers and opinion leaders. In this instance, opinion leaders are the English lecturers who communicate with students to indicate that the lesson will include ICT integration. Orr maintained that these avenues of communication are more reliable and efficient at overcoming

resistance or indifference on the side of the recipient. As a result, students attended in their numbers.

How do lecturers perceive ICT integration in teaching English for NC(V) students at a TVET college?

The study found that the lecturers who participated in this study found the use of ICT as important, more especially when the students are young people who are fascinated by ICT. Though some of the lecturers have never used ICT in their lessons, their perception was positive mainly because of the benefits that come with it. This is in line with one of the main factors of Diffusion of innovation which is relative advantage. People will adopt an innovation when it is believed to be more useful, such as increasing efficiency and effectiveness (Lin & Chen 2012). For instance, if lecturers perceive the usefulness of technology in their teaching, they will employ it. Conversely, it would be a potential hassle that makes English lecturers at Nkangala TVET college feel the integration of ICT in their practice useless and difficult to use and they rather go back to the traditional method of teaching. This implies that once Nkangala College English lecturers see the value of integrating technology in teaching English, they will be more likely to adopt and embrace it. This finding is also in line with Ghavifekr & Rosdy's (2015) assertion that technology integration and utilization in the classroom is governed by the idea of perceived usefulness and ease. As indicated by Orr (2003), people will adopt an innovation if they believe that it will, all things considered, enhance their utility.

The results from this study showed that failure in integrating ICT into teaching English by some lecturers was a result of accommodating students who did not have resources. Some students did not have smart phones that can be used to access internet information. Some lecturers claimed that even though some students have smartphones, they did not have data to access the information at their own time. As a results, some lecturers who participated in the study indicated that they failed to integrate ICT into teaching English.

What are the barriers and challenges that lecturers face in using ICT when teaching English for NC(V) students at a TVET college?



This study found lack of competency from the lecturers to use ICT tools in the classroom as a barrier to ICT integration into teaching. This study noted that lecturers who were part of this study expressed failure to deal with the technical problems. This affected their confidence to integrate ICT into teaching and learning. Marais (2021) emphasized that teachers need digital competencies in order to make use of technology to make smart decisions. This idea is supported by Maja (2023) who indicated that acquisition and development of technology and skills would ensure that teachers could effectively integrate technology into their practice. This posed a dire need for Nkangala TVET college to train more lecturers on ICT integration in teaching English. This finding is in line with Katemba's (2020) assertion that the main problem is the lack of in-depth continuing professional development for teacher who are expected to integrate new technologies into their classes.

One of the challenges expressed by respondents is the lack of backing from management. The Nkangala college management is not providing English lecturers with ICT skills and training on ICT integration in teaching. This affects the adoption rate (observability), as lecturers cannot see the benefits of the innovation and communicate about it (Rogers 2003). As stated by Min, Jeong & Fung So (2018), consumers are more likely to adopt an innovation when their effects and benefits are visible to them. People will adopt an innovation when it is believed to be more useful, such as increase efficiency Lin & Chen (2012).

This study found that another challenge that affected the implementation of ICT at Nkangala TVET College was the unequal distribution of ICT resources among the campuses. ICT resources are not equally distributed among the campuses. Some campuses had enough resources while others had less. Participants indicated a shortage of computers and poor internet connectivity. This unequal distribution of resources among campuses affected planning and effective teaching and learning.

#### **5.4 CHAPTER SUMMARY**

This chapter dealt with the summary of the findings in line with the research questions. The findings of the study were also discussed in relation to the theoretical framework. The conclusion of the study was dealt with. Lastly, the recommendations from the study were discussed.

## **5.5 CONCLUSION**

This study has shown that integrating ICT into regular education is a very difficult task. ICT does not come without its share of challenges when it comes to supporting teaching and learning. It is indeed possible that neither lecturers nor students have the abilities needed to obtain, process, and utilise information. Even so, there are some challenges that operate as obstacles and hinder teachers from incorporating ICT into the classroom. This study found that there are barriers when it comes to integrating ICT into teaching and learning English and these were teacher-level barriers, student-level barriers, and school-level barriers.

Moreover, this study found that management support is important in implementing ICT for teaching and learning. Management support has the potential of motivating lecturers to fully incorporate ICT into their classroom instruction. Most of the participants that tried to integrate ICT into their lessons using their own resources were left frustrated by the poor connectivity in some of the classes at the college. The majority of the participants had a positive perception when it comes to ICT integration into their lessons. However, their perception was affected by lack of resources, lack of training, and poor connectivity.

