



**THE APPLICATION OF COMPUTER ASSISTED APPROACH WITH
BRITISH E-DICTIONARY TO ENHANCE ENGLISH PRONUNCIATION
OF O’LEVEL STUDENTS: A CASE STUDY OF MASAKA SECTOR IN
KIGALI CITY.**

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September, 2022

DECLARATION

This Research is my original work and has not been presented for a degree in any other University or for any other award.


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Date: September, 30, 20, 2022

THESIS CERTIFICATION

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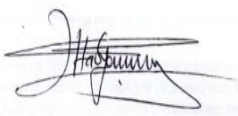
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DEDICATION

I dedicate this project to my husband, NDAGIJIMANA Sylver and my son NDAGIJIMANA Asa Alva for their great support, patience and understanding as I undertook this thesis project.

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I wish to convey my thanks to all persons for seeing this thesis Project to completion. Particular gratitude goes to my supervisors Dr. Niyibizi Epimague and Dr. Habyarimana Hilaire for the advice and guidance they offered me since the inception of this study. I am extremely grateful for the collegial atmosphere they created for me which enabled me to complete my studies. Special thanks go to The University of Rwanda – College of Education in general and to the School of Education in particular for the knowledge and skills I have been equipped with thanks to them.

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ABSTRACT

This research was aimed to identify the causes of poor English pronunciation of ordinary level students in Masaka sector, assess the application of computer assisted approach in English class to boost speaking ability among O' level students in Masaka sector and determine the impact of computer assisted approach during the teaching and learning of English pronunciation.

The target population for this study is 170 from which a sample of 63 participants was computed by adopting the formula of Naissuma (2010). Questionnaires, interviews and focus group discussions with learners during assessment activity were used to collect primary data and afterwards data was entered, coded and analyzed using SPSS version 22.0. The findings were presented in frequencies and percentages as well as tables from which conclusions and recommendations were drawn.

The findings reported that the level of application of computer assisted approach (British e-dictionary) to enhance English pronunciation among students at G.S Rusheshe and G.S Ayabaraya is not effective. First of all some English teachers are not familiar with technology. Besides, internet connection is sometimes weak. However, the approach was reported to boost the elucidation of segmental features of vocabulary and led to quick understanding of the pronunciation when it is used. After using the approach (Two times), there was a remarkable improvement of 71.6% of learners who pronounced vocabulary correctly against 28.4% who failed to capture the standard British pronunciation.

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LIST OF ABBREVIATION AND ACRONYMS

ASR	: Automatic Speech Recognition
BRP	: British Received Pronunciation
CAA	: Computer Assisted Approach
CAP	: Computer Assisted Pronunciation
CAPT	: Computer Assisted Pronunciation Teaching
EFL	: English as a Foreign Language
G.S	: Group Scolaire
ICT	: Information Communication Technology
MINEDUC	: Ministry of Education
OUP	: Oxford University Press
PP	: Pronunciation Power
PSP	: Public School Pronunciation
REB	: Rwanda Education Board
RP	: Received Pronunciation
SPSS	: Statistical Package for Social Sciences

CHAPTER ONE: GENERAL INTRODUCTION

This chapter introduces the readers to the background of the application of computer assisted approach (British e-dictionary) to enhance English Pronunciation among Ordinary level Students in secondary schools in Rwanda specifically in Masaka sector. It also contains a general description of the importance of application of computer assisted approach (British e-dictionary) to enhance English Pronunciation ordinary level students and the current situation of their English pronunciation ability. Subsequently, the problem description, purpose, research question, significance of the study, justification, scope of the study and a brief methodology as well as research structure will be presented.

1.1. Background of the study

For decades, researchers and teachers have suggested ways to apply computer assisted approach (British e-dictionary) in teaching and learning pronunciation, and there are many useful tools that can be used for this purpose. However, many teachers feel unsure about how to teach pronunciation at all, and the idea of using computer assisted approach (British e-dictionary) may make pronunciation teaching seem doubly intimidating. Based on both research and the classroom practice of experienced teachers, this thesis evaluates a range of available ways of applying computer assisted approach (British e-dictionary) to accomplish tasks such as providing a pronunciation model, recording and responding to learners' pronunciation practice to enhance English pronunciation among ordinary level students. .

A good pronunciation is a basis for a successful communication. If the speaker uses incorrect pronunciation, their speaking confuses the listeners and it will result in communication failure. This study is set to apply a computer assisted approach in a model in teaching and learning pronunciation in ordinary level students to improve

the teaching of pronunciation in order to attain intelligible pronunciation of English. In most countries which use the language as the L2 especially in Africa and Asia, pronunciation remains a concern. Albiladi (2019) states that teaching English in EFL countries is a challenging task especially the teaching of pronunciation because of lack of interaction with target language and lack of motivation. In Turkey, Essien & Plailek (2021) examined the problem in Suan Sunandha Rajabhat University.

The results showed that English sounds at the beginning syllable place that challenge students comprise the /ð/, /θ/, /dʒ/, /ʒ/, /v/ and /z/ sound respectively and the /ð/, /θ/, /v/, /f/, /s/, and /l/ sound at the end syllable position. It was concluded that the main factor that contributes to this challenge was the students' basic knowledge of English pronunciation. In Ghana, Asante-Nimako (2018) examined the problem in pre-service training institution using Wesley College of Education, Kumasi a case study. Among the challenges, opportunity for students to express themselves in class is on top of the list. He argues that some of the classrooms are still teacher-centered which hampers the students' chance to practice speaking in class where they would get corrected in their pronunciation mistakes. If they get no chance for the correction, pretty much they will mispronounce English sounds even after their college period (Rodman and Fromkin (1978) cited in Asante-Nimako (2018) that spelling and pronunciation of English may confuse students.

In their view, most English words are not pronounced as they are spelt which require students to study each individual word pronunciation. In Arabic schools English language is one of the second languages they study and is completely different from Arabic which causes a problem in communication especially in pronunciation. Abdulgalil Abugohar (2018) did a research on high school Arab male students studying in their second grade of secondary stage in EFL context. He reported that pronunciation challenges students because the same letter (vowel and consonant letters) in English language has various sounds. There are a few pairs to

take as examples”– (bath – bathe), (South – Southern), (now – know), and (uncle – university).” On top of puzzling sounds, most of verbs and nouns for instance desert (v) and desert (n) share the same spelling while they differ from pronunciation. Hence Arab and Saud students find English silent letters, certain consonants and vowels sound structure difficult to internalize (McCrocklin, 2014).

In Malaysia, Gilakjani & Ahmadi (2011) observed several factors affecting the learning of pronunciation such as accent which immediately distinguish between native from nonnative speakers of English. He commented on the theory of “Critical Period Hypothesis” which emphasizes on the early age of learning a second language to develop a perfect accent. In addition to that, Malaysian students fail to put stress where it should be on a word, to perfect intonation and rhythm thus the mistakes affect intelligible pronunciation than errors of phonetics can do. Further, lack of motivation and exposure to L2 with age at the acquisition of a language affect the level of English pronunciation learners attain. Lastly, negative attitude toward L2, the allocation of a short time of pronunciation course on curricula and interference of L1 to L2 are among the leading causes Malaysian students fail to develop a perfect English pronunciation.

Teachers often ask students to record their voices as part of pronunciation practice, either with the goal of (a) listening to and analyzing or transcribing the recordings to increase their awareness and ability to self-correct or (b) submitting the recordings to the teacher for feedback. Recording sound has become incredibly easy in recent years, as tape recorders have become a thing of the past, and computers, tablets, and cell phones provide built-in sound and video-recording capability. Even the free sound-recording program Audacity (<http://www.audacityteam.org>), a favorite of many teachers for more than a decade, has been superseded by easier ways of recording sound simple apps such as Sound Recorder for Windows, QuickTime Player for Mac, Voice Memos for iPhone, and

many free sound-recording apps for Android devices. In addition to simple recordings of students' pronunciation, recorded practice can also be done in more creative and communicative ways.

