UNIVERSITY OF RWANDA



COLLEGE OF EDUCATION

INTEGRATION OF COMPUTER- ASSISTED LANGUAGE LEARNING APPROACH TO ENHANCE STUDENTS' PERFORMANCE IN ENGLISH AS A SUBJECT IN TECHNICAL SECONDARY SCHOOLS, NYANZA DISTRICT

By

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Kigali, March 2024

DECLARATION

I affirm that this research project is solely the result of my own efforts, and it has not been previously presented in any format for a different academic qualification at any University or higher education Institution. I have appropriately acknowledged any information taken from the published or unpublished works of others.

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Date: 16/03/2024

DEDICATION

This research is a heartfelt tribute to my beloved daughter, Willa Aislin Iganze, and my wife, Adeliphine Mukangirinshuti, who have been my constant pillars of support and inspiration. May this work be a source of motivation for both of you as you pursue your aspirations and dreams. My love for you both will endure always.

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Jacques Ndahayo

ABSTRACT

The implementation of appropriate methods in English Language teaching holds a crucial role in improving students' academic performance. Despite English being a subject taught and medium of instruction in Rwanda's educational system, Technical Secondary Schools have observed scarce performance in English, as evident in National Examinations and School-Level Assessments. This study aimed to explore the potential of Computer-Assisted Language Learning Approach (CALL) in enhancing Students' Performance in English subject in eight Technical Secondary Schools of Nyanza District. The specific objectives were (i) to investigate the level of teachers' adaptation to the use of CALL and its implication on teaching and learning English, and (ii) to investigate the level of students' motivation towards CALL and its effects on learning English. This research adopted descriptive research design with the population of 359 students in Level 5 Construction Technology, and 24 teachers of English. Utilizing stratified simple random sampling, 105 students, and 24 teachers fulfilled all criteria to form the sample of this research. Data were collected using questionnaires in the form of a likert scale. Descriptive, inferential and regression analysis were done to test correlation, and impact of variables. The findings show that teachers use CALL in teaching and learning English language and students are motivated to learn English through CALL, which affect positively students' performance in English. It is indicated by inferential analysis results of both P values of 0.020 and 0.015 which are less than the significant correction of 0.05, and regression analysis results of P values of 0.022 and P 0.014.The researcher recommends that RTB should provide more training for teachers of English in the use CALL Approaches in teaching, and Teachers, Parents should foster students' motivation to the use of CALL in English class. Lastly, the researcher encourages further researches in the area of CALL to improve English-speaking skills.

***Keywords*:** ICT, English, CALL, Performance, Technical Secondary Schools, Nyanza

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ACRONYMS AND ABBREVIATIONS

CALL **:** Computer Assisted Language Learning

CD-ROM : Compact Disc-Read-Only Memory

EL : English Language

ESL **:** English as Second Language

H_1 : First Hypothesis

H_2 : Second Hypothesis

HLIs **:** Higher Learning Institutions

ICT **:** Information and Communication Technology

ICTALL : Information Communication Technology Assisted Language Learning

L2 : Second Language

MALL **:** Mobile Assisted Language Learning

RTB **:** Rwanda TVET Board

SLA **:** Second Language Acquisition.

SPSS : Statistical Package for the Social Sciences

TSS **:** Technical Secondary School

TSSs **:** Technical Secondary Schools

CHAPTER ONE

INTRODUCTORY BACKGROUND OF THE STUDY

1.1 Introduction

This chapter presents the background to the study, the statement of the problem, the research objectives and the research questions. Subsequently, it states the conceptual framework that guides this research. At the end, it provides a brief chapters' overview of the research.

1.2 Background of the Study

English has become the world's leading lingua franca, and is used as a second language in many countries around the world. Due to that situation, and in order to align with the demands of 21st-century education there is a growing imperative to enhance the methods of teaching and learning English across all educational levels (Roy, 2014). Not only has this resulted in multiple alterations in methods of teaching and learning English, but it has also prompted the emergence of diverse innovative approaches across the world to help learners of English to perform well in this subject.

Computer Assisted Language Learning(CALL) is very much used in different countries like China, Thailand, Philippines, Vietnam, Korea, Japan and many of the Gulf countries (Gupta, Pandey and Bhatnagar 2021). In the research conducted at the University of Southern Queensland, Australia, Nim and Son (2009) demonstrated that recent advancements in Information and Communication Technology (ICT) have transformed the roles of both language teachers and learners. According to Bangs and Cantos (2004) CALL is not a distinct matter isolated from the broader landscape of language learning and acquisition, since it puts the learner at the center of the learning.

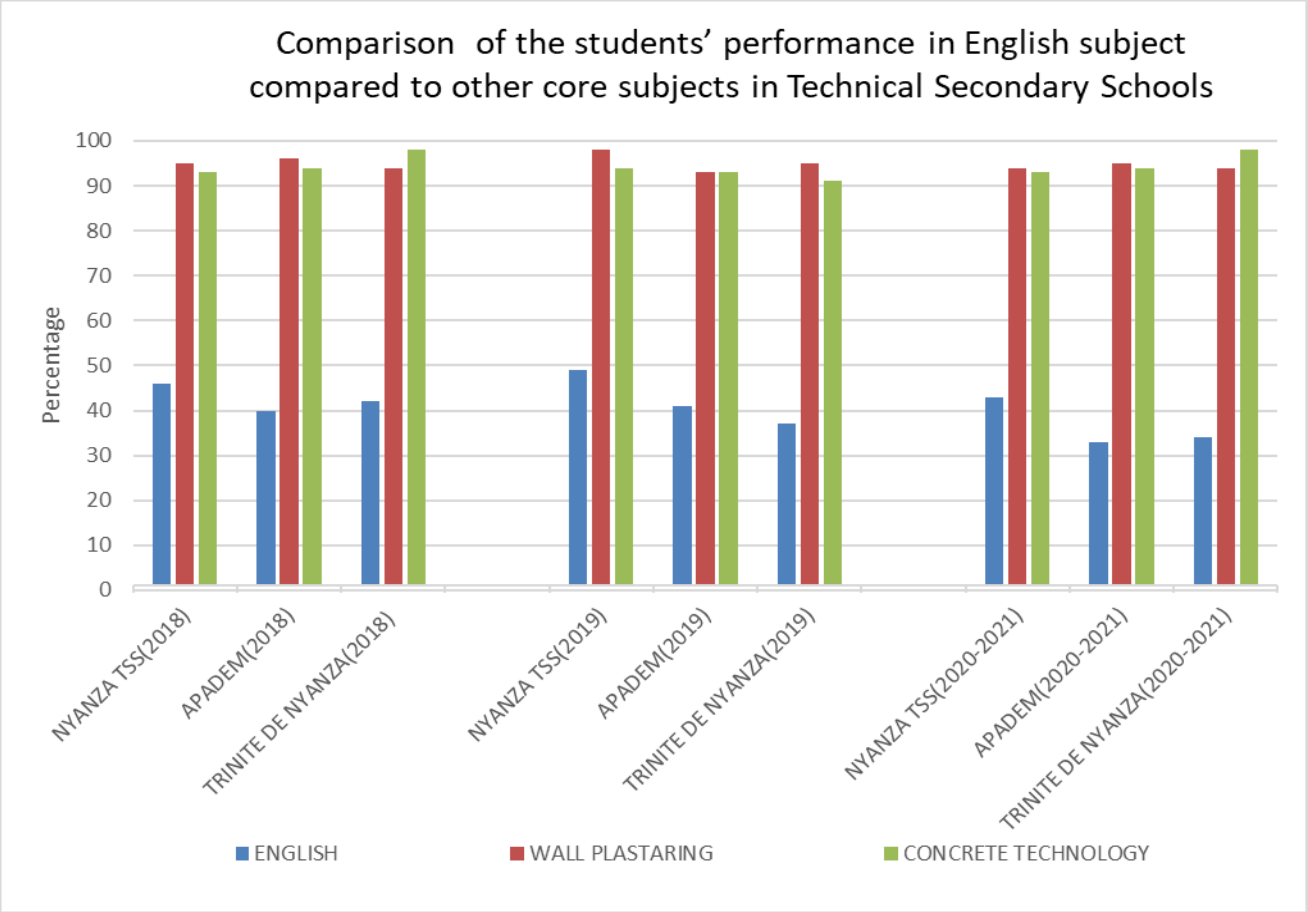
In Africa, CALL has shown promising potential to address the challenges of language education. With the increasing availability of digital technologies, CALL offers innovative solutions to overcome barriers in linguistic landscapes. Initiatives like the African Storybook Project leverage CALL platforms to provide multilingual literacy materials for children in African languages (Westhoff and Jedlowski, 2018).

Additionally, Universities and Language Institutes across the Continent are integrating CALL into their curricula to enhance language-learning outcomes and prepare students for the demands of the globalized world (Hubbard, 2018).

In Rwanda, the ICT policy has been adopted and the Rwandan government since 1998 has launched the National Information and Communication Infrastructure Plan (NICI). In Technical Secondary Schools of Rwanda, Computer-Assisted Learning was introduced. Therefore, Rwanda's Technical Secondary Schools are fostering a conducive learning environment that prepares students for the demands of the modern workforce (The World Bank, 2021).

1.3 Statement of the Problem

English, the Language of worldwide communication, is considered as one of the most useful subjects in Technical Education for employable skills to the labor market demand. In this regard, attempts have been made by the Government of Rwanda through Rwanda TVET Board (RTB) to support teaching and learning of English across TSSs. Nevertheless, Students' Performance in English has been deplorable in Technical Secondary Schools of the southern Province of Rwanda, yet English is a medium of instruction across all subjects. Figure 1.1 presents a comparative look into the Students' Performance in English compared to other subjects in three Technical Secondary Schools in the National Level 5 Examination for 3 academic years.