It is envisaged that this study will help with developing strategic approaches that will ensure that ICT is integrated into teaching English at Nkangala TVET College as this will improve students' class attendance and enhance teaching and learning. Additionally, it is anticipated that this research would greatly aid the college's administration and other stakeholders in identifying and eliminating hurdles that affect ICT implementation in teaching English and other courses at a TVET college. Many researchers have already done an excellent job in studying ICT integration in classroom instruction. The above assertions necessitate devotion, involvement, optimism, and genuine commitment from the DHET, the college's senior management, parents, lecturers, and students to guarantee that ICT is used in both teaching and learning.

## **5.6 RECOMMENDATIONS**

The study's recommendations are based on the literature and data gathered during the research process on ICT integration into teaching English at a TVET college. The research showed that English lecturers at the college have a positive perception when it comes to integrating ICT into teaching English. However, this positive perception was affected by the existing barriers. The barriers that the study participants mentioned the most were lack of training and resources. This study recommends that Nkangala College equip English lecturers with in-depth continuous ICT skills that will assist them to integrate ICT in teaching English. This professional development should be continuous because ICT is also changing and developing every year.

ICT facilitates teacher-student interaction. It aids the teachers in their preparation for teaching and providing constructive feedback to students. The absence of an ICT implementation plan for teaching and learning contributes to the current existing barriers experienced by lecturers and students. This study found that with an appropriate ICT implementation plan, the majority of the barriers faced by college students and lecturers may be controlled and removed. To address the barriers of integrating ICT into teaching English, it is really crucial that the classroom is furnished with efficient ICT resources and that lecturers are trained to utilise them. This will boost their confidence to integrate ICT into their lessons. This study recommends that the Nkangala TVET college develops an ICT implementation plan that will ensure that the college prioritises ICT integration into classroom instruction.

## **5.7 RECOMMENDATION FOR FUTURE RESEARCH**

The researcher recommends that future research on integrating ICT into teaching English at a TVET college be conducted to determine the effectiveness of lecturers' ICT integration into teaching English at a TVET college. The current study was conducted at one TVET college out of the three colleges in the province. Future studies could be extended to include all colleges in the province to gain a broader scope and more insight as ICT integration into teaching is becoming the way of teaching. Further studies could also use the mixed methods approach or the quantitative approach where data could be gathered using the survey and case studies. This could draw the attention of the Department of Higher Education and Training, and other parties involved as various institutions in South Africa are now promoting the Fourth Industrial Revolution and taking actions to achieve its vision.

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# APPENDIX A



0847 MIRST

MAKARING B A MRS  
P O BOX 415  
WITBANK  
1035

STUDENT NUMBER : 4830-021-7  
ENQUIRIES NAME : M&D ADMIN SUPPORT  
ENQUIRIES TEL : (012) 441-5702

DATE : 2022-03-31

Dear Student

I wish to inform you that your registration has been accepted for the academic year indicated below. Kindly activate your Unisa mylife (<https://myunisa.ac.za/portal>) account for future communication purposes and access to research resources.

DEGREE : MED (CURRICULUM STUDIES) (98434)  
TITLE : Using information and communication technology in teaching English at a technical and vocational training college  
SUPERVISOR : Prof TI MOGASHOA (Mogasti@unisa.ac.za)  
ACADEMIC YEAR : 2022  
TYPE: DISSERTATION  
SUBJECTS REGISTERED: DFDID95 MED - Didactics

A statement of account will be sent to you shortly.

You must re-register online and pay every academic year until such time that you can submit your dissertation/thesis for examination.

If you intend submitting your dissertation/thesis for examination you have to submit an Intention to submit form (available on the website [www.unisa.ac.za](http://www.unisa.ac.za)) at least two months before the date of submission. If submission takes place after 15 November, but before the end of January of the following year, you do need not to re-register and pay registration fees for the next academic year. Should you submit after the end of January, you must formally reregister online and pay the full fees.

Please access the information with regard to your personal librarian on the following link:  
<https://bit.ly/3hxNqVr>



Yours faithfully,



Prof M S Mothata  
Registrar

University of South Africa  
Preller Street, Muckleneuk Ridge, City of Tshwane  
PO Box 392 UNISA, 0003 South Africa  
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150  
[www.unisa.ac.za](http://www.unisa.ac.za)

## APPENDIX B ETHICS REVIEW COMMITTEE APPROVAL



### UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2021/08/11

Ref: **2021/08/11/48300217/44/AM**

Name: Mrs BA Makaring

Student No.:48300217

Dear Mrs BA Makaring

**Decision:** Ethics Approval from  
2021/08/11 to 2024/08/11

**Researcher(s):** Name: Mrs BA Makaring  
E-mail address: 48300217@mylife.unisa.ac.za  
Telephone: 082 7914 322

**Supervisor(s):** Name: Prof T.I. Mogashoa  
E-mail address: mogasti@unisa.ac.za  
Telephone: 076 372 5084

**Title of research:**

**Using Information and Communication Technology in teaching English at a technical and vocational training college.**

**Qualification:** MEd Curriculum studies

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 2021/08/11 to 2024/08/11.