By producing a video or multimedia project to share with classmates or others, learners believe that they are truly communicating and that there is a purpose for their work. This can result in stronger motivation than if only the teacher heard the recording, and it provides an extra incentive to use pronunciation in a way that was understood by listeners. Creating a project also increases the probability that students practiced repeatedly as they rehearse and perfect their final product. Many tech tools allow learners to create projects combining pictures, words, and sounds for purposeful pronunciation practice.

Rwandan education has been delivering instructions in English language despite the fact that most secondary and primary teachers don't have enough proficiency level in the language. As stated by Edwards (2019) and Williams (2020), Rwanda's Ministry of Education declared that from the academic year 2020, English will replace Kinyarwanda a medium of instruction in all schools. Even though the language had been taught in all public schools as one of the core subjects, its speaking proficiency has been doubted. In the view of Munyandamutsa (2005), concerning facilitating learners in achieving a good command of phonological competence, they fear that implementation policy plan and the reality in teaching don't match. In his view, more effort in equipping teachers with perfect English pronunciation proficiency is needed. If the ministry of education doesn't provide constant training opportunities, the observed gap will remain inexorable.

As for Niyibizi (2015), "*...the main finding is that both urban and rural teachers and learners perceived themselves to have high proficiency in speaking Kinyarwanda; while their perceived in speaking English is unbalanced.*" It appears that low English speaking proficiency is not only a particularity for

primary and secondary students, but some of their educators as well. This leads to its' seldom use in the whole community. Sibomana (2014) as well, holds the view that English has been taught as a main course in almost all Rwandan public schools and has been lately used as the language of instruction but still, many educated people in Rwanda do not exhibit a good proficiency level of the language hence not many people in our community use it in their everyday routines.

In Rwanda, primary and secondary schools' low proficiency in communicative competence English language is a persistent problem. The issue dates from after the Genocide against Tutsi which took place in 1994. The nation had been using Kinyarwanda and French as official languages. Due to the shift in power, returnees from English speaking countries namely Uganda, Kenya and Tanzania introduced English to Rwandan society and from then, two languages of instruction were used to allow freedom of education to Francophone and Anglophone. As reported by Lewis Samuelson (2012); Basheija (2015); Olzacki (2015); Tabaro (2015); & Kayigema & Mutasa (2017), late exposure of English language to Rwandan schools and constant shifts of language of instruction in education cause English to lack the leading place in a Rwandan community.

It is only from December, 8th, 2008 that the language gained medium of instruction position for all levels of education. However, due to inadequacy to maximize teaching and learning success, in 2011, the law was modified and from nursery to primary three, Kinyarwanda had been used as a medium language. Nonetheless, on 2nd, Dec. 2019, the ministry of education declared English language as the sole medium of instruction in all levels of public schools (Mineduc, 2019). At this very moment, either a conversation with some graduates or an interview with their teachers highlights a huge gap between the service they have to offer and proficiency level of English they exhibit. The origin is explicitly clear. Most teachers completed their education in francophone program and students who undertook secondary school in francophone program had to learn in English as it

was the only medium of instruction from upper primary to university (McGreal, 2008). Accordingly, they struggled to learn in a language they have never used before. In my reckoning, improving English language pronunciation among students will lead to better quality of the language education. It is feckless to complete basic levels education yet still unable to hold a conversation with neighbors and barely perform the job when it requires communication with English speakers.

1.2. Statement of the Problem

English was taught as a school subject in secondary schools and as a major subject in the faculties of languages and literature (Kayigema & Mutesa, 2017). It became a language of instruction at all levels since 2008 (Pearson 2013). Since then, there have been various attempts to improve speaking skills of students. However, those endeavors are yet successful. In my view, they seem to worsen the issue among students and their teachers. At the onset, English was declared a medium of instruction in 2008. In 2011 however, the system was changes and Kinyarwanda became the medium of instruction in lower primary. Recently the minister of education declared that English is the only medium of instruction in all levels of education in public schools. As you see, the period English has been in use does not allow the language to be popular in our community because it is short. Second, the changes in the medium of instruction in all public schools pressured older teachers who were trained in French to adopt their teaching in English and this has been delaying education. Third lack of consistence in the language of instruction may be the major cause students' speaking skill is still a problem (McGreal, 2008). Lately, researchers (Munyandamutsa, 2005; Niyibizi, 2015; Sibomana, 2014; Tabaro, 2015; Kayigema and Mutasa, 2017; Bashejja, 2015; Lewis Samuelson, 2012; Rwirahira, 2017) investigated 'the teachers progress in the language, unfortunately, their studies still point to insufficient proficiency in speaking. The

researchers likewise, blame low speaking proficiency among students and their teachers to constant shifts of language of instruction in education, education background of older teachers but rarely do they attribute it to the way English pronunciation skill is taught in all public schools. In my perspective, enough time on the curriculum is allocated to the teaching grammar, reading and comprehension but English sound is given few periods. On top of that, only few exercises are provided with no appropriate materials to assist students in pronunciation. For instance, there are no CDs of sound and vocabulary pronunciation, no listening tools and teachers' pronunciation is not perfect. As a result, students speak as their teachers because they are their only model. The reason the way pronunciation taught is a concern is that students and some of their teacher still find it hard to hold a conversation in English.

If you ask me, I would say that O' level students find English sound complicated because of the structure of English vocabulary. For instance, vowel or consonant letter like 'a' and 'th' have different pronunciations. For instance, the 'a' in 'fat' and 'fate', 'thought' and 'though' have different pronunciations. Secondly, it is difficult for ordinary level to know which part of the word is stressed because of lack of prior knowledge of the word. In order to pronounce it correctly students have to study it individually. Thirdly, unlike Kinyarwanda, English vowels have **diphthongs** (a sound made by the combination of two vowels in a single syllable such as 'coin' and 'loud' and **triphthong** (vowel sound in which the tongue changes position to produce the sound of three vowels such as 'fire', 'mower' ,etc... This requires a student to study the pronunciation of each individual vocabulary. Also the pronunciation of 'l' and 'r' troubles our students because in Kinyarwanda those letters are almost pronounced in the same way. If the students complete O' level without the ability to express themselves in English how are they going to find employment in English speaking companies? How are they going to fit in East African community? What happens when they reach the airport in foreign country?

We need to teach proper pronunciation if we want our students to be understood easily by English speakers. Mistakes in pronunciation confuse the listener and lead to communication breakdown. In a similar way, Rwirahira (2017) asserts that inability to attain English good command is one of the causes of questionable quality of education among learners and teachers. Many factors affect pronunciation including little time and few resources allocated on English pronunciation course, inability of facilitators who struggle in the skill, little practice opportunity, structure of English lexemes, motivation, interference with L1 and lack of appropriate tools to facilitate pronunciation course among others.

In this study, the researcher will use a sample of 63 which includes 2 head of studies, 17 teachers of English and 44 students from two schools GS Ayabaraya and GS Rusheshe in an attempt to discover the real causes of incorrect pronunciation, examine if teachers use different teaching approach to improve the way they teach pronunciation and apply computer assisted approach with oxford online dictionary to the 44 sample of students in order to assess its' usefulness in teaching pronunciation. After all, Yildiz (2020) and Yoshida (2018) support technology-assisted computer-based methods as it may improve English teaching-learning. They argue that, smart education only does not digitalize education setting, but also speeds educational aims by availing authentic resources; allow students to carry out educational research and turns education into creative and collaborative system by solving limitation issues between education and students. In this wise, they recommend facilitators to go for pronunciation tools capable of providing pedagogical tasks which are part of pronunciation teaching. This implies that those tools are able to be pronunciation models, to record pronunciation practice, to correct students' pronunciation as well as to facilitate independent practice. A tool like Oxford British e-dictionary may offer modality on pronunciation thus a model students measure their pronunciation with. In agreement with Wadhvani (2016), teaching English relying merely on text books

is counterproductive in the virtue of learners' lost interest in a traditional language class.

1.4. Research objectives

Every research is expressed by various objectives. This thesis has both general and specific objectives that are presented in sub-sections below:

1.4.1. General Objective

This study is set to investigate the significance of applying computer assisted method in English class to boost speaking ability and comparing English speaking proficiency among learners who use e-dictionary and online listening tools with students who rely on a traditional class only while studying pronunciation.