Source: Secondary Data, Nyanza District Schools Reports, 2018, 2019 and 2021

Figure 1. 1: A Comparison of Students' Performance in English with other Subjects

However, considering the English subject grades from three mentioned Technical Schools, with the average percentages of 60%, 56%, and 58% recorded in the end of term two assessments for Level 5 Students in Construction Technology trade in 2023(See attachment III). It is noteworthy that this year marked the change in English Performance after introduction of the use of ICT in teaching across all Subjects in Technical Secondary Schools by RTB.

Therefore, if RTB does not effectively emphasis on the use of ICT in teaching and learning English, challenges are likely to appear in the future. Inadequate Performance of Students in English would not only affect their low scores in TSS Examinations but also have adverse effects on the employment prospects of TSS graduates. Hence, there is an urge imperative to investigate the extent to which Computer Assisted Language enhance Students' performance in English subject.

1.4 Research Objectives

1.4.1 General Objective

The aim of this study is to examine the effect of using Computer-Assisted Language Learning (CALL) in the teaching and learning of the English language within Nyanza District Technical Secondary Schools, with a focus on its influence on students' performance in the English subject.

1.4.2. Specific Objectives

1. To investigate the level of teachers' adaptation to the use of CALL and its implications on teaching/learning English subject.
2. To investigate the level of students' motivation towards CALL and its effect on learning English subject.

1.5 Research Questions

1. To what extent do teachers adapt to the use of CALL and what are its implications on teaching / learning English?
2. How are students motivated towards CALL and what are is its effect on learning English subject?

1.6 Conceptual Framework

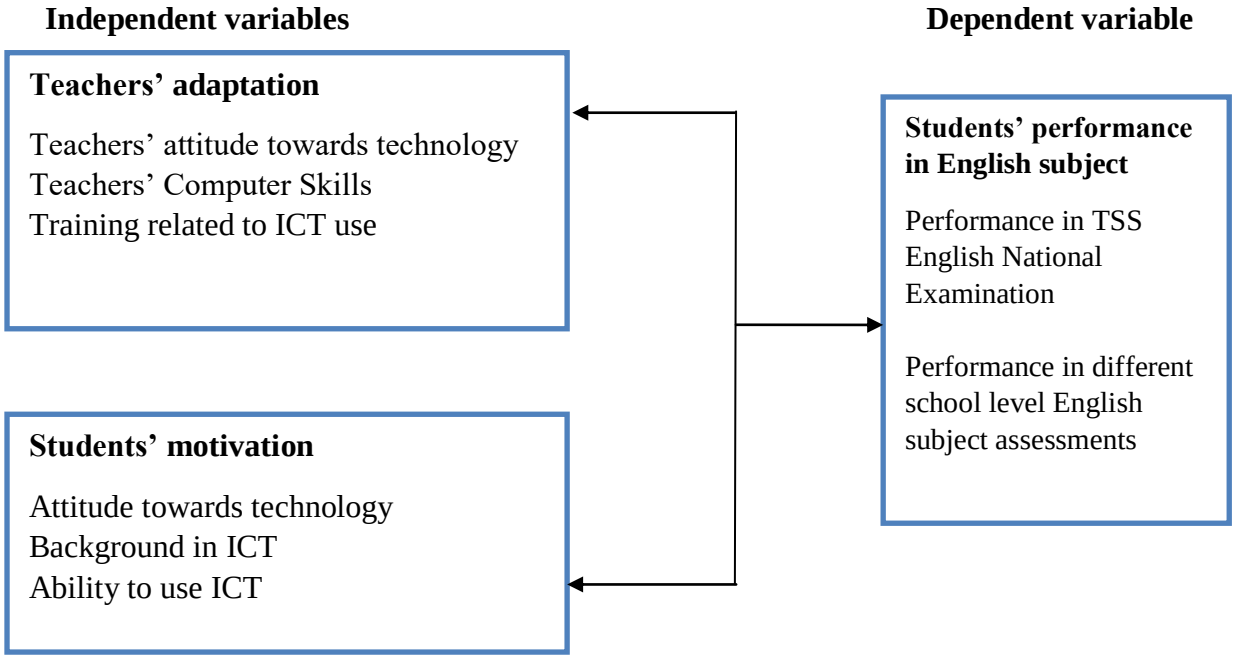


Figure 1: Conceptual framework

Source: Researcher compilation, 2023

Figure 1. 2: Research Conceptual Framework

1.7 Research Hypotheses

The research hypothesis serves as a pivotal element in the research process, providing a clear and testable proposition that guides the research (Narayan, 2015). It not only delineates the specific question or problem under study but also directs the design, data collection, and analysis phases (Leedy and Ormrod, 2015). Through systematic testing, the hypothesis facilitates the interpretation of results, enabling researchers to draw reliable conclusions (Salkind, 2010). Therefore, the present study is guided by two research hypotheses (1) there is a significant positive impact of teachers' attitude towards CALL on Students' Performance in English Subject. (2) There is a significant positive impact of Students' Motivation towards CALL on Students' Performance in English Subject.

1.8 Brief Chapters Overview

This research is structured into five separate chapters, as illustrated in the diagram below:

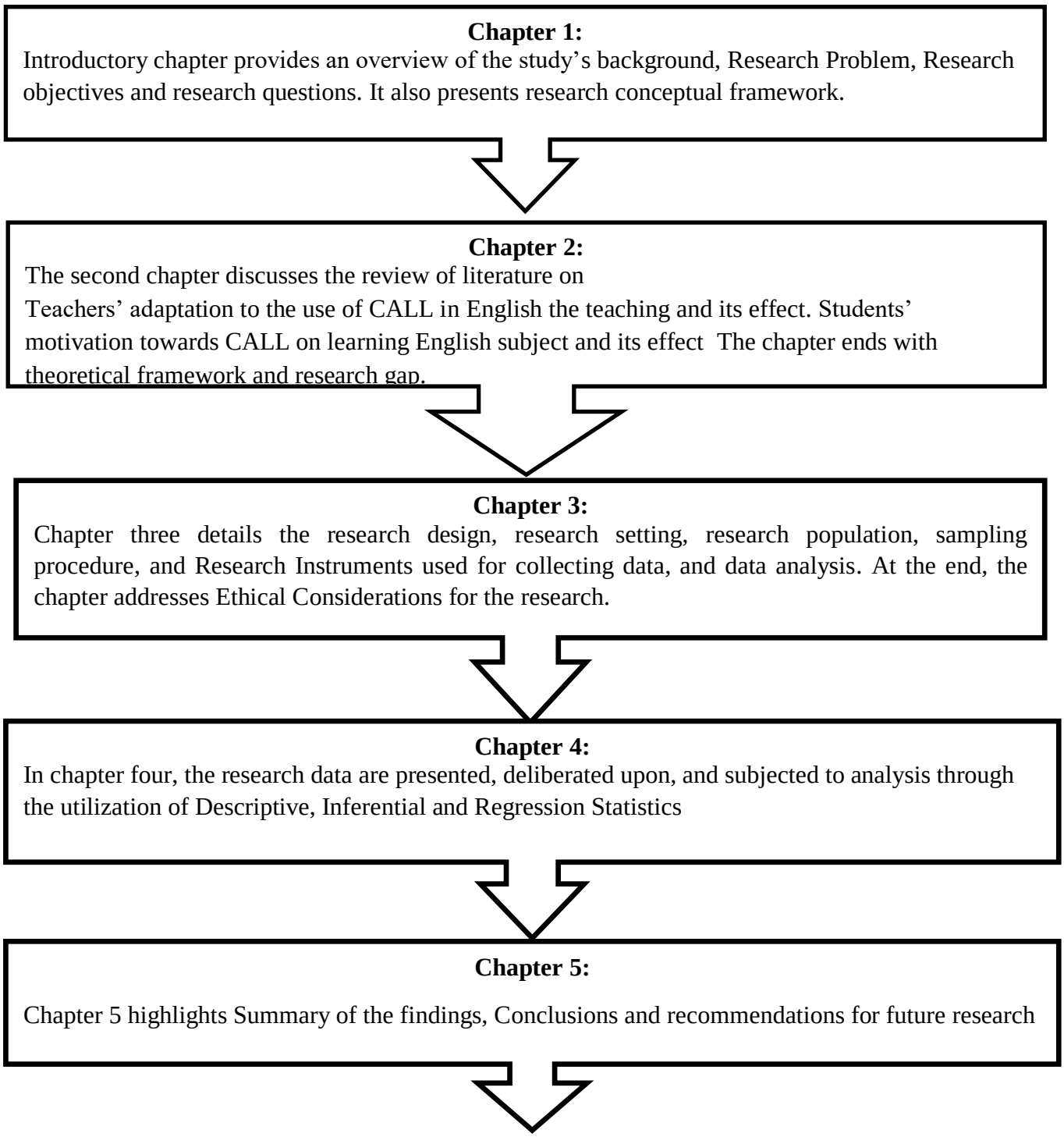


Figure 1. 3: Brief Chapters' Overview

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The primary objective of this chapter is to make a valuable contribution to the existing literature concerning technology in language learning, with a specific focus on Computer-Assisted Language Learning (CALL). Additionally, this chapter contributes to the body of knowledge in the field of second language learning, particularly in relation to the performance of learners in English as a second language (ESL). Through this chapter, we seek to advance understanding and insights into the use of technology for language learning, as well as its effect on ESL learners' performance. These areas will provide valuable and relevant information that can benefit language educators, researchers, and policymakers, in enhancing students' performance in English subject.