*The **low risk** application was reviewed by the Ethics Review Committee on 2021/08/11 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.



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 risk for the research participants, particularly in terms of assurances made with regard to the protection of participant's 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 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 deidentified 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 **2024/08/11**. Submission of a completed research ethics progress report will constitute an application for renewal to the Ethics Research Committee approval.

*Note:*

*The reference number **2021/08/148300217/44/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 PM Sebate**  
**EXECUTIVE DEAN**  
 Sebatpm@unisa.ac.za

## APPENDIX C: PERMISSION FOR CONDUCTING RESEARCH



### *Central Office*

CNR Haig & Northey  
P. O. Box 2282  
WITBANK  
1034



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☎ 013 690 1430  
✉ 013 690 1450  
M email: [info@nkangalafet.edu.za](mailto:info@nkangalafet.edu.za)

Subject: Permission for conducting research

Date: 28 October 2021

Dear. Ms BA Makaring

I am pleased to inform that I give you permission in respect of your research request. Your initiative is appreciated and the college is ready to support this research.

For conducting the research; may you please liaise with the college and ensure that all protocols are followed, and privacy regulations are adhered to before conducting the research.

Please note that the research data collection should not disturb the teaching and learning activities; especially examinations. We wish you all the best in your research.

Mr. CM Maimela

College Principal

Date

## APPENDIX D: CONSENT FORM FOR PARTICIPATION



I have obtained, studied and preserved a copy of the information letter about the research in using Information and Communication Technology in teaching English at a technical and vocational college. I was offered the chance to inquire about this research and I have had responses that are satisfactory. I have had an opportunity to add any additional details I wanted.

I have been informed of the following and have given my agreement to take part in the study:

- I am only participating voluntarily.
- What actions are anticipated and demanded of me?
- Who should I contact if I have concerns about the research or how it was conducted?
- I can ask for copies of the research papers and findings.
- the confidentiality and security of my personal information.

I am aware that results from this study may be included in publications, with the knowledge that my identity will remain a secret. I am also aware that I can permit audio recording of my interview to make sure my responses are accurately recorded. I was informed that I can withdraw my consent from the study without any implications to me. With full understanding of the above, I agree, without being compelled, to take part in the study.

**Name:** (please print)

Signature: \_\_\_\_\_

Date:

Name of researcher: Makaring Busisiwe Agnes (please print)

A rectangular box containing a handwritten signature in dark ink. The signature appears to be "Makaring" followed by a flourish.

Signature of researcher:

Date: 11 June 2021

APPENDIX E: INTERVIEW QUESTIONS FOR LECTURERS



NAME OF COLLEGE: \_\_\_\_\_ CAMPUS: \_\_\_\_\_

NAME OF ES: \_\_\_\_\_

NUMBER OF YEARS TEACHING EXPERIENCE: \_\_\_\_\_

DEPARTMENT: \_\_\_\_\_

RESEARCH QUESTIONS	INTERVIEW QUESTIONS
<p>1. What are the positive influences of integrating ICT in teaching English for NCV students at a TVET college?</p>	<p>a. What are your feelings about the use of ICT in teaching English for NCV students at a TVET college?</p> <p>b. How is ICT integration influencing your teaching?</p> <p>c. What factors might influence your ICT integration in teaching English for NCV students?</p>
<p>2. How do lecturers perceive ICT integration in teaching English for NCV students at a TVET college?</p>	<p>a. How effective is the integration of ICT during the learning process?</p> <p>b. What type of ICTs for education are available in your campus and what training have lecturers had in using ICTs for teaching and learning?</p> <p>c. What are the impacts on the level of student motivation in learning English using ICT?</p>

<p>3. What are the barriers that lecturers face in using ICT when teaching English for NCV students at a TVET college?</p>	<p>a. What obstacles do you face when using ICT in your teaching and learning activities?</p> <p>b. How do you cope with these obstacles?</p> <p>c. What kind of support do you get from the college on ICT integration?</p>
<p>4. To what extent are the challenges associated with the use and implementation of ICT in teaching English at a TVET college?</p>	<p>a. What are the challenges associated with ICT implementation in teaching English at a TVET college?</p> <p>b. What effects do these challenges have on you as a lecturer?</p> <p>c. What are the significant effects of ICT integration during the learning process on student motivation in learning English?</p>

Thank you for taking part in this study.