1.4.2. Specific objectives of the study

- i. To identify the contribution of teachers in promoting computer assisted approach with British e- dictionary among ordinary level students in Masaka sector.
- ii. To assess the level of effectiveness of computer assisted method in English class to boost speaking ability among O' level students in Masaka sector,
- iii. To determine the significance and impact of computer assisted approach during the teaching and learning of English pronunciation.

1.5. Research questions

The research questions help in the design of the study, data collection, data analysis, and the interpretation of results. It is important that the research questions are clearly formulated before the research is undertaken. In line with this understanding, the study poses the following basic questions up on which the entire research undertakings attempted to answer.

- 1) To what extent do teachers contribute in promoting Computer assisted approach in improving English pronunciation among students in O' level in Masaka sector?
- 2) What are the causes of unsatisfactory English pronunciation among O'level students in Masaka sector?
- 3) What is the level of effectiveness of applying computer assisted method in English class to boost speaking ability in O' level in Masaka sector?
- 4) What is the significance and impact of computer assisted approach during the teaching and learning of English pronunciation?

1.6. Justification of the research

This study aims at analyzing the problem of inefficient pronunciation skill among O' level students. We will do it by correlating the quantity of words students are able to pronounce in British Received Pronunciation using a traditional class with the amount of pre-set words students in a digitalized class can flawlessly pronounce. The rationale is to prove whether a computer assisted system in English class may enhance an English standard pronunciation among students. The Ministry of Education (2016) emphasized the grounds of smart classes as: To harness the innovative and cost-effective potential of world class educational technology tools and resources, for knowledge creation and deepening, to push out the boundaries of education: improve quality, increase access, enhance diversity of learning methods and materials, include new categories of learners, foster both communication and collaboration skills, and build capacity of all those involved in providing education.

Various researchers have proven that English communicative competence among Rwandans is yet to be attained; even so they rarely attribute the concern to poor pronunciation of English words. The ministry of education encourages facilitators to teach a British received pronunciation nonetheless, there is a wide gap between

what students say and how it should be said. Numerous facets affecting the learning and teaching of pronunciation constitute a compaction of four skills of a language in a short time, hardly any listening tools in English classes and facilitators with low pronunciation skills to make the matter worse.

A computer assisted class may enhance diversity of listening materials, build capacity of teachers involved in providing pronunciation, bring native speakers near via online resources, then, boost pronunciation. For typical cases, facilitators only polished their pronunciation by using British e-dictionaries and authenticated pronunciation tools as they are the only sources to familiarize learners with sounds, stress and intonation of English words. As stated by Rwanda Education board (2018), ICT should be utilized as a tool capable of amplifying teaching and learning at all grades of education, from elementary to tertiary period of education.

Sibomana (2014) and Turner (2012) agree that English proficiency especially speaking ability is yet attainable but it is still the sole medium of instruction in public schools. What's more, every student should be capable of speaking a Standard English as the exponential increase of population density forces people to immigrate. In agreement with what Pieter (2012), migration can serve to build human capital of youth, but if they lack communicative competence they will be exposed to several dangers due to poor social networks and restricted access to information. Turner claimed that English pronunciation is incredibly important if you want to be understood “. In her experience, mispronunciation causes misunderstanding. Her Colombian English student said: “My doctor is traveling abroad and I haven't heard from her in two days! “Wow, she must really love her doctor, I thought.” Can someone figure out where the mistake is? Later, Turner read in her student's notebook that “her daughter was traveling abroad...! It is a fact that while learning a language, mistakes of pronunciation are unavoidable;

however, at the end of a certain level, each graduate must exhibit a considerable degree of improvement.

1.7. Significance of the study

The findings that are likely to stem from this study will benefit the researcher specifically, other researchers, schools in Masaka District, Rwanda Ministry of Education (MINEDUC) and Rwandan readers in general.

1.7.1. To the researcher

This thesis enables the researcher as a teacher to improve their skills and practices specifically application of computer assisted method in English class to boost speaking ability and comparing English speaking proficiency among learners who use e-dictionary and online listening tools with students who rely on a traditional class only while studying pronunciation.

1.7.2. To the academicians

Theoretically, the study also prompted further research, thus, contributing to the literature and methodology in the field of applying computer assisted approach (British e-dictionary) to enhance English Pronunciation among O' level Students in Rwanda specifically in Masaka sector. Today the new technologies have changed the world into a small nation which needs a language of communication between them and it is obvious that English won the position. The study widens up range of knowledge to other researchers and hence constitutes an addition to literature in the field of technology used in classroom, a computer with assisted approach is essential and it may bring about a reform in education if used effectively.

1.7.3. To the school leaders

Nonnative, the school leaders may encourage teachers to use computer assisted method in preparing English pronunciation courses and practicing to improve their

pronunciation levels and to motivate learners and incorporating e- dictionary to be a model of providing a standard pronunciation, and installing online listening tools in student's computers, to render an opportunity to listen to fluent speakers' and gaining a lot about the language in general. This study aims at attesting the quality of integrating a computer assisted methods in English class to augment speaking skills.

1.8. Scope of the study

Scope implies the area in which the study should be conducted. Due to limited financial capacity and time bound/limit, geographically, this study will be carried out in G.S Ayabaraya and G.S Rusheshe located in Masaka sector. Conceptually, the study will be focused on the significance of application of computer assisted approach (British e-dictionary) to enhance English pronunciation among students in o' level secondary schools in Masaka sector. As time is constraint, this study will consider a period of the last 10 months. That is to say from April/2021 to February 2022. This is the time the researcher deems suitable for collecting data with the regards to the objectives of the study and also finishing the research on time with regards to the University timeline and convenient for the researcher to achieve the award in time.

1.9. Brief methodology

Labeling a non-native corpus for pronunciation quality through application of computer assisted method in English class is critical for research on pronunciation evaluation. A variety of techniques used in secondary schools in Masaka sector was revealed in chapter four which is assisted by the research methodology. This research is possible by using a descriptive research design combining both qualitative and quantitative approaches. The study population of this current investigation is 170 (2 Director of studies, 17 teachers and 151 students) from two secondary schools in Masaka sector (G.S Ayabaraya: 55 and G.S Rusheshe: 96) the

study population comprises head of studies, English teachers and learners. A sample of 63 participants was computed by adopting the formula of Naissuma (2010) to calculate the sample size as shown in equation below;

$$n = \frac{NC^2}{C^2 + (N - 1)e^2}$$

The purposive sampling technique was applied to select both head of studies and teachers while convenient sampling technique were applied to select senior three students from G.S Ayabaraya and G.S Rusheshe, both primary data and secondary data were used in this study, primary data was collected using questionnaire (Designed to the teachers and learners) and interview guide designed to the head of studies. On the other hand, secondary data was collected from school reports, Mineduc websites, journals and internet guide. Validity and reliability of research tools were ensured by both pilot study and supervisors' feedback and clarification. Systematically, quantitative findings were presented using tables and charts using SPSS while qualitative data was analyzed narratively. Last not least, ethical consideration was ensured before distributing research instruments.

1.8. Research disposition

The rest of the thesis is organized as follows: The chapter two reviews relevant literatures; chapter three introduces the research method; chapter four describes the result of the interview and questionnaire and chapter five concludes the thesis and presents the limitations and future research opportunities.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter deals with introduction, definitions of key concepts to be used in this study, and literature review related to the specific objectives. The study also reviewed some empirical evidences in relation to apply computer assisted approach (British e-dictionary) to enhance English pronunciation among students in secondary schools in Masaka sector, identification of research gap as well as summary.

2.1 Conceptual literature review

In order to make the study clearly understood some key concepts such as, Computer assisted approach and English Pronunciation are defined before the deep literature review.

2.1.1. Computer assisted approach

According to Hardisty & Windeatt (2019), computer assisted approach refers to the machine such as artificial intelligence aided with internet, software and tools strategy. Computer-assisted approach in language learning is succinctly defined in a seminal work by Levy (2017) as "the search for and study of applications of the computer in language teaching and learning especially using British e-dictionary to boost learners' English pronunciation ability and proficiency and to embrace a wide range of information and communication technology applications and approaches to teaching and learning foreign languages.