The chapter is divided into three main sections. The first section gives literature on how teachers adapt to the use of CALL in teaching and learning English as a Second Language, where it traces Language teachers' attitudes towards technology, the role of teachers' computer skills in integrating CALL, and the role of related training to ICT use in language teaching. The second part of this chapter describes the role of students' motivation toward technology, by narrowing students' attitude towards CALL, and students' ability to deal with ICT in language learning. The third part seeks to provide the importance of teaching and learning resources such as ICT laboratories, Internet connection, and English learning applications to implement CALL approach in English language teaching and learning. The theoretical framework that guided this research is critically reviewed at the end of this chapter, as well as the research gap.

2.2 Teachers' Adaptation to the use of CALL in teaching English

Computer-Assisted Language Learning(CALL), a sub category of Computer-Aided Learning is defined by Gamper and Knapp (2002) as computational methods and techniques for language learning and teaching by utilization of computers to facilitate language learning through games, tests, exercises, and word processing. Therefore, Teacher is the one to decide how and when to use CALL in session.

CALL's fame was raised in the time with technological advancements and developments in teaching. CALL systems have become fully integrated with audio and video support over the past few years, resulting in presentations that are engaging and appealing. A brand-new platform for CALL systems has been developed as a result of the rise of the internet (Laghos and Zaphiris, 2014).

CD-ROM-based technology of English teaching is being replaced by online Web-based CALL, allowing teachers and students to increase connectivity and interaction with other students or teachers. The ability to use chat rooms and e-mail, conduct audio and videoconferencing, and communicate with native speakers of the language are important reasons why CALL has grown into a Web-based platform (Laghos & Zaphiris, 2014).

According to Killen (2013) a teacher who embraced digital technologies in his teaching methodology guides learning process, and caters students' requirements in performance. Ghavifekr and Rosdy (2015) concluded that Teachers who embrace digital tools in their teaching practice are better equipped to provide a modern and relevant learning experience for their students, preparing them for the challenges of the era of digital advancement

According to Begum and Liton (2018) teachers are to adapt the modern technologies to meet 21st century Education. As per findings of Buabeng (2012) this adaptation can be influenced by several factors, include the teacher's pedagogical beliefs, their competence and confidence in integrating digital technologies into the classroom, the availability of resources, opportunities for professional development, and the socio-cultural context.

Over the past five decades, the introduction of Computer Assisted Language Learning has had a profound and lasting impact on the teaching of second/foreign languages (Butler,2011). In language classrooms where CALL materials are used, provide significant results role(Kiliçkaya and Seferoglu, 2013). Although teachers are responsible for managing classrooms, he does not have to over self-centralize all learning processes. Yet, he can play a vital supporting role in making learning more learner- centered (Garrett, 2008). Moreover, teachers' adaptation to the use of CALL to suit the individual needs of their students is needed(Van, 2023). This adaption allows the teaching experience to each learner's unique requirements and preferences (Alshammari, 2016). In the context of using CALL materials, teachers must identify and employ strategies that align with their learners' learning styles, as doing so would further facilitate the learning process (Jaychandra, 2007). By effectively incorporating CALL into language teaching, teachers enhance students' language learning

experience and create a more engaging and efficient learning environment. As technology continues to evolve, the integration of CALL remains a powerful tool for language teachers seeking to foster successful language learning and language proficiency among students(Zhou and Wei, 2018).

However, some factors make it difficult for English teachers to incorporate CALL into their classroom. Nim and Son (2009) reported some external factors such as lack of time, insufficient computer facilities, rigid school curricula, and lack of administrative support as the most factors that affect negatively the implementation of CALL. Nim & Son (2009) didn't limit to the external factors, they also discussed internal factors such as teachers' limited computer skills, knowledge about computers, beliefs, and perceptions of CALL as significantly affecting teachers' decisions to integrate CALL in the language classroom. In a similar study conducted in the South Yemeni, Ahmed (2020) stated that the lack of internet, motivated students are key factor to hinder the integration of CALL.

In his research, Johnson (2016) recommended that teachers should have access to computers, since, the limited availability of computer facilities can discourage teachers from integrating CALL into their teaching even if they have positive attitudes toward using technology. Therefore, providing schools with sufficient computer facilities and technical support would encourage teachers to embrace CALL more enthusiastically in their classrooms (Ghavifekr and Rosdy, 2015).Nim & Son (2009) highlighted teachers' training to equip teachers with proper methodology and practical skills for using CALL as essential in empowering and promote successful CALL integration.

2.2.1 Teachers' Attitude towards CALL

Researchers such as Albirini (2006) highlighted the crucial role of teachers' attitudes towards technology. In his research indicated that teachers' positive attitudes towards CALL is associated with greater ease in integrating the technology into teaching.

According to Galvis (2012) teachers' personal attitudes significantly influence their decisions regarding the use of technology. Gilakjani and Leong (2012) have also listed attitudes of teachers towards computers as a major factor affecting the successful implementation of CALL in language classrooms, whether positive or negative.Sarıçoban (2013) noted that the performance of students using computer technology depends largely on the attitudes of teachers and their willingness to embrace technology in education. In a similar study, (Kafu and Chikoko 2019) revealed that the extent to which technology is implemented in education

depends on teachers' positive attitudes towards it, and successful technology integration heavily relies on teachers' support and attitudes.

Other researchers, including Blau and Peled (2012); Gupta et al.(2021) also found that teachers' attitudes and beliefs towards technology significantly influence the successful integration of CALL into language teaching. Positive attitudes among teachers towards the use of technology lead to more effective adaption and integration into teaching and learning processes.

Therefore, teachers' attitudes towards technology, particularly CALL, play a critical role in its successful implementation in language classrooms. Positive attitudes toward the use of technology enable teachers effectively integrate CALL, leading to the students' performance and enhanced language learning experiences. Thus, fostering positive attitudes and providing adequate support and training for teachers in the use CALL can contribute to the effective integration of technology in language education.

2.2.2 The role of Teachers' Computer Skills to the implementation of CALL

As per Nim Park & Son (2009) findings teachers' decisions to utilize Computer-Assisted Language Learning (CALL) are significantly influenced by their Computer Skills and knowledge. Talbi and Sekou (2003) also conclude that Teachers' Computer Skills helps Teachers to provide timely feedback, facilitate pair and group work, and encourage exploratory and comprehensive learning. Computers can enable these benefits and make language learning more enjoyable, efficient, and effective. However, realizing these benefits requires teachers to possess adequate computer skills (Kiliçkaya & Seferoglu, 2013).

Nami (2021) in his research concluded that language teachers effectively integrate CALL, into their daily teaching practices, they must possess relevant ICT literacy. This would allow them to understand technologies better and develop their pedagogical knowledge in teaching. Furthermore, Yildirim (2000) argued that the successful implementation of CALL depends on teachers' proficiency in using computers, as it directly effects the scores of English language learners.Similarly, Hedayati, Reynolds and Bown (2018) concluded that the effective integration and use of CALL in language education, depends not only on having appropriate resources and technology but also on the computer literacy and proficiency of teachers. As such, providing teachers with professional development to enhance their CALL literacy is crucial to fully harness the potential advantages of CALL in English language learning environments (Perren, 2018).

2.2.3 Effect of Teachers' Training on the use of CALL

As per research findings, Kim (2023) showed that providing necessary resources and introducing technological tools to pre-service and in-service teachers during CALL teacher training may lead to the automatic adoption of technology. Researchers such as Yildirim (2000) found that teachers training programs in ICT significantly contribute to improving teachers' Computer capabilities and boosting their confidence in using technology. The study conducted by Kiliçkaya & Seferoglu (2013) demonstrated that providing ICT training to language teachers enables them to incorporate a variety of CALL-based materials into their classrooms effectively.

Alkahtani, (2017) highlighted various issues that arise regarding the integration of ICT tools into school programs, but he emphasized the need for appropriate training to update teachers in digital education. Vi (2011) supported this notion by revealing that training in ICT significantly improves teachers' knowledge and skills, ultimately enhancing students' motivation in learning.

If the integration of CALL into language teaching is to be normalized and its benefits fully realized, an emphasis on teacher training is crucial (Vi, 2011). The CALL training provided to teachers with continuous professional development opportunities focused on technology integration that foster confident and competent in teachers (Albion, Baruch, Tondeur and Peeraer, 2015).

2.3. Students' Motivation towards CALL on Learning English Subject

Traditional teaching methods may not always yield significant impacts on learners, especially in today's complex language learning landscape. As technology has advanced, it has become a powerful tool for fostering innovation and motivating learners to engage in their educational journey (Muhammad and Saira, 2019). Recognizing the importance of motivation in language learning, teachers are seeking new ways to motivate their students, understanding of what motivates learners before implementing any activity in class (Richards, 2015). Taking an integrated approach to motivation in English teaching is deemed the most effective method to enhance students' performance (Ahmed et al., 2019). By integrating motivational elements into the teaching process, teachers can create a learning environment that actively encourages students to participate, explore, and take ownership of their learning (Schunk and Meece, 2016).

By leveraging technology as a motivational tool, teachers can foster a culture of innovation and enthusiasm, driving students to be more engaged and motivated in their language learning experiences (Reinders and Warschauer, 2010).

Grenner & Jönsson (2019) argued that CALL is a motivational method that yields beneficial results, by providing authentic skills in a learner-centered environment. Ahmed et al. (2019) indicated that the CALL approach positively affects students' motivation to learn English. Afshari (2013) stated that computer technology enhances English language learning and the use of ICT creates a powerful learning environment and creates motivation intrinsically into students to learn and participate in classroom activities. Musmar (2018) showed how CALL has a great role in boosting students' motivation in L2, catering to student diversity, promoting self-directed language learning, and scaffolding while learning English.