APPENDIX F: FOCUS GROUP QUESTIONS FOR LECTURERS



NAME OF COLLEGE: \_\_\_\_\_ CAMPUS: \_\_\_\_\_

NAME OF ES: \_\_\_\_\_

NUMBER OF YEARS TEACHING EXPERIENCE: \_\_\_\_\_

DEPARTMENT: \_\_\_\_\_

RESEARCH QUESTIONS	INTERVIEW QUESTIONS
<ul style="list-style-type: none"> <li>• What are the positive influences of integrating ICT in teaching English for NCV students at a TVET college?</li> </ul>	<ul style="list-style-type: none"> <li>a. What are the advantages and benefits of ICT integration in teaching English at a TVET college?</li> <li>b. What motivates you to integrate ICT in teaching English at a TVET college?</li> </ul>
<ul style="list-style-type: none"> <li>• How do lecturers perceive ICT integration in teaching English for NCV students at a TVET college?</li> </ul>	<ul style="list-style-type: none"> <li>a. How do you perceive your self-confidence in integrating ICTs into your teaching?</li> <li>b. How do you perceive the college climate and support in relation to ICT integration in teaching English?</li> <li>c. How confident are you in integrating ICT when teaching English?</li> </ul>
<ul style="list-style-type: none"> <li>• What are the barriers that lecturers face in using ICT when teaching</li> </ul>	<ul style="list-style-type: none"> <li>a. Elaborate on the barriers that you face when integrating ICT in teaching English?</li> </ul>



<p>English for NCV students at a TVET college?</p>	<p>b. How do you overcome those barriers?</p> <p>c. Is the college supporting lecturers in trying to overcome those barriers? If so, how?</p>
<ul style="list-style-type: none"> <li>• To what extent are the challenges associated with the use and implementation of ICT in teaching English at a TVET college?</li> </ul>	<p>a. What are the challenges associated with ICT implementation in teaching English at a TVET college?</p> <p>b. What effects do these challenges have on you as a lecturer?</p> <p>c. What are the significant effects of ICT integration during the learning process on student motivation in learning English?</p>

Thank you for taking part in this study.

## APPENDIX G: CERTIFICATE OF EDITING

**Mike Leisegang**

Freelance Copy-Editor and Proofreader

Phone: +27 82 857 8733

Email: [mike@wellspotted.ink](mailto:mike@wellspotted.ink)

Web: [www.wellspotted.ink](http://www.wellspotted.ink)



# Certificate of Editing

This serves to confirm that copy-editing and proofreading services were rendered to Busisiwe Agnes Makaring for “Using Information and Communication Technology in teaching English at a technical and vocational training college” with final page count of 121 of edited text from 18<sup>th</sup> October to 20<sup>th</sup> November 2022.

*I am a member of the Professional Editors’ Guild (member number LEI004) and commit to the following codes of practice (among others):*

- *I have completed the work independently and did not sub-contract it out*
- *I kept to the agreed deadlines and/or communicated changes within reasonable time frames*
- *I treated all work as confidential and maintained objectivity in editing*
- *I did not accept work that could be considered unlawful, dishonest, or contrary to public interest*

*I uphold the following editing standards:*

- *proofreading for mechanical errors such as spelling, punctuation, grammar*
- *copy-editing that includes commenting on, but not correcting, structure, organisation and logical flow of content, basic formatting (headings, page numbers), eliminating unnecessary repetition*
- *checking citation style is correct, punctuating as needed and flagging missing or incorrect references*
- *commenting on suspected plagiarism and missing sources*
- *returning the document with track changes for the author to accept*

I confirm that I have met the above standards of editing and professional ethical practice. The content of the work edited remains that of the student.

**Michael John Leisegang**

**Certificate in Freelance and In-house Copy-editing and  
Proofreading Project Management Professional (PMP)**

# Using Information and Communication Technology in teaching English at a technical and vocational training college

*by* Busisiwe Agnes  
MAKARING

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**Submission date:** 21-Nov-2022 07:32PM (UTC+0200)

**Submission ID:** 1960458573

**File name:** final\_dessertation.docx (2.63M)

**Word count:** 32777

**Character count:** 181852