2.1.2. Pronunciation

Pronunciation is the manner in which native speakers speak the words of their language. It means the conventional patterns and flow of sounds they use in uttering a given lexeme or language in a distinguished dialect ("correct

pronunciation") or even the techniques a certain individual use in speaking a word or language. It is the way we make the sound of a vocabulary. "Pronunciation," (n.d.); Dalton & Seidlhofer (2001) define pronunciation as the yielding of meaningful sound. It involves both (Holistic) and corporeal attitude of a person acts. We mostly use the muscles of our mouth, tongue and lips to direct the shape of our mouth and the glide of air. If we can govern the shape of our mouth and the pass of air properly, then the way we pronounce words get correct and other people are able to understand us.

2.1.3. English Pronunciation

Conforming to Gunduz (2015), while talking about pronunciation of English he means to be able to speak English standardly following General British Pronunciation. Intelligibility is the aim to learning English pronunciation. We want students of L2 to speak to the level fluent speakers of English can understand with less difficulty.

2.1.4 British e- dictionary

Congruent with Hilary, N. E. S. I. (2000) and Dziemianko, A. (2017) the term electronic dictionary (or ED) can be used to refer to any list of words of a language stored in a device form that provides information about the spelling, meaning, pronunciation or the way you can use words. Its main character is the system of storage and retrieval. In proportion to Robert (2010) not so long ago, the accessible offer of electronic all-purpose encyclopedia had been yet finalized, with the large esteemed publishing company (prominent Oxford University Press) clearly reluctant about putting their commodity online free of charge. In recent times, OUP produced the new oxforddictionaries.com lexicographic portal, made of two of the publishing house latest recent dictionaries: the brand new (third) edition of the Oxford encyclopedia of English (under the title World English). In this study, we

will use Oxford online dictionary because its hard version is the main one teachers use in public schools.

2.2. Theoretical review

As any other business, there has been advancement of new trends in second language acquisition. However, the teaching methods and the types of activities they have advanced are still products of behaviorist theory of second language acquisition, mainly grounded on reproduction and discrimination drills, loud reading and equivalent investigation of L1 and L2 sound systems. The question is: can we teach pronunciation? Discussions against the thorough teaching of pronunciation is based on two basic presumption about the acquisition of second language sound system: the initial one is based on the critical period hypothesis, with the view that it is practically unattainable for grown -ups to secure native-like pronunciation in a foreign language (for review see Burrill, 1985); and the second, developing particularly from the work of Krashen (1982), asserts that pronunciation is a naturally gotten skill and that earnest instruction is somewhat worthless and at worst detrimental (Jones, 1997).

The controversy is “how do students living in an English language setting acquire native like or intelligible pronunciation?” Krashen’s Monitor Hypothesis argues that there is a difference between “acquisition” and “learning”. Acquisition is meant to take place in a way similar with the one we acquire our L1. It is an unconscious process that happens automatically when children try to communicate a message. Learning on the contrary, is said to be a conscious process with learners paying attention to the rules and forms of the language (LA, 2020).

My assumption is that for L2 learners who live in environment where their target language is not used, they will only learn pronunciation since they do not have the opportunity to acquire it. This is in support with Behaviorism theory with its’ view that all learning – involving the learning of language learning happen throughout a

procedure of imitation, rehearsal, fortification and usage development. conforming to behaviorism, the setting is essential not only because it is the origin of the linguistic inducement that learners need in order to develop associations between the pronunciation of words they hear and the rules and forms of phonology they represent, but also because it offers the comments on learners' performance. Behaviorists claimed that when learners accurately produce language that is close to what they are open to in the input, and these attempts get positive encouragement, habits are formed (Nor & Ab Rashid, (2018).

Some scholars who work elementarily within a second language acquisition specification claim that a fair amount of language learning occurs through social cooperation, at least in part because speakers adapt their speech to make it more understandable to learners. Some of the L2 research in this framework is based on L1 research into children's interaction with their caregivers and peers. L1 studies showed that children are often exposed to a specialized variety of speech which is tailored to their linguistic and cognitive abilities (that is, child-directed speech). When native speakers engage in conversation with L2 learners, they may also adjust their language in ways intended to make it more comprehensible to the learner. What's more, when L2 learners reciprocate speeches with each other or with fluent speakers, they use a number of interaction methods and conformation in their attempt to negotiate meaning. Further, Krashen's comprehensible input is presumably the necessary building block for linguistic communication evolution (Patra, et al, 2010). However, in relation to learning pronunciation, this can be a repeating, clarifying or otherwise working with the L2 speaker to make sure that pronunciation features of each word is successfully internalized (LA , 2020). Thereupon, in an environment where there is no frequent use of the target language, and where our facilitators are not as fluent as native, plus that students may only hear the target language in class, the adaptation of computer assisted Pronunciation teaching is our boon to avail authentic pronunciation model to us, to

provide e-tools that can record, correct a student's pronunciation and components students can use to learn pronunciation of English wherever and whenever they want to.

This study is guided by two theories; behaviorist theory and input hypothesis of Stephen Krashen. In my humble opinion, if the teachers adopt or opt for Behaviorist Theory during pronunciation lessons; they should rely largely on rote learning using memorization, repetition to strengthen the behavior of students. Also, computer assisted approach with e-dictionary should be used to make sure the pronunciation is correct. Moreover, to encourage the behavior, if the students pronounce a word correctly, the teacher would acknowledge the students to positively substantiate the desired behavior. Also if the teachers adopt input hypothesis of Stephen Krashen during pronunciation lessons, they will strive to provide authentic listening materials probably listening audios of fluent speakers of English, online dictionary capable of producing audio sound to act as the pronunciation modal for students to imitate. In doing so, they will praise the effort that a student makes and eventually learning will take place.

2.3. Empirical review

2.3.1. A computer assisted approach in enhancing English words pronunciation

As reported by Timucin, (2016), there are many ways and tools which can be used to teach English skills. Among those, dictionary is one of the most commonly and broadly used tools by teachers and learners. Besides, Leffa, (2019) shared the same view that electronic dictionaries have been found to be a useful instrument to practice and improve pronunciation. To Schitteck, et al (2001) CAA is a system able to facilitate interaction while learning on different levels. Ruliah, Syahrial, and Muchtar1 (2019) likewise argue that (CAI) is a pattern of electronic assisted learning that uses the designs of didactic, actions and trainings approaches to teach topics, and measure students' understanding. Some may call CAA a computer

based learning others say a computer assisted instruction or computer assisted learning etc...Generally, the term sums itself as a reciprocal educational method through which an artificial intelligence is utilized to display the learning content and controls the learning. The approach uses a collection of texts, pictures, voices and video in boosting the learning process. Therefore, CAA has great importance in the classroom, and it can be used by the students independently in all sections of the curriculum.

Various researchers recommend computer assisted pronunciation teaching as a convenient choice with a strong academic effectiveness. The approach (CAPT) allows a medium for multiplying users' access to their own and others' speaking ability, for paying attention on phonology, and for acquiring more new pronunciation areas (Chu Liu & Yi Hung, 2016). Indigenous speaker voicing exemplars have prevailed over English language teaching for a long time. Nonetheless, there is now a growing recognition of universal English's and strange pronunciation (i.e., not adhering to Anglophonic norms) the sole goal of many learners of English is to speak nearly like native speakers (Begoich, et al, 2021).

An experimental study on two sets of 40 students who were being trained to become English Language teachers at the Department of Languages in Mount Kenya University exhibited a promising use of the system in speaking teaching. While the control group was traditionally trained, the experimental group was exposed to computer assisted pronunciation teaching. The outcome of the experiment proposed that in EFL settings, where they rarely get comprehensive native input, e-learning tools may be reliable choices to mend the break for restricted real life pronunciation practice (Ongo'onda & Muindi 2016).

Considering low level of speaking proficiency in English, this study will compare the outcome of teaching pronunciation using facilitators as models with teaching pronunciation using a computer assisted approach on O' level students with the

intention of choosing a method that may produce effectiveness in teaching-learning of pronunciation of English. Researchers comply with the idea that Rwandan students and teachers speaking proficiency is not adequate though they consent that their writing is better. Stephen Krashen's theory of Second Language Acquisition stresses input hypothesis holds the view that language acquisition is driven by a comprehensive input that learners can understand.