Since students see a computer as a trendy and useful tool that enables them to be close to the world, the use of the computer in their English language learning is very motivating, offering a wide range of authentic material and promoting the development of new learning strategies (Hatami, 2014). In line with this idea, Grenner &Jönsson (2019) identified the CALL as a motivational method that yielded beneficial results, by providing authentic materials in a learner-centered environment. Using CALL enhances the motivation of the teachers and students in the language learning process (Yuliana, 2021).

Azmi (2017) highlighted that the integration of Information and Communication Technologies in English teaching and learning has a positive impact on learners' motivation in learning. The use of ICT tools in language teaching make learners more engaged and enthusiastic about their learning process, thus enhancing their motivation to learn more (Ibrahim and Ali, 2019). Additionally, the integration of ICT empowers learners to become more autonomous in their learning. By utilizing technology, students can access a wide range of language resources and practice materials independently, taking greater control of their learning journey. This autonomy fosters a sense of responsibility and ownership, which further contributes to their overall motivation to succeed in language learning (Kurt, 2014).

In his research, Azmi (2017) uncovered that integration of CALL into language classrooms can serve as a strong motivator for learners, encouraging them to continue their learning journey with increased enthusiasm and passion. However, it is essential to implement CALL with careful planning and well-defined objectives. Merely using technology without a clear purpose and direction may result in a waste of time and effort (Moriam, 2008). Therefore,

teachers should design pedagogically sound and purposeful activities that align with the language learning goals and leverage technology effectively to motivate and support students' language development. (Colpaert and Hubbard, 2022). By thoughtfully incorporating CALL and information technology into ESL teaching, teachers can create a motivating and dynamic learning environment that fosters learners' creativity, passion, and engagement. This, in turn, leads to enhanced language learning and more effective language learning outcomes (Hartnell-Young, 2006).

When examining motivation in the context of language learning, it is important to differentiate between foreign language learning and second language learning. In both cases, Computer-Assisted Language Learning (CALL) has shown the ability to increase students' motivation levels. Anything that enhances motivation is considered as a key factor for success in a language learning journey (Enayati, 2015). According to Mahapatra (2020), if a school aims to improve students' performance and motivation, it is crucial to develop an awareness of students' needs and preferences regarding CALL. Understanding students' attitudes and interests towards technology can help shape effective CALL practices that boost their motivation and engagement in language learning. The study by Nachoua (2012) supported the idea that CALL is an effective method to enhance students' motivation in language learning when it is used in the teaching and learning of English as a second language, as it positively influences students' motivation, which consequently leads to improved performance in language tests. Subsequently, the use of technology, particularly CALL, can be a powerful tool to create a more motivating and stimulating language-learning environment (Lai, 2006).

2.3.1 Students' Attitude towards CALL

According to Teo (2008) positive attitudes towards the use of technology is significantly influence the academic performance. This notion is further supported by a study conducted by Ayres (2002) where the findings revealed that the positive attitudes towards using computers in foreign language enhances students' performance. Henry and Thorsen (2019) pointed out that the success rate of integrating digital technology in language learning is largely dependent on the learners' acceptance of it.

In the study conducted by Hussain (2017) the findings indicated that students with higher levels of positive attitudes towards technology demonstrated higher academic achievement in Technical Education, while those with lower levels of attitude towards technology scored

lower marks. The study further established a significant relationship between students' attitude toward technology and their academic achievement in Technical Education. In a similar study by Abbas (2020) argued that students' attitudes toward ICT had significant direct and indirect effects on their academic performance, the study recommended that teachers should integrate technology into teaching to enhance students' academic performance.

Enayati (2015) concluded that students who have positive attitudes towards CALL enriches their knowledge in Language and plays a crucial role in developing students' overall academic skills. Since English is the language of instruction in most of schools, performance in this language can serve as a determining factor for success in other subjects and CALL is in medium (Betty, 2016).

Therefore, by integrating CALL effectively in language learning, teachers can use technology to foster students' positive attitudes towards language learning and provide students with a more engaging, motivated and supportive learning environment. This, in turn, can contribute to improved English proficiency and overall academic performance among students.

Hence, students' attitudes towards technology, particularly CALL, play a pivotal role in the effective implementation and success of Technology Assisted Language Learning. By fostering positive attitudes towards technology, teachers can ensure a more effective and engaging Language Learning experience, leading to improve language learning and learning outcomes (Hussain and Akhter, 2016).

2.3.2 Students' Ability towards ICT

Students' proficiency in ICT cannot be overstated, as it plays a pivotal role in various aspects of modern life (Johnson, 2019). Students equipped with ICT competencies can navigate online libraries, engage in virtual classrooms, and leverage multimedia tools to enhance their understanding of academic concepts. In academia, ICT proficiency is increasingly becoming a prerequisite for success (Wang, 2020). In today's digital workplace, employers seek candidates who possess skills in using ICT as it empowers students to become active participants in the digital society (Selwyn, 2016).

In essence, the ability of students to utilize ICT is crucial for their academic, professional, and societal growth. By fostering ICT proficiency among students, educators and

policymakers can equip the next generation with the tools they need to thrive in an increasingly digital and interconnected world.

2.4 Availability of teaching resources to integrate CALL in teaching English

According to Hennessy et al.(2005) the integration of Computer-Assisted Language Learning is characterized by teachers using computer technologies to improve the effectiveness of familiar teaching activities. CALL integration involves utilizing computer tools and resources to facilitate language instruction, enabling teachers to provide a more dynamic and adapted learning experience for their students.

Challenges in the field of English language teaching require new methodologies. It requires new infrastructure in the form of teaching aids that are digital in nature. Technologies are then required such that students get enough exposure English practices (Balamayuranathan, 2019). In the conclusion of his study, Balamayuranathan (2019) stated that, besides developing the four language skills, CALL materials are excellent for developing students' team spirit, individual competence, as well as pair work. The establishment of CALL resources offers numerous possibilities for learning English as a second language and increase performance in that subject.

Bobunova (2021) confirmed that structuring electronic resources encourage students' active engagement in learning. The study conducted by Musmar (2018) focused on the use of CALL materials in English as a Second Language (ESL) classrooms highlighted the beneficial impact of CALL activities, which include reducing tension in English learning, boosting motivation, catering for student diversity, promoting self-directed language learning, and providing scaffolding to support learners during the language learning process.

2.4.1 The role of Computer Laboratories in integration of CALL

Hedges et al. (2003) demonstrated a positive relationship between computer use and academic achievement. Their research findings suggested that technology could indeed bolster student outcomes in education. One effective way of utilizing technology in language learning is to establish a language laboratory (Oymak , 2017).

According to Poudel (2022) using language laboratories in English learning, students access a wide range of interactive resources, multimedia content, and language practice tools, all of which contribute to a more engaging and effective learning experience. Access to language laboratories can facilitate individualized instruction, allowing students to learn at their own

pace and focus on areas where they need additional support. Moreover, laboratories with technology-based in language learning often provides immediate feedback, which can be instrumental in reinforcing correct language usage and addressing mistakes. This feedback loop helps students develop language proficiency more efficiently and with greater accuracy. The positive impact of technology on language learning is evident through improved attitudes towards learning and enhanced academic performance(Shadiev & Yang, 2020). When utilized thoughtfully and purposefully, technology can be a powerful tool to complement traditional language teaching methods, leading to the successful of language learning outcomes (Galvis 2018).

Fiagbe (2020) concluded that computer labs are a critical part of a schools technology resource, offering a primary means of motivating students. This reinforces the notion that providing access to technology-rich environments, like computer labs, can have a profound impact on student engagement and performance. Gupta et al. (2021) expanded this concept by including ICT equipped classrooms and digital libraries with the internet. It creates a technology-enhanced learning atmosphere at schools. The purpose of this approach was to further motivate students and facilitate a more student-centered learning environment. Taken together, these studies suggest that the integration of technology, particularly using computer labs, ICT-equipped classrooms, and digital libraries, can significantly enhance student-centered and improve students' performance in English Language.

2.4.2 The role of internet in CALL integration

The internet is considered as the best alternative to immersion in the English learning environment. Student engagement with online content tends to be more robust compared to print-based resources. Internet users often frequent certain websites or participate in online conversations to exchange ideas and information. Nowadays, both students and teachers are increasingly integrating digital technology into their personal and academic lives (Ammani, 2016).The implementation of Information Communication Technology Assisted Language Learning (ICTALL), which includes computers and the internet, introduces a method of teaching and learning that is not dependent on printed materials rather web- based learning. The internet provides a wealth of resources that are easily accessible to students. Motivation can be enhanced through various mediums available online, such as video clips, audio sounds, and visual presentations (Eyovi & Amah, 2016). These interactive and engaging materials provide an immersive learning experience that can boost students' motivation and

facilitate a more comprehensive understanding of the English language. By harnessing the power of the internet and digital technology, teachers can create a dynamic and stimulating learning environment that enhances language acquisition and motivates learners to actively participate in the learning process. The integration of ICT in English language teaching and learning provides a flexible and effective approach to language instruction, leading to improved learning outcomes.

The study conducted by Yuliana (2021)highlighted how the internet serves as a powerful motivator for learning, especially through websites, in comparison to printed text. The internet facilitates the sharing of information and ideas, offering a convenient and efficient way to save time and energy. Both students and teachers benefit from the practicality of online learning, as they can engage in education without leaving their homes. The internet provides easy access to a wide range of learning materials, making it effortless for students to find study resources and complete assignments. Online platforms enable the retrieval of missing lessons through worksheets, recorded videos, and notes, ensuring that students have continuous access to learning materials. This accessibility contributes to enhanced motivation and engagement in the learning process.

Gupta et al. (2021) further emphasized the dominance of the internet in the world, with computers in schools becoming essential tools in educational environments. This highlights the growing significance of digital technology, particularly the internet, in revolutionizing the way students and teachers interact with educational content and resources.

Therefore, the internet plays a crucial role in motivating learning by providing a wealth of resources, facilitating communication, and enabling convenient access to educational materials. As technology continues to advance, the internet's influence on education is likely to continue growing, shaping a more dynamic and interactive learning experience for students and teachers. The rapid advancement of computer and information technology has created a favorable external environment for English teaching worldwide. Millions of English learners now have access to rich learning materials through information technology. This technology has presented teachers with an opportunity to transform their pedagogical strategies and enhance the efficiency of teaching and learning (Raad,2020). Computer-Assisted Language Learning (CALL), as highlighted by Vi (2011), has the potential to support and enhance the learning process. Through access to computers and the internet, students can acquire knowledge beyond what is available through their teachers and physical resources at school.

The vast online resources open up new avenues for self-directed learning, enabling students to explore diverse materials, authentic content and interactive tools that complement traditional classroom instruction. Furthermore, the integration of CALL allows for personalized and adaptive learning experiences. Students can progress at their own pace and focus on areas where they need additional practice, which can lead to more effective language acquisition and skill development. Therefore, information technology, including CALL, has revolutionized English teaching by providing abundant learning materials and expanding the possibilities for both teachers and learners. It empowers teachers with innovative approaches to teaching and enables students to access a wealth of knowledge beyond the confines of the physical classroom. As technology continues to evolve, the potential for further advancements in English language teaching and learning is promising.

2.4.3 English Learning Applications

In Ali (2018) research, the focus was on investigating the impact of computer-assisted English learning on Saudi Arabian students. The primary objective was to determine if learning English through a combination of computer instruction and traditional methods yielded significantly different results compared to non-computer learning, which relied solely on traditional methods.

The study comprised two groups: a control group and an experimental group. The control group was taught using the regular prescribed textbook and followed the traditional teaching method. On the other hand, the experimental group received a unique application that was based on Duolingo, English language learning application. To evaluate the effectiveness of the intervention, two tests were conducted: a pre-test immediately at the end of the instructional period and a delayed post-test three weeks after the instructional period. Both groups took tests at the specified intervals. The findings of the study revealed that the performance of the experimental group, which received computer-assisted language learning through Duolingo, was significantly better than that of the control group, which used traditional teaching methods, during the post-tests. The results suggested that integrating computer-assisted language learning into traditional instruction could lead to improved language learning outcomes for students. The use of computer-based applications as instructional materials and language learning software provides an additional and effective learning to the performance among English Language students. The use of educational apps can greatly enhance the teaching approach of ESL instructors by facilitating the proper

preparation of exercises that cater for both visual and auditory senses. Providing students with a wealth of engaging and realistic learning resources, and improving their efficiency in language production, collaboration, and confidence (Bimrew, Sendekie and Belay, 2022).Implementing ICT applications in the classroom not only shifts the learning environment to be more student-centered, but also lightens the teachers' classroom responsibilities. The integration of ICT in the classroom results in a broader range of English content, context, and innovative pedagogical methods. This leads to more interactive, flexible, and innovative learning (Bimrew, et. al., 2022).

The integration of English learning through applications fosters a more diverse and dynamic learning space that can cater to the varying learning styles of students(Cardino, Ortega and Cruz, 2020). According to Ghavifekr and Ghani (2014) the use of ICT applications in English teaching signifies a progressive and beneficial shift in educational practices. The findings of Khafaga and Alghawli (2021) indicated that the use of CALL applications has a significantly positive impact on the learning outcomes of the students and suggests that incorporating CALL into ESL contexts can effectively enhance students' learning achievements and overall performance in English language learning. Scagnoli, Ruth and Jinhee (2014) emphasized the use of CALL applications in ESL education to offer a more interactive and engaging learning experience, enabling students to benefit from a variety of resources.

In the study conducted by Roohani (2012) showed that vocabulary skills were more effectively taught by the computer assisted approach than with the conventional classroom instructional approach, findings revealed that students preferred Computer-Assisted Approach to be used as a complement to conventional classroom instruction in vocabulary skills. The researcher concluded that Computer Assisted Approach could enrich the multi-context vocabulary learning experience. Based on different researches finding and status of the ongoing research, a web-based CALL acts as an approach to enhance students' performance in English Subject.

2.5 Theoretical Framework: Constructivist Theory

This study was guided by Constructivist theory by Lev Vygotsky's (1896-1934). In the early 20th century, Russian psychologist Lev Vygotsky developed a theory of learning that has come to be known as constructivism. This theory holds that learners are actively involved in constructing their own knowledge, rather than passively receiving information from others.

Vygotsky's theory has been particularly influential in the field of education, where it has been used to inform teaching methods and educational practices.

Constructivism is not a single or unified theory; rather, it is characterized by plurality and multiple perspectives (Yilmaz, 2008).This theory, have had an impact on the development of technology enhanced on linguistics (Aljohani, 2017).

According to Aljohani (2017) as cited in Gul (2016) indicated that Constructivism suggests the learners' needs to be proactive in how they learn, taking new information, and shaping it to their understanding, rather than just sitting still and passively absorbing information like a sponge. In recent decades, this method of learning has gradually become more popular in the school system. Therefore, through the use of CALL in teaching and learning English, constructivist learning strategies improve academic achievement, high order thinking skills, the social and emotional skills of students as they interact with worldwide society to add on to what has already gotten from teachers to improve the performance (Akpan and Beard, 2016).

2.6. Summary of the Chapter and gap identification

The integration of Computer-Assisted Language Learning (CALL) has brought significant changes in teaching patterns, leveraging new technological advancements. Therefore, the impact of CALL can be assessed both quantitatively and qualitatively, considering factors such as hardware and software usage, budgetary considerations, internet access, and shifts in the roles of teachers and learners. CALL benefits both teachers and learners, and its potential to bring about societal change and enhance student performance is considerable. With continuous technological advancement, the progress of CALL is expected to continue and strengthen its position in improving students' performance.

Despite the growing body of research on CALL, there is an area that remains underrepresented in the literature. Specifically, the literature has not adequately addressed how students with visual impairments can benefit from CALL integration in English Language Learning. In order to make the approach inclusive, it is essential to consider the specific needs and challenges faced by students with visual impairment and explore how CALL can be adapted to cater for their unique learning requirements.

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This study aims to investigate the effect of the use of the Computer Assisted Language Learning in English language learning in Nyanza District Technical Secondary Schools to students' performance on English subject. This chapter gives a detail on the research methodology and procedures adopted for data collection. It starts with a description of the research design, research setting, research population, sample size and sampling techniques, research instruments and data collection, ends with data analysis and ethical considerations.

3.2 Research Design

This research adopted a descriptive research design. Rillo and Alieto (2018) as cited in Calderon (2006) defined descriptive research as a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships and then making adequate and accurate interpretation about such data with or without or sometimes minimal aid of statistical methods. In addition, this method ascertains prevailing conditions of facts in a group under study that gives either qualitative or quantitative, or both, descriptions of the general characteristics of the group as results.

3.3 Research Setting

Research setting refers to the physical, social, or virtual environment where research activities occur (Creswell, 2017). It encompasses the context in which data is collected, experiments are conducted, and observations are made, influencing the validity and generalizability of research findings. This research took place in Southern Province of Rwanda, in Nyanza Districts, within 8 Technical secondary schools.

3.4 Research Population

The population of this study comprises 359 Level 5 students Construction Technology and 24 English Teachers from 8 Technical Secondary Schools (TSS) situated in Nyanza District.

3.5. Sample Size and Sampling Procedure

Sampling involves the procedure of choosing a statistically indicative subset of individuals from the larger population of interest (Majid, 2018). According to Biggerstaff (2012) a research study's sample must be particular but planned.

3.5.1 Sample Size

According to Kothari (2004) no fixed number and no fixed percentage is ideal, rather it is the circumstances of the study situation that determines what number or what percentage of the population should be studied. Therefore, in total, 129 people formed the sample to the present study. These included 105 students, 24 teachers.

3.5.2 Sampling Procedure

In this study, the stratified random sampling was used to select teachers according to the subject they teach (English), while students were classified according to their classes and then simple random sampling was applied to choose level 5 students. Researcher used simple random sampling as it is often utilized in quantitative research designs and often used for large number (Rahi, 2017).

3.6 Research Instruments

In this study, data were collected by means of questionnaires containing four scaling questions. According to Abawi (2017) The questionnaire should be adequate based on the fact that it helps evaluate aspects like subject behaviors, preferences, intentions, attitudes, and opinions, which align with the scope of this research.

Therefore, the statements from questionnaires were aimed at capturing information pertaining to the study variables, focusing on Teachers' adaptation to the use of CALL and Students' motivation towards CALL. All the statements used close-ended statements.

3.7 Data Analysis

Data were coded and entered into the computer through the statistical Package for the Social Sciences tool (SPSS). Descriptive statistics by measuring frequencies, percentages, means and standard deviation were analysed. Inferential statistics, in the form of Pearson correlation coefficient and Spearman rho, were used to establish the relationship between the study

variables. Regression analysis was used to get how Independent Variable affects Dependent Variable.

3.8 Ethical Considerations

In this context, ethical considerations extend beyond the methods and procedures employed to encompass the subject matter itself. Careful attention was paid to ensuring the protection of respondents' rights and well-being during the data collection process. Measures were taken to uphold anonymity, confidentiality, and privacy for the participants. Prior permission was secured from district administrators and relevant school authorities to facilitate data collection from the respondents. The questionnaires were accompanied by a cover letter (see Appendix I) outlining the study's objectives and guaranteeing the confidentiality of the shared information. Respondents were explicitly encouraged to provide honest answers without any coercion. Importantly, no participant was forced into participating in the study.