Furthermore, the majority of dictionaries provide pronunciation based on the two most widely used pronunciation varieties, they are from BBC with Standard British Pronunciation and General American with Standard American Pronunciation. Hence, EFL students can listen to the pronunciation of words and phrases in both ways of how they speak (or wish to speak) and an opportunity will be offered to make a notice towards the substantial difference between BBC and GA accents. Another notable feature deserving attention is the capability of recording our own word pronunciation and making a comparison to the standard pronunciation of dictionary. Unfortunately, this kind of feature is commonly available only on electronic dictionaries with CD-ROM/DVD-ROM editions (Hakim., et al, 2018).

Pronunciation as well is acquired faster if the model is perfect and native like which we cannot afford in public schools unless we adopt online system. Michel Long's Interaction hypothesis emphasizes the role of comprehensible input for second language acquisition and change to the interactional structure (Rod, 1991). It is through a conversation with a fluent speaker the learning of second language take place. Whenever student of L2 interact with fluent speakers by receiving an input above their usual language knowledge, they will learn better. The problem in our schools remain that our facilitators who would serve the purpose of providing comprehensible input struggle with speaking as well. On the account of those hypotheses, students who are taught English by facilitators who struggle in the language will never attain a Standard English. We as teachers were taught in a

changing system where the language of instruction had never been English only; we lack perfection in speaking skills hence unable to provide a comprehensible input to our students who regard us as their models.

Luckily, since 2000 Rwanda's education introduced ICT for teaching. The system's objective is to increase fair and excellent quality learning, to incorporate the utilization of computers for teaching learning, to improve teachers' capacity in the use of technological appliances for academic purposes is a key goal. It is a transformation that requires facilitators to go for improving teaching (Mugiraneza, 2021). Therefore English teachers are encouraged to make use of smart classes available at their school to improve the pronunciation skills of students.

2.3.2. English pronunciation (British Received pronunciation, Public school Pronunciation and Received Pronunciation).

The act of pronunciation involves segmental features (vowel, consonant sound or phoneme) and suprasegmental characteristics of a language which are rhythm, stress, tone, instead of an isolated element (Laroy, 2003). In accordance with Cruttenden (2014), there had been **British Received Pronunciation** (BRP) spread from loyal class to most of commoners through education. It is referred to **Public School Pronunciation** (PSP).

In 1926 however, it lost that name to **Received Pronunciation** (RP). Before then, it had been acknowledged a kind of standard because it was based from educated people and in countries surrounding London even though its utilization was not restricted to one region only but also others including BBC. That is why it was called BBC Pronunciation because it was spoken by professional speakers, usually the News presenters on BBC1, BBC2 BBC radio3 and 4, even on commercial broadcasting institution an ITN.

Though individual broadcaster has his speaking traits such as Scottish, Welsh and Irish accent, they all share consistency of speech in the use of English accent. It is said that their speech does not evoke the connotation of high social class and the privilege the former (PSP) and present high standard traits. It is also called **General British pronunciation**, considered standard and the principal accent (Kreidler (2004), Jones (2006); Roach (2004); Milroy (2001); Wells (2019)).

Normally, speakers of any language automatically develop various muscles of oral pronunciation. Nevertheless, whenever we learn to speak a new language, our muscles are not developed for that language and as a result, pronunciation becomes complicated. Having said that, the skill is more important than it is considered. In keeping with Mei-Zhang (2009), whenever we engage in conversation in English, the initial thing they note, which can create good conception about the merit of our language competence, is our pronunciation. Unsatisfactory and unclear pronunciation will cause confusion and misapprehension for both speakers and listeners. Furthermore, it is clear unintelligible pronunciation ability will make learners lack self-confidence and lead to detrimental credit for learners to assess their credibility and capability. Therefore, it is by practicing speaking that intelligibility will be reached. Conforming to Hamidove et. al., (2020) and Saito (2011) this practice should happen to every aspect of language pronunciation (suprasegmental and segmental features). Word stress practice for example may familiarize us with the part of the word or syllable that is emphasized while speaking. Likewise, practicing sentence stress may help us speaking coherently. In addition, practicing joining certain words together may assist us in making near native sound.

Lastly, practicing intonation will familiarize us with the rise and fall of our voice as we speak. Like any other language pronunciation, English pronunciation as well is natural for native but foreigners need to practice a lot. They may listen and imitate, practice sound and stressed syllable among others. As we see it, regardless of color

or nationality, anyone who has ever tried to speak another language other than their own may say that it is difficult to pronounce certain sounds which we do not use in our first language. As a teacher, I understand how it feels to study a second language and above that to be obliged to learn any other important course in L2.

When I was a student I was nervous about uttering English words, to make it worse, I found it an obstacle to effective understanding of different subjects I had to learn and a hindrance to effective communication as well. Even though one does not need native like pronunciation of English sounds to be understood, the gap occurs whenever workers need to deliver services to English speakers. It is very essential to emphasize certain aspects of English pronunciation, especially with young learners in order to reach intelligibility for the purpose of being understood clearly. Syllable stresses, word stress in a sentence, phonetics to name a few are to be given a lot of practice during English pronunciation course.

The purpose of this research is to extend the body of knowledge about the causes why Rwandan secondary students hardly achieve a standard level of English pronunciation as well as suggesting the increase in use of smart classrooms to solve the problem among students and teachers.

2.3.3. The Effect of E-Dictionary on Students

It has been revealed in a number of studies that the e-dictionary usage is highly effective, mainly in the area of vocabulary learning. One of the studies is held by Bahri and Mahadi who investigated the use of Google Translate as an instrument to provide aid to international students in Malaysia in developing their knowledge and skills in studying the Language of Malay (Bahri & Mahadi, 2016).

There were sixteen overseas students taking part in the study, who later insisted that Google Translate was very helpful in vocabulary learning, writing improvement, and reading in Malay Language. Fageeh likewise did a study about the effects of using online dictionaries on developing the skills of vocabulary

building and developing positive attitudes of EFL students towards the learning of vocabulary. The study used a design of pretest posttest control group that was combined with a qualitative questionnaire to investigate the learners' attitudes. It was indicated by the study that online dictionaries usage posed positive effects on the skill improvement of vocabulary learning a learners' attitudes enhancement towards vocabulary learning (Fageeh. 2014). Nisbet and Austin also revealed that application programs on mobile phones are effective tools for increasing vocabulary learning among adult learners in English as a second language program (Nisbet & Austin, 2013).

2.3.4. Significance of computer assisted approach in English pronunciation teaching

Expeditious telecommunication has impacted education and leads to modification in framework and realization of education. As it stands here, teachers use a computer aided by internet to improve English language teaching. The approach has been hailed to stimulate and motivate learners and teachers for the past few years (Ghasemi, Hashemi & Bardine, 2011). Many researchers acknowledge the importance of CALL in language learning. Its contents' goal is a successful and reliable learning by the assistance of computers and online apps for language. Therefore the approach facilitates interaction between learners and language.

Not only does the approach facilitate learning, but also learners can use it to measure what they have learned in the target language they need to master (Derakhshan, Salehi & Rahimzadeh, 2015). Along with that, CALL supports behaviorist theory of language which emphasizes the use of repetitive language drill and exercise. In this case the computer is regarded as a mechanical teacher who never gets exhausted or accuses anyone but helps learners to learn each on their speed (Warschauer & Healey 2009). Given the points, computers and its language components offer language learners opportunity to socialize, collaborate,

reach authentic materials and develop responsibility towards their learning and promote ubiquitous learning (Mutlu & Tuga, 2013).

By promoting teachers and learner's perception on advantages of CALL, the field of learning may see an increase of the knowledge on which technology to choose for a specific aspect of L2. That is why there are selections of software and online tools designed to enhance the pronunciation aspect of a L2 skills. As a crucial part of CALL, Computer Assisted Pronunciation Teaching (CAPT) has a great share and many apps were developed to make the job of pronunciation teaching easier.