Participants were assured that their responses would be treated with the utmost confidentiality. Moreover, they were informed that the information they provided would solely be utilized for academic purposes. The study's outcomes were presented in an unbiased manner, with no manipulation or undue influence exerted by the researcher in any aspect.

CHAPTER FOUR
PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.0 Introduction

This chapter presents the findings from data collected after being analyzed. It starts with response rate, demographic characteristics of respondents, after then, data presentation and analysis. The findings of the study are discussed in line with the study objectives. The analysis-delved into teachers' adaptation, students' motivation and availability of teaching and learning resources to implement the use of CALL in Nyanza Technical Secondary Schools. Findings were presented using descriptive statistics and inferential statistics. This was done in tables and discussions thereof.

4.1 Response Rate

A total of 129 questionnaires, including 24 for teachers, 105 for students that were distributed, in selected TSS in Nyanza District were filled and returned, representing a response rate of 100%.

4.2 Demographic Characteristic of Respondents

This study revealed information about teachers of English as subject and students, from 8 Nyanza TSS, their gender, age and school status were taken into consideration. The findings are discussed in Table 4.1.

Table 4. 1: Distribution of respondents' demographic characteristics

			Frequency Distribution	Percentage	N
Students	**Age**	12 to 17	6	5.71 %	**105**
		18 to 23	97	92.38 %	
		24 to 30	2	1.9 %	
	Gender	Male	72	68.57 %	
		Female	33	31.42 %	
	School Status	Public	83	79.04 %	
		private	22	20.96 %	
Teachers	**Age**	18 to 23	1	4.16 %	**24**
		24 to 29	5	20.83 %	
		30 to 35	15	62.5 %	
		36 to 40	2	8.33 %	
		Above 41	1	4.16 %	
	Gender	Male	14	58.33 %	
		Female	10	41.66 %	
	School Status	Public	16	66.66 %	
		private	6	25 %	
		Government Aided	2	8.33 %	
Total N					**129**

Source: *Primary Data, Researcher compilation, 2023*

Considering the data from table 4.1, 97 of the respondents, represented by 92.38 % of students are aged between 18 to 23 years old, followed by 6 (5.71 %) who, aged between 12 and 17. However, 2(1.9 %) students aged between 24 to 30 years old. Therefore, the study concluded that most of students who study in Level 5 in TSS are aged between18 and 23.

Furthermore, 72 (68.57 %) of students respondents are males and 33 (31.42 %) females. In addition, this study also sought to indicate the school status of the participants; therefore, 83 (79.04 %) students were from public schools, and 22 (20.96 %) students represented private schools. Therefore, Nyanza District has more public Technical Secondary Schools than privates.

On the other hand, findings indicated that teachers 15(62.5 %) who participated in this study were aged between 30 and 35, followed by 5 (20.83 %) who aged between 24 and 29. Teachers aged between 36 and 40 were 2 (8.33 %) and only 1 was aged between 18 and 23 while one aged 41years old. Therefore, the study' findings indicates that large number of teachers of English in Nyanza TSSs are aged between 30 and 35 years old. Furthermore, as far as gender is concerned, 14 (58.33%) teachers are males while 10 (41.66 %) are females. Therefore, there was no big difference between male and female teachers who were teaching English as subject in Nyanza TSSs. The study findings indicated that; 16 (66.66 %) of schools are public, 6 (25 %) are private and 2 (8.33 %) are government aided.

4.3 Presentation of Findings

In this research, the researcher aimed to understand the viewpoints of the participants regarding different variables investigated in the study. Participants' degrees of agreement or disagreement were gauged using a Likert scale ranging from 1 to 4, encompassing options from "Strongly Agree" to "Strongly Disagree." The outcomes were then organized and presented in connection to the specific study variables, as elaborated in subsequent discussions.

4.3.1 Teachers' Adaptation to the use of CALL

The analysis aimed to determine how participants perceived the effect of teachers' adaptation on the integration of Computer Assisted Language Learning (CALL) while teaching the English subject. Initially, the distribution of responses in terms of frequencies and corresponding percentages across the Likert scale is displayed in Table 4.2.

Table 4. 2: Distribution of responses to the teachers' Adaptation to the use of CALL

Statements	N	SA	A	D	SD	Mean	Std
i. My attitude toward the use of technology influences the integration of CALL in the teaching of English language	24	2(8.3%)	22(91.7%)	0	0	3.92	. 282
ii. Integrating CALL affects teaching of English language positively hence improve students' performance	24	12(50%)	12(50%)	0	0	3.50	.511
iii. Integration of CALL as teachers of English makes easy my job of teaching since I have less tasks	24	15(62.5%)	7(29.2%)	2(8.3%)	0	3.54	.658
iv. CALL is appropriate means of getting variety information when teaching English	24	14(58.3%)	10(41.7%)	0	0	3.5833	.50361
v. The integration of CALL in teaching of English language is quite tasking and involving students in real learning	24	15(62.5%)	9(37.5 %)	0	0	3.63	.495
vi. The availability of enough computer skilled teachers of English has improved students' performance in English.	24	0	14(58.3%)	10(41.7%)	0	3.58	.504
vii. Through training in the use of ICT in teaching, teachers acquire confidence in the mastery of English language.	24	4(16.7%)	16(66.7%)	3(12.5%)	1(4.2 %)	2.96	.690

Source: *Primary Data, Researcher compilation, 2023*

It was observed from table 4.2 that most of the respondents strongly agreed and agreed that teachers' attitude toward the use of technology influences the integration of CALL in the teaching of English language. On the other hand, teachers further agreed that integrating CALL affects teaching of English language positively, hence improving students' performance. It was proven by the respective mean of 3.92 and 3.50 for both statements. Furthermore, teachers strongly agreed that integration of CALL as teachers of English makes easy their job of teaching since and agreed that CALL is an appropriate means of getting variety information when they are teaching English. This is the fact confirmed by mean of 3.54 and 3.58 for respective statements. The study further established the perception in regard of teachers' training in the use of ICT in teaching. The mean of 2.96 and standard deviations of .690 were established to enable the researcher to draw inferences from the findings.

This implies that teachers are adaptive to the CALL and have positive attitude to its integration in English teaching. Sarıçoban (2013) asserted that the performance of students who use computer technology depends largely on the attitudes of teachers and their willingness to embrace technology in education. This also confirms the findings of Kafu (2019) who claimed that the extent to which technology is implemented in education depends on teachers' positive attitudes towards it, and successful technology integration heavily relies on teachers' adaptation.

The view from table 4.2 also indicates that through training in the use of ICT in teaching, teachers acquire confidence in the mastery of English language hence students' performance enhanced. This was announced by Kiliçkaya & Seferoglu (2013) who demonstrated that providing ICT training to language teachers enables them to incorporate a variety of CALL-based materials and tools into their classrooms effectively. To confirm findings, the descriptive analysis from table 4.2 were supported with inferential analysis which demonstrated the positive significant correlation between teachers' adaptation and students' performance since the P value equals 0.020, which is less than the correlation significant of 0.05 as shown in table 4.3.

Table 4. 3: The relationship between teachers' adaptation to the use of CALL and students' performance in English

		Teachers Adaptation	Students' Performance
Teachers' Adaptation	Pearson Correlation	1	.187*
	Sig. (2-tailed)		.057
	N	24	105
Students' Performance	Pearson Correlation	.227*	1
	Sig. (2-tailed)	.020	
	N	24	105

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.3 shows that there was a positive significant correlation between teachers' adaptation and students' performance since P value equals 0.020 (r=0.227, P=0.020). However, the correlation was found to be statistically significant at P<.05 level of significance. As a result, we conclude that teachers' adaptation to the use of CALL in English affects positively the performance of students in Nyanza Technical Secondary Schools.

4.3.2 Students' Motivation towards CALL

The analysis was done to establish how students are motivated when learning English through CALL. The findings were as shown in table 4.3.

Table 4. 4: Distribution of responses regarding to the students' Motivation towards CALL

Statements		N	SA	A	D	SD	Mean	Std
i.	I consider learning English using computer is important because as an educated person I am supposed to be able to use technology in language learning	105	18(17.1%)	62(59.0%)	7(6.7%)	18(17.1%)	2.24	.936
ii.	Computer in English class is important because it enables me to work at my own pace.	105	35(33.3%)	52(49.5%)	11(10.5%)	7(6.7%)	1.90	.838
iii.	I prefer using a computer while learning English because I get more understanding than when teacher explains only with printed copies	105	23(21.9%)	69(65.7%)	11(10.5%)	2(1.9%)	1.924	.6309
iv.	Learning English using computer is important to me because it enables me to add on what my teacher taught in class	105	32(30.5%)	57(54.3%)	11(10.5%)	5(4.8%)	1.90	.771
v.	I often use the computer in learning English	105	7(6.7%)	23(21.9%)	47(44.8%)	28(26.7%)	2.91	.867
vi.	My schools has put more emphasis to use ICT for all students from all levels	105	8(7.6%)	49(46.7%)	32(30.5%)	16(15.2%)	2.53	.844
vii.	My Teacher of English uses ICT tools that I am familiar with	105	23(21.9%)	72(68.6%)	7(6.7%)	3(2.9%)	1.90	.628
viii.	I am pleased with the school's support in the teaching English, they offer	105	9(8.6%)	61(58.1%)	25(23.8%)	10(9.5%)	2.34	.770
ix.	I have enough skills about the use of ICT in learning English	105	4(3.8%)	32(30.5%)	53(50.5%)	16(15.2%)	2.77	.750

Source: *Primary Data, Researcher compilation, 2023*

Table 4.4 shows that students were in strongly agreement and agreement with the statement "I consider learning English using a computer is important because, as an educated person I am supposed to be able to use technology in language learning" with, the mean of 2.24 and standard of deviation of .936. The findings further indicated that students agreed and strongly agreed with the mean of 1.90 and standard deviation of.838 that it is important to learn English using a computer. Further, students were in agreement with the mean of 1.90 and standard deviation of .771 agreed that learning English using a computer is important to them because it enables them to add to what their teacher taught in class.