More importantly, those programs are created with the ability to promote learner's autonomy in terms of place and time with or without the presence of a tutor. As Thomson & Derwing (2014) stated, CAPT specialty is its ability to bring native pronunciation to students who don't access English fluent people's world. Khoshsima, Moradi & Saed (2017), in a study done on 7 EFL Iranian learners using *Clear Pronunciation2 software* that covered suprasegmental features including consonant cluster, word stress, connected speech, sentence stress and intonation, the experiment proved that the software and the used methodology are able to increase pronunciation competence on a promising level. Since few facilitators received sufficient training in teaching pronunciation plus only little class time is used on teaching pronunciation, the adaptation of computer assisted approach can be a useful means of teaching English pronunciation (Gilakjani & Sabouri, 2017).

On top of that, CAPT can intensify esteems to traditional learning methods by expanding chances for exposure to an expansive collection of spoken language, including different second language (L2) accents and different speech types and styles (Revell, 2021).

Hincks (2003) as well proved a full access to a speech-recognition-based pronunciation learning program can boost the pronunciation. He did the study on a group of middle-aged immigrant professionals learning English in Sweden using Talk to Me program and the group was encouraged to practice on their computer anytime. He compared the improvement to control group and the result showed that exercising with the system was fruitful to those students who had begun the subject with an obvious foreign accent but the exercise was of limited value for students who began the course with better pronunciation.

On the other hand, Hincks advances some practical and linguistic setbacks for embracing technological modes in dealing with speech. He commented that, dealing with speech demands huge data bank and transfer capacity, in addition to instruments such as sufficient microphones, and a quiet setting to access the computer. Wordily, speech processing is hindered by the natural changeability of the speech signal and the intricate sequence of events needed to provoke a proper response to a spoken utterance.

Sake Jager, Nerbone & Essen (1997) likewise advanced the weakness of CALL as unable to recognize all language aspects such as parts of speech and word kind. Nonetheless, it can still offer the basic language teaching methodology; keeping learners attentive, providing opportunity for repetition and availing the chances to get various exercises. In striving to achieve intelligible communication in O' level students, what they need at the moment is to know how a certain word is said standardly in order to polish their speaking ability regardless of the kind a word is. Basically phonetic and stress parts of a word.

Therefore, the available online tools for pronunciation are able to perform the job but when it comes to advanced pronunciation parts such as prosodic and suprasegmental and giving feedback for each specific part of pronunciation. Neri et. Al, (2002) after their observation, they said that there are many programs

designed to facilitate pronunciation but, when analyzed thoroughly, they may not be entirely sufficient. Many writers relate profitably available programs as showy and lavish modes that may at first attract learners and tutors the same, but gradually unsuccessful in meeting sound instructional necessity.

To Livis (2007), digitally, CAPT modes normally experience incapacity in providing learners sufficient, appropriate response and exhibits weakness in giving precise and automatic diagnosis of mispronunciation. Those areas are Automatic Speech Recognition (ASR) concern. Neri, Cucchiarini & Strik (2001), argue that ASR-based CALL manner turn up to be specifically proper for elocution teaching as they permit assessment of the student's speech and supply suitable, personal comment in real-time. Notwithstanding insufficient prescription for CALL devise, most applications software produced often do not deliver competent instruction to the learner. Moreover, due to the obstruction in the state-of-the-art computers, all ASR models will at times produce misunderstandings. Turner & London (2009) introduced another hindrance of CAP, it is that mostly all computer assisted pronunciation (CAP) focus particularly on segmental. This focus explains that comprehension is elementarily hindered by the formulation of individual sounds and disregards the weight of prosody. If understanding is preferred above accuracy, attention on key words, stress, rhythm, and intonation instead of articulation of a specific sounds, may be needed. For instance, the Latest Computer-Assisted Pronunciation Learning (CAPL), ignited by the amelioration of artificial intelligence apparatus and Automatic Speech Recognition (ASR), has focused on two points: assessment and enlightenment. Nonetheless, only little has been done to associate education and evaluation, and to bestow learners with comments on which errors are most hypercritical to their intelligibility (Roux & Kawahara, 2002).

This study aims at evaluating if free online pronunciation tools available can be used in our tertiary education to improve the level of English intelligibility among learners. Intelligibility cannot be attained without standardizing pronunciation. It is true that most English teachers are still holding tight to traditional modal of language teaching in spite of its little benefit. New trends in education have been encouraging teachers to adopt a computer assisted approach in order to gain the proved learning affordances of online teaching and learning. In accordance with that, e- dictionary will be used to evaluate their use in boosting pronunciation of English among O' level students.

2.3.5. Areas of pronunciation more likely cause difficult internalizing to L2 students

At this moment in time, pronunciation teaching appear to have gained a more balanced persuasion, understanding that both prosodic feature and segmental feature which hold an important role such as the distinction between /i/ in *pill* and /i:/ in *peel* may have a undesirable influence on the discernment of L2 speaker and indigenous speaker. The current curriculum aims at determining the most significant features of suprasegmentals and segmentals to incorporate them properly in the course that meet the need of any given learner (Jarosz, 2019).

However, non-native English students obviously encounter some ordeal amid the learning proceeding of speaking skill. For instance, fifty students in Sudanese University of science and technology, participate in a study aiming at identifying difficult in uttering consonants sounds. The result exposed that a large number of students find it hard to pronounce (/p/, /θ/, /ð/, /tʃ/, /dʒ/, /s/, /d/) sounds because of L1 meddling and unlikeness in the inventorying model between Arab and English language (Othman & Abubakar 2021).

In Arabic schools English language is one of the second languages they learn but is complicated to internalize. The language is said to be completely different from Arabic and causes a problem in communication. Arab students always encounter more difficult in learning pronunciation because of various reasons (Abdulgali, 2018) discovered. His study was limited to high school Arab male students studying in their second grade of secondary stage in EFL context. In his observation, pronunciation challenges the students because the same letter has various sounds. There are a few pairs to take as examples”– (*bath – bathe*), (*South – Southern*), (*now – know*), and (*uncle – university*).” On top of puzzling sounds, most of verbs and nouns for instance *desert (v) and desert (n)* share the same spelling while they differ from pronunciation. Moreover, Arab and Saud students find English silent letters, certain consonants and vowels sound structure difficult to internalize.

Rodman and Fromkin (1978) cited in Namiko (2018) that spelling and pronunciation of English may confuse students. In their view, most of English words are not pronounced as they are spelt which require students to study each individual word pronunciation. As an example, the word “island” is not pronounced as “aisland” but instead “ailand”. At times ‘h’ letter is or not pronounced in words such as: hour, habit, hospitals etc.. as a result the problem of spelling has been affecting pronunciation. Nunan (1991) as cited in (Asant, 2018) L1 affect the pronunciation of L2 as pupils tend to pronounce sounds that appear similar in their L1 in the L1 pronunciation and it gets worse if the learners were exposed to the language at a later age. Lastly, pronunciation courses are not consistent in curriculum which makes it a root cause for teachers and students fail to attain a standard pronunciation.

In Vietnam, Cunningham (2013) explains that Vietnamese students of English specifically have a much difficult time with pronunciation than other aspects of the

language. In terms of the teaching and learning of a single pronunciation element, it seems that a group of similar consonant bunch, both initial and final, is particularly resistive to internalizing. Vietnamese phonotactic limitation means that there are no clusters in the language words or borrowed words, and there are relentless limitations on what is admissible in the coda of syllables. Among the factors affecting the learning of pronunciation, Brown stated that speakers of Asian languages may have difficulty producing /l/ and /r/ sounds; speakers of Spanish may have difficulty differentiating between and uttering of /sh/ and /ch/ sounds (as cited by Brown (2000) in Gilakjani (2012)). Native Japanese as well have difficult pronouncing certain letters of English. Among those are Fricatives /f, v/ and /θ, ð/ which are found challenging because there are no labio-dental fricatives /f, v/, or interdental fricatives /θ, ð/ in Japanese, they likely mispronounce English /f, v/ as Japanese /φ, b/, and English /θ, ð/ as Japanese /s, z/ owing to the impact of the Japanese phonetic system. (as cited by Leached, 1999) in Saito 2011).