This infers that students are motivated to learn English through Computer-Assisted, as they prefer computer-based learning to traditional teaching methods that rely solely on printed materials. In fact as per Grenner & Jönsson (2019) who argued that motivated students are more likely to be proactive, persistent, and enthusiastic in English language learning journey. By leveraging technology as a motivational tool, teachers can foster a culture of innovation and enthusiasm, driving students to be more engaged and motivated in their language learning experiences. Enayati (2015) argued that anything that enhances motivation is considered as a key factor for success in a language learning. Data analyzed from table 4.4 were completed by inferential analysis which indicated the positive significant between students' motivation towards CALL and their performance in English subject with the P-value of 0.015, which is less than 0.05 of the correlation signification as revealed in table 4.5.

Table 4. 5: Relationship between students' motivation and their performance in English

			Students Motivation	Students' Performance
Spearman's rho	Students Motivation	Correlation Coefficient	1.000	.300*
		Sig. (2-tailed)		.015
	Students Performance	Correlation Coefficient	.300*	1.000
		Sig. (2-tailed)	.015	

*a. Correlation is significant at the 0.05 level (2-tailed). b. Listwise N=105.

Table 4.5 shows the relationship between students' motivation towards CALL and their performance in English. The findings showed that there was a positive correlation between

students' motivation and students' performance (r=.300, *n*=105, p<.05).The correlation between these two variables was significant as the P-value was 0.015, which is less than 0.05.This indicated that students' motivation towards the use of CALL in English subject improves their performance in English. This implies that; in Nyanza Technical Secondary Schools, the level of students' motivation towards CALL affects positively their performance in English language learning.

4.3.3. Impact of CALL Integration on English Subject Performance

The statement of the problem presented revolves around the English subject grades of level 5 students in three technical schools of 60%, 56%, and 58% were recorded during the end-of-term two assessments in 2023 (see attachment III) that are different from previous years in performance. This is after introduction and emphasis on the use of Information and Communication Technology (ICT) in teaching across all subjects in technical secondary schools in Rwanda.

Based on the results shown, one could hypothesize various factors influencing English subject performance, such as the effectiveness of ICT integration in teaching, teacher training, curriculum alignment, student engagement, and socio-economic factors affecting access to technology. The problem statement sets the stage for further investigation and analysis to understand the dynamics behind the recorded English subject grades in the given technical schools by testing two research hypotheses related to teachers' adaptation to the use of CALL and Students motivation towards CALL, results are presented here below.

4.2.3. Hypothesizes Regression Analysis

The study seeks to investigate the effect of teachers' adaptation to the use of CALL and Students motivation towards CALL on the students' performance in English Subject. Following hypotheses were proposed. H_1: There is a significantly positive impact of teachers' adaptation to the use of CALL on Students performance in English Subject and H_2 There is a significantly positive impact of students' motivation towards CALL on Students performance in English Subject.

The dependent variable (student performance) was regressed on predicting variables of teachers' adaptation and students' motivation. The independent variable significantly predict students' performance, F (2, 102) = 3.141, P<.047, which indicates that the two factors under

the study have a significant impact on student performance. Moreover $R^2 = 0.581$ depicts that the model explains 58.1 % of the variance in students' performance.

Additionally, coefficients were further assessed to ascertain the influence of each of the factors on the criterion variable (students' performance). H_1 evaluates whether teachers' adaptation significantly and positively affects students' performance. The results revealed that teachers adaptation' to the use of CALL significantly and positively affects students' performance (B= .458, t= 2.321, p .022). Hence, H_1 was supported. H_2 evaluates whether students motivation towards CALL has a significantly positive impact on students' performance. The results show that students motivation towards CALL has a significantly positive impact on students' performance (B= .491, t= 2.488, p< 0.014). Consequently, H_2 was supported. The results are presented in table 4.6

Table 4. 6: Impact of Independents Variables on Dependent Variable

Hypotheses	Regression weights	B	t	p-value	Results
H_1	TA → SP	0.458	2.321	0.022*	Supported
H_2	SM → SP	0.491	2.488	0.014*	Supported
R	0.241				
F(2,102)	3.141				

Note. *p<0.05. TA: Teachers' Adaptation to the use of CALL, SM: Students Motivation towards CALL, SP: Students performance.

CHAPTER FIVE
SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

After the completion of data collection and its subsequent analysis, incorporating both descriptive, inferential statistics, and regression analysis, the researcher compiled a comprehensive summary of the major research findings based on the developed literature review. It brings straight answers to the two research questions and draws conclusions and recommendations regarding the relationship between the independent variables and the dependent variable under investigation.

5.2 Summary of Findings

The focus of this research was to examine the effect of the Computer-Assisted Language Learning (CALL) Approach and its impact on Enhancing Students' Performance in English as a subject in TSS located in Nyanza District. Specifically, the study aimed to assess two key aspects related to CALL integration: the first key aspect is the teachers' adaptation to the use of CALL; the second key aspect is the students' motivation towards CALL. The findings were summarized according to each specific objective in the study. This approach allowed for a comprehensive understanding of the effects of CALL integration on English language teaching and learning in the context of Technical Secondary Schools in Nyanza District.

5.2.1 Teachers' adaptation and Students' performance in English subject

In relation to the research objectives, the findings as exposed in the previous chapter prove that teachers' adaptation to the use of CALL in teaching and learning English subject enhance Students' performance in English subject. Furthermore, the research findings reveals teachers view on CALL as an invaluable resource for accessing a wide range of information to bolster their English language teaching. Through the utilization of CALL resources, teachers experience greater ease in delivering lessons and addressing potential teaching obstacles.

However, the study also emphasizes the significance of teacher training in information and communication technology (ICT) for successful English language performance. Teachers acknowledge the necessity of adequate training in leveraging ICT tools and methodologies to enhance students' English proficiency.

5.2.2 Students motivation towards CALL and their performance in English subject

Based on Inferential analysis results related to the second research question, regression analysis prove the positive impact of students' motivation towards CALL on their performance in English Subject. Findings indicate that Students are motivated when they are exposed to CALL rather than traditional method of teaching. The study's findings underscore the significance of empowering students with ICT skills and integrating technology effectively into language classrooms can lead to increased motivation, improved learning outcomes, and enhanced language proficiency.

5.3 Conclusions of the Study

The overall findings clearly indicate that teachers' adaptation to CALL positively impacts students' English performance. Additionally, students' motivation towards CALL enhances their ability to learn English, resulting in improved performance.

However, engaging students directly with CALL tools such as Duolingo for language learning or participating in chat rooms in a native language can significantly enhance performance. Familiarizing students with online tasks and Computer Mediated Communication (CMC) activities help to language learning. Implementing a cyclical approach and incorporating collaborative debriefings further reinforce the effectiveness of CALL in improving language proficiency.

5.4 Recommendations of the Study

The findings of this study allow the following recommendations:

- Ministry of Education, owner of the schools, stakeholders must provide sufficient teaching and learning resources include computers and internet connection to help the integration of CALL in English teaching and learning;
- RTB should train English teachers on the use of CALL approach in teaching;
- Teachers and Parents should encourage and foster students' motivation to use computer in English class;
- RTB should extend the duration allocated for English subject on school timetable;
- Staff should be facilitated to purchase own laptops
- School administrators should establish mechanisms for monitoring the implementation of
- CALL approaches and providing ongoing support to teachers.

By implementing these recommendations, schools and educational institutions in Nyanza District can collaborate for effectively integrate CALL in English teaching to enhance students' performance in English language.

5.5 Suggestions for Further Studies

This research has not thoroughly explored all aspects of the usage of CALL in English teaching and learning use. Therefore, current research suggests further research to explore the integration of CALL to enhance English-speaking skills, should complete the present.

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APPENDICES

Appendix I : Introduction Letter

Ndahayo Jacques
Masters student
University of Rwanda
College of Education
ndahayojacques1990@gmail.com

Dear Respondent,

RE: RESEARCH QUESTIONNAIRE

I am a Masters student at the University of Rwanda, College of Education conducting a research entitled "***Integration of Computer-Assisted Language Learning to Enhance Students' Performance in English as Subject in Technical Secondary Schools, Nyanza District***." This research forms part of the requirement for my masters' qualification. I would appreciate if you would kindly take a little of your time to complete a questionnaire that I will provide. Any information provided from you is purely for academic purposes and all responses will be treated with utmost confidentiality. Your response will be of utmost importance to this study and the information you provide will help improve the academic performance in Technical Secondary Schools. Your cooperation is most valued and appreciated.

I take this opportunity to thank you in advance for your quick return of your completed questionnaire.