2.3.6. Factors affecting intelligible pronunciation among L2 learners

Common examination indicates that those who begin to learn English after a few school years of using their first language exhibit higher struggle in attaining a standard pronunciation, with the level of trouble growing noticeably with age. The problem is not related to intellect, level of education, or even with the amount of learned English language use and lexemes. There are various issues that make English pronunciation so hard to learn and a wide variety of theoretical perspectives put some to light. (Alhaisoni, 2016) said that Psycholinguists and phonologists specialists in this domain agree on the fact that the difficult of learning to speak correctly a second language is caused by mental rather than physical and concerned with how sounds are mentally visualized and classified in using speech.

A number of graduates who learned English as a second language still have a big problem with English pronunciation despite many years of learning the language. The problem is one of the leading cause of lack or difficult in finding jobs among graduates. Gilakjani (2011 & 2012) observed several factors affecting the learning

of pronunciation such as accent which is immediately distinguish between native from nonnative speakers of English. The author commented on the theory of “Critical Period Hypothesis” which emphasizes on the early age of learning a second language to develop a perfect accent. A failure to put stress where it should be on a word, and incorrect intonation and rhythm may affect intelligible pronunciation than errors of phonetics can do. Thirdly, motivation and exposure together with age at the acquisition of a language will affect the level of English pronunciation a learner will attain. Learners who wish to associate with English culture will surely spend time with English speakers or even give it enough time to practice as a result, they may develop native like pronunciation. As (Alhaisoni, 2016) puts it researchers claim that even second language adult learners who are highly motivated will eventually develop native pronunciation.

On the whole, students with a positive attitude towards the second language will develop a perfect pronunciation easily than those who are less motivated. In addition, students who were exposed to the second language at early age will surely develop a perfect pronunciation than those who started learning a second language at a later age. On the contrary, second language curricula focuses on teaching sounds and phonetics of a second language only at the first years of second language learning and this result in a delay in learning pronunciation. Also, students’ personality is another factor that may determine if he will acquire a perfect pronunciation or not. Lastly, first language may interfere with the learning of the second language and students associate the sounds of the second language with those of first language.

Bongaerts (2009) said that the Critical Period Hypothesis advanced by some language scholars may be a too strong conclusion. In three studies he conducted on adult learners, one involved 10 Dutch learners of English and 12 learners of English with various proficiency and who started learning English after the age of

12. The second study involved 10 native speakers of English who had indicated that they don't speak English with native accent and another group of 11 native speakers of Dutch recommended by the university that they are highly competent in British English. The last study involved 20 Dutch learners of French and Romance languages with different level of proficiency. The results proved that pronunciation of some of those learners was judged to be native like or authentic by listeners who were native speakers of British English. For the most part, those results are proofs that absolute biological hindrance to the attainment of native accent in foreign language is too exaggerated. To Flege et. Al., (2001), a part from age of L2 learning, motivation, aptitude, formal instruction, length of residence in L2 speaking country is also a factor that affects pronunciation learning. It is explained as an experience one get by living in environment where L2 is predominate. He also pointed out that gender is another factor that contributes to learning of L2 pronunciation. He stated that female children and adolescent gained more rating in pronunciation than their age mates male did. Lastly, he explained that language use affect positively students who have the opportunity to speak to native English speakers after school or at work or even living among English fluent speakers.

Brown likewise, argues about three variables related to competent language students in pronunciation learning: those include motivation, aptitude, and opportunity. (as cited by Brown 2008 in Szyszka 2015).

Sahatsathastana (2017), exposed further factors affecting the learning of L2 pronunciation among Thai students. First of all, native language interferes with L2 and Thai students fail to speak foreign language differently. Secondly, English pronunciation learning favors learners who live in an English speaking country to those living in non-English speaking nation, the former tend to grasp pronunciation of English quicker. Thirdly, phonetic ability implies that some learners have more

phonetic listening ability than others as a result; they are able to differentiate between two sounds more accurately than others and to imitate sounds better. Then motivation is another factor that leads to quick learning of pronunciation or not. Learners with high motivation for learning a foreign language will determine whether they will develop authentic pronunciation. Lastly, when instruction emphasizes the teaching of pronunciation on the first year only, there will be a delay in becoming competent in pronunciation.

2.4. Summary of review of related literature and gap identification

As illustrated by researchers Harrod and Ruggles (1983), Muchtar1 (2019) and Schitteck, et. Al., (2001) a computer assisted approach in teaching is simply referred to as Computer assisted pronunciation teaching (CAPT). The system facilitates learners and students to practice the pronunciation of the target language either in class or independently (Chu Liu & Yi Hung, 2016). In line with Moradi & Saed (2017), Gilakjani & Sabouri (2017), Gilakjani& Rahmy, (2019), Ravell (2021) and Hincks (2003), CAPT was proved to boost the learning of English pronunciation in an environment where fluent comprehensible input is rare. The approach facilitates the learning of pronunciation by using online tools to avail audios and videos of fluent speaker of English to learners hence, acting as authentic resources and models for pronunciation learning (Begoach, et. Al., 2021, Ongo'onda& Muindi 2016).

Teaching and learning English pronunciation using assisted machines to provide standard conversations and individual word pronunciation audio confirm Krashen's theory of 'input hypothesis and interaction hypothesis of Michel Long (Warschauer& Healey 2009). Though there is no interaction with a machine assisted tools, students are able to practice listening as much as they can by understanding segmental features of words, rehearsing the pronunciation and doing listening tests. That is, they interact with the language (Derakhshan, Salehi &

Rahimzadeh 2015, Thomson & Derwing (2014). The method is far better than learning pronunciation solely from a teacher who struggle with pronunciation skill as well.

In accordance with Mugiraneza (2021) public schools in Rwanda were provided with computer to facilitate learning of any form. A computer aided by didactic materials such as picture, audio, video or any other components capable of supplementing learning and teaching is essential during learning. There are numerous researchers who show factors which affect the learning of pronunciation but such as lack of motivation and authentic resources, difficult of English sounds system which completely differ from Asian and African sound system, first language interference, living in an area where English is not used in every day routine related problems (Bongaerts (2009); Flege et. Al. (2001); Gilakjani (2011 and 2012); Sahatsathastana (2017); Szyszka (2015), having said that, Computer assisted Pronunciation Teaching (CAPT) has been proven to bridge the gap. This current study is expected to close the gap related to the scanty literature on the application of computer assisted approach on enhancing students' English pronunciation in Rwanda.

In doing so, not only will the researcher compare English speaking proficiency among learners who uses e-dictionary and online listening tools with students who rely on a traditional class only while studying pronunciation but also invite more research to be conducted in the area of e-dictionaries with the main goal of increasing awareness among teachers and students towards the potentials of electronic dictionary.

CHAPTER THREE: METHODOLOGY

This chapter describes the methodological approach and techniques which were used in the study. It includes the research design, description of the area of the study, study population, the sampling techniques as well as the data collection methods, validity and reliability of research tools and data collection procedures. It further describes how data was collected, processed and finally analyzed to give the implications of the findings.

3.1. Research design

A mixed research design involving qualitative and quantitative was used in this study to assess the contribution of the application of computer assisted approach (British e-dictionary) to enhance pronunciation among O' level students in secondary schools in Masaka sector. Mixed methodology enabled the researcher to harness the potential that laid in the use of both quantitative and qualitative data in addressing the subject matter. Borg et, al (2017) define a survey as an attempt to collect information from members of a population in order to determine its current status with respect to one or more variables. The variables for this study include computer assisted approach with British e-dictionary (independent variable) and enhanced pronunciation as (a dependent variable). This design was relevant to the study because it facilitates adequate data collection basically by the use of questionnaires and interview guides (Madges, 2016).

The decision to use qualitative approach in this research has been influenced by the fact that this approach permits a considerable amount of flexibility (Arisunta, 2010). Indeed, qualitative data deals with respondents' place of events and processes and structures of their lives (Lodico, et al ,2015). Quantitative approach was predominantly used as a synonym for data collection technique (such as a questionnaire) or data analysis procedure, such as: graphs or statistics that generates or uses numerical data (Creswell, 2016) that allowed the researcher to

identify the causes of poor English pronunciation among students in secondary schools in Masaka sector; assess the effectiveness level of applying computer assisted method (e.g., British e-dictionary) in English class to boost speaking ability in secondary schools in Masaka sector; determine the significance of computer assisted approach during the teaching and the learning of English pronunciation and examine the impact of e-dictionary and online listening tools on speaking proficiency among learners in secondary school in Masaka sector.

3.2. Study Site

The current study was conducted in Masaka sector within two of its secondary schools that are G.S Ayabaraya and G.S Rusheshe. Firstly, those schools have been chosen because computer assisted approach (British e-dictionary) has been in application for years at those two selected schools but students' speaking proficiency and pronunciation remains wanting. Secondary, when considering marks recorded in those schools in last three years, it is clear that the students' English pronunciation and speaking proficiency are dreadfully low.

3.2.1. G.S Ayabaraya

G.S Ayabaraya is a public school located in Masaka. The school was inaugurated in 1979 and it is located in Ayabaraya cell, Masaka Sector, Kicukiro District at around 5 km from main road (Kigali city – Kayonza) in the right side of main tarmac road. The school started as primary and was attended by children from different hills around it. In 2012, The government launched a policy of education for all under the Nine Years' Basic Education for all Rwandan children. It is then when the school got other new classrooms to tackle with the problem of nine years' basic education and most secondary students at G.S Ayabaraya are from the same primary school with only few come from neighboring primary schools such as G.S Rusheshe, G.S Iharara etc...Since then, we still observe low level of English

proficiency among learners which does not allow them to understand or imitate what they have heard as a good way of learning how some words are pronounced.

3.2.2. G.S Rusheshe

G.S Rusheshe is restricted in Mubano Village, Rusheshe cell, Masaka sector, this school started in 1963 with only primary school. In 2009, the school launched a secondary level with 430 Students. Now, the school has a total of 10 of English teachers from nursery to A' level and a total students of 2219 with 96 students in senior three.

A brief description of those schools is mapped in table 1 as follow:

Table 1. Two Selected secondary schools in Masaka sector

S/N	Description	G.S Rusheshe	G.S Ayabaraya
1	Location	Masaka sector	Masaka sector
2	Owner	Public	Public
3	Establishment	1963	1979
4	English teachers	10	7
5	Total student	2267	1377
6	Students in ordinary level	406	274
7	Students in senior three	96	55
8	School structure	Nursery, Primary, Ordinary Level and A. level.	Nursery, primary and Ordinary Level
8	Problems	Lack of internet connectivity. Lack of electricity Insufficient computer literacy.	Low level of understanding English which does not allow them to understand and imitate what they have heard as a good way of learning how some words are pronounced.

Source: Researcher (2022)

3.3. Study population

A research population is said to be a large collection of people with certain characteristics that are of particular interest to the researcher (Bougie & Sekaran, 2016). Thus, the target population for this study is 170 and it is comprised of 2 head of studies, 17 teachers and 151 learners from two selected secondary schools in Masaka sector (MINEDUC, 2021). However, the study targeted two targeted schools (G.S Ayabaraya and G.S Rusheshe) using stratified sampling and 2 head of studies as well as 17 teachers using purposive sampling while 151 were targeted using simple random sampling.

3.4. Sample Design

In my view, the sample design implies the formulation of a plan of collecting information about sampling frames and their handling. Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which a judgment or inference about the aggregate or totality is made (Yin, 2003). In the same line, Miles and Huberman (2014) quoted by Keith F Punch (2016), stresses that “You cannot study everyone everywhere doing everything”. This implies that all empirical research involves sampling. Thus the researcher needs to think about sampling aspects of the study in order to achieve the objectives. Sampling therefore, serves to extract a portion of a population from which the generalization to the population can be made.

3.4.1. Sample size

According to Amin (2005), a sample size is a portion of the population whose result can be generalized to the entire population. In this study, a sample of 63 respondents was selected based on the formula of Naissuma (2010). How to calculate the sample size as described in equation below;

$$n = \frac{NC^2}{C^2 + (N - 1)e^2}$$

Where;

n = is the sample size

N = is the population size

C = is the coefficient of variation

e = is the level of precision.

With a confidence level of 95%, coefficient of variation of 0.5 and precision level of 5%, the sample size is equal to 63 as derived in the equation below;

$$n = \frac{170 (0.5)^2}{(0.5)^2 + (170 - 1)(0.05)^2} = 63.013 \text{ or } 63 \text{ Respondents}$$

Table 2. Respondents sampling selection breakdown

	Targeted population			Strategy		Research tools
	Population	Sample size		Types of sample size	Sampling	
Director of studies	G.S Rusheshe	1	2	Universally or census	Purposively	Interview
	G.S Ayabaraya	1				
Teachers	G.S Rusheshe	10	10	Universally	Purposively	Questionnaire
	G.S Ayabaraya	7	7	Universally		
Students	G.S Rusheshe	96	44	Stratified sampling	Randomly	Questionnaire
	G.S Ayabaraya	55	28			
Total		170	63			

Source: Researcher (2022)

This table shows that the sample size is 63 respondents drawn from 170 respondents; this implies that 2 school staff and 19 teachers were universally sampled. According to Bryman (2012), under the proportion allocation, the sizes of the sample from strata are kept to the size of the strata using the following formula:

$$n1 = \frac{n * P1}{N}$$

n1 represents the sample size for stratum one (Students at G.S Rusheshe; n representing the total sample size; P1 representing the proportion of population in stratum one; and N representing the total population. Therefore, for the stratum of teachers were sampled using the above formula, its sample size is as follows.

$$n1 = \frac{96 * 44}{151} = 27.89 \text{ or } 28 \text{ Learners at G.S Rusheshe}$$

To determine the sample size of students at G.S. Ayabaraya, the same sample technique is systematically applied to determine 15 students.

3.5. Background factors of respondents and key informants in the sample

Under this section, the study seeks to assess the respondents' background information in terms of gender, age, academic qualification and experience in teaching duties (for teacher) or experience in education administration (for Director of studies).

The major aim of the researcher is to know the respondents' life experience coupled with their knowledge that enable them to provide needed data to enrich this research on the significance of applying computer assisted approach (British e-dictionary) to enhance English pronunciation among students in o' level secondary schools in Masaka sector. 61 respondents (2 key informants, 15 teachers and 44 students) participated and the following were the results on general background

information of three categories of respondents: school staff, teaching staff, and students.

3.5.1. Gender categorization of respondents

This section represents respondents in terms of their gender. Descriptive and vivid statistics (Frequency and percentage) was used to exemplify and weigh data on respondents' gender concern. Table 4 highpoints the results in percentages and frequencies resulted from the number of participants.

Table 3: Respondents' gender

Gender	Students		Teachers		School staff		Total Percent	
	F	%	F	%	F	%	F	%
Female	27	61.4	6	40.0	0	0.0	33	54.1
Male	17	38.6	9	60.0	2	100.0	28	45.9
Total	44	100.0	15	100	2	100.0	61	100.0

Source: Field survey (2022)

Table 4 shows that there were more female participants than male participants. Among 44 students sample, 27 which makes 61.4% were female while 17 which makes 38.6% were male. The reason behind a greater number of female may be because the government policy encourages females to go to school. Additionally, in the sample of 17 teachers, 6 which make 40% were females while 9 which make 60% were males. This is may be because males dominate employment domain. Also 2 school staff accounted 100% participated in the study.

3.5.2. Information respondent's age

All respondents were keen on disclosing their ages voluntary. One's age is always related to experience and understanding of a given issues related to the significance

of applying computer assisted approach (British e-dictionary) to enhance English pronunciation among students in o' level secondary schools in Masaka sector. Individuals of different age groups usually have different feelings/ thoughts and views on a given study subject and this provides comprehensive data on the significance and impact of applying computer assisted approach (British e-dictionary) to enhance English pronunciation among students from all dimensions. In this study, the respondents' age was presented and analyzed.

Table 5 points out the results related to school staff and teachers' age analysis while the age of students' participants was presented in Figure 1

Table 4: Director of studies and teachers' age itemization