Yours Faithfully,



Ndahayo Jacques

Appendix II: Research instruments

SECTION I: BACKGROUND INFORMATION
(Tick the appropriate box corresponding to your information)

1. **Respondent's gender**

Female ☐ Male ☐

2. **Respondent's age**

18 to 23 ☐ 24 to 29 ☐ 30 to 35 ☐ 36 to 40 ☐ 41 to 46 ☐ 46 above ☐

3. **Respondent's school status**

Public ☐ Private ☐ Government aided ☐

SECTION II: TEACHER' ADAPTATION TO THE USE OF CALL

In this section, tick where appropriate using the following scale
(Strongly agree, agree, disagree, and strongly disagree)

SECTION II: TEACHER' ADAPTATION TO THE USE OF CALL

In this section, tick where appropriate using the following scale

(Strongly agree, agree, disagree, and strongly disagree)

S/N	**Statement**	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
	A. Teacher's attitude towards technology				
1	My attitude toward the use technology influences the integration of CALL in the teaching of English language				
2	Integrating CALL affects teaching of English language positively hence improve students' performance				
3	Integration of CALL as teachers of English makes easy my job of teaching since I have less to tasks				
4	CALL is appropriate means of getting variety information when teaching English				
5	The integration of CALL in teaching English language is tasking and involving students in real life				
	B. **Teacher's computer skills**				
6	The availability of enough computer skilled teachers of English has improved students' performance in English.				
	C. **Training related to ICT use**				
7	Through training in the use of ICT in teaching, teachers acquire confidence in the mastery of English language.				

Thank you for your collaboration

SECTION I: BACKGROUND INFORMATION

(Tick the appropriate box corresponding to your information)

1. **Respondent's gender**

Female ☐ Male ☐

2. **Respondent's age**

12 to 17 ☐ 12 to 17 ☐ 18 to 23 ☐ 24 to 30 ☐

3. **Respondent's School status**

Public ☐ Private ☐ Government aided ☐

SECTION II: STUDENTS'MOTIVATION TOWARD THE OF USE CALL

In this section, tick where appropriate using the following scale
(Strongly agree, agree, disagree, and strongly disagree)

S/N	Statements	Strongly agree	Agree	Disagree	Strongly disagree
	A. Ability to use ICT				
1	I consider learning English using computer is important because as an educated person I am supposed to be able to use technology in language learning				
2	Computer in English class is important because it enables me to work at my own pace.				
3	I prefer using a computer while learning English because I get more understanding than when teacher explains only with printed copies				
4	Learning English using computer is important to me because it enables me to add on what my teacher taught in class				
	B. Background in ICT				
5	I often use the computer in learning English				
6	I have enough skills about the use of ICT in learning English				
7	My Teacher of English uses ICT tools that I am familiar with				
8	My schools has put more emphasis to use ICT for all students from all levels				
	C. Attitude toward CALL				
9	I am pleased with the school's support in the teaching English, they offer				
10	Presence of computers in learning makes learning of English friendly				

Thank you for your collaboration!

Appendix III: English marks for Level 5 Students in Construction Technology

S/ N	ACADEMIC YEAR 2023/ SECOND TERM_ ENGLISH MARKS		
	SCHOOL 1	SCHOOL 2	SCHOOL3
1	72	45	56
2	48	50	73
3	65	56	34
4	76	40	75
5	75	46	74
6	54	45	73
7	53	43	72
8	56	41	72
9	43	76	54
10	46	75	75
11	45	40	64
12	45	67	65
13	56	46	45
14	53	74	63
15	47	76	50
16	32	72	75
17	45	79	56
18	45	60	68
19	46	76	67
20	43	34	55
21	76	45	61
22	74	46	53
23	75	55	70
24	61	54	56
25	56	50	56
26	76	65	43
27	34	60	34
28	81	51	45
29	56	60	45
30	67	67	56
31	76	51	53
32	68	48	47
33	65		32
34	78		
35	85		
36	83		
37	49		
38	50		
39	70		
40	60		
41	79		
AVERAGE	**60%**	**56%**	**58%**

Appendix IV: Research ethical clearance

UNIVERSITY of RWANDA

COLLEGE OF EDUCATION

RESEARCH AND INNOVATION OFFICE

Rukara, 15th May, 2023
Ref: 03/DRI-CE/078(a)/ EN/gi/2023

Mr Jacques NDAHAYO
Master Student
Master of Education in English Education
School of Education
UR-CE

Dear Mr Ndahayo,

RE: RESEARCH ETHICAL CLEARANCE FOR YOUR STUDY

Following your application for research clearance for your study entitled: **"Integration of Computer-Assisted Language Learning Approach to enhance students' Performance in English as a Subject in Technical Secondary Schools, Nyanza District;"**

Having reviewed your application and being satisfied with your protocol (research topic, interview schedule/questionnaire and informed consent): this study is ethically acceptable. This ethical clearance shall last for 18 months and is renewable upon your request and presentation of the progress report to the UR-CE Research Screening and Ethics Clearance Committee (RSEC-C) through the Research and Innovation Unit. Please note that you will have to apply for ethical clearance before making changes in the protocol during the implementation phase. The Research and Innovation Unit shall receive a final copy of your study report at the end of your study.

We wish you success in your study.

COLLEGE OF EDUCATION · UNIVERSITY of RWANDA · RESEARCH AND INNOVATION UNIT

Assoc. Prof. Eugene NDABAGA
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Director of Research and Innovation Unit
Tel.: 250788308862
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UR-College of Education

Cc:

- The Principal, CE
- Dean, School of Education
- Dr Irénée Ndayambaje (Supervisor)

Appendix V: Research recommendation

UNIVERSITY of RWANDA

COLLEGE OF EDUCATION

RESEARCH AND INNOVATION UNIT

Rukara, 15th May 2023
Ref: 03/DRI-CE/078(b)/EN/gi/2023

The Mayor
Nyanza District
Southern Province
Rwanda

Re: Research recommendation letter for Mr Jacques NDAHAYO

On behalf of the University of Rwanda-College of Education (UR-CE), I introduce Mr Jacques Ndahayo, a postgraduate student at the School of Education of UR-CE. He is writing his thesis entitled: "**Integration of Computer-Assisted Language Learning Approach to enhance students' Performance in English as a Subject in Technical Secondary Schools, Nyanza District"** to complete his Master of Education in English Education.

The researcher participants of this study are students, Teachers of English and Headmasters from Technical Secondary Schools of the Nyanza District. Therefore, we kindly request your permission for him to collect data for this study.

We very much hope to get your usual cooperation.

Yours sincerely.

COLLEGE OF EDUCATION UNIVERSITY of RWANDA RESEARCH AND INNOVATION UNIT

Assoc. Prof. Eugene NDABAGA
Director of Research and Innovation
University of Rwanda-College of Education
E-mail: ndabagav@yahoo.ie
Mobile: +250788308862

Cc:

- Principal, UR-CE
- Postgraduate Program Coordinator, School of Education
- Dr Irénée Ndayambaje (Supervisor)

Appendix VI: Data collection authorization

REPUBLIC OF RWANDA

SOUTHERN PROVINCE

NYANZA DISTRICT

……25……/……07……/2023

Ref:……N.1.07……/07/02/01/23

NDAHAYO Jacques

Tel: 0788333978

Email: ndahayojacques1990@gmail.com

Re: Your request for Data Collection

Basing on your letter of 28th February 2023 requesting for Academic research in Nyanza District, I have a pleasure to inform you that you are given an opportunity to collect data for your research work;

However, you are requested to use the information given to you for academic purposes only and this research will be carried out in the selected Secondary schools which includes Nyanza TSS, Lycee de Nyanza, Saint Trinite, Nyanza TSS, Busasamana TSS, Maranatha, kavumu TSS and Hanika TSS in Collaboration of Education Unit.

Best regards

NTAZINDA Erasme
The Mayor of Nyanza District

Cc:

- ✓ Director of Education Unit;
- ✓ Head Teacher of Nyanza TSS, Lycee de Nyanza, Saint Trinite, Nyanza TSS, Busasamana TSS, Maranatha, kavumu TSS and Hanika TSS.

Appendix vii: Turnitin receipt

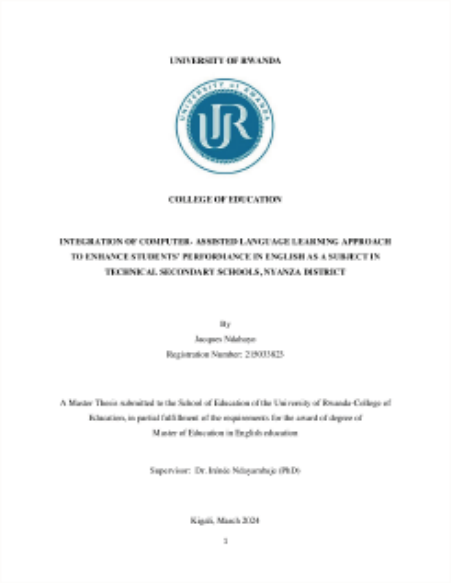
turnitin

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Jacques NDAHAYO
Assignment title:	ndahayo jacques
Submission title:	Masters Thesis
File name:	APPROVED_ASSESSED__FINAL__MED_THESIS_NDAHAYO_JACQ...
File size:	2.11M
Page count:	69
Word count:	15,423
Character count:	96,118
Submission date:	17-Apr-2024 07:14PM (UTC+0300)
Submission ID:	2352853273



UNIVERSITY OF RWANDA

COLLEGE OF EDUCATION

INTEGRATION OF COMPUTER- ASSISTED LANGUAGE LEARNING APPROACH TO ENHANCE STUDENTS' PERFORMANCE IN ENGLISH AS A SUBJECT IN TECHNICAL SECONDARY SCHOOLS, NYANZA DISTRICT

By
Jacques Ndahayo
Registration Number: 219033823

A Master Thesis submitted to the School of Education of the University of Rwanda-College of Education, in partial fulfillment of the requirements for the award of degree of Master of Education in English education

Supervisor: Dr. Irénée Ndayarabaje (Ph.D)

Kigali, March 2024

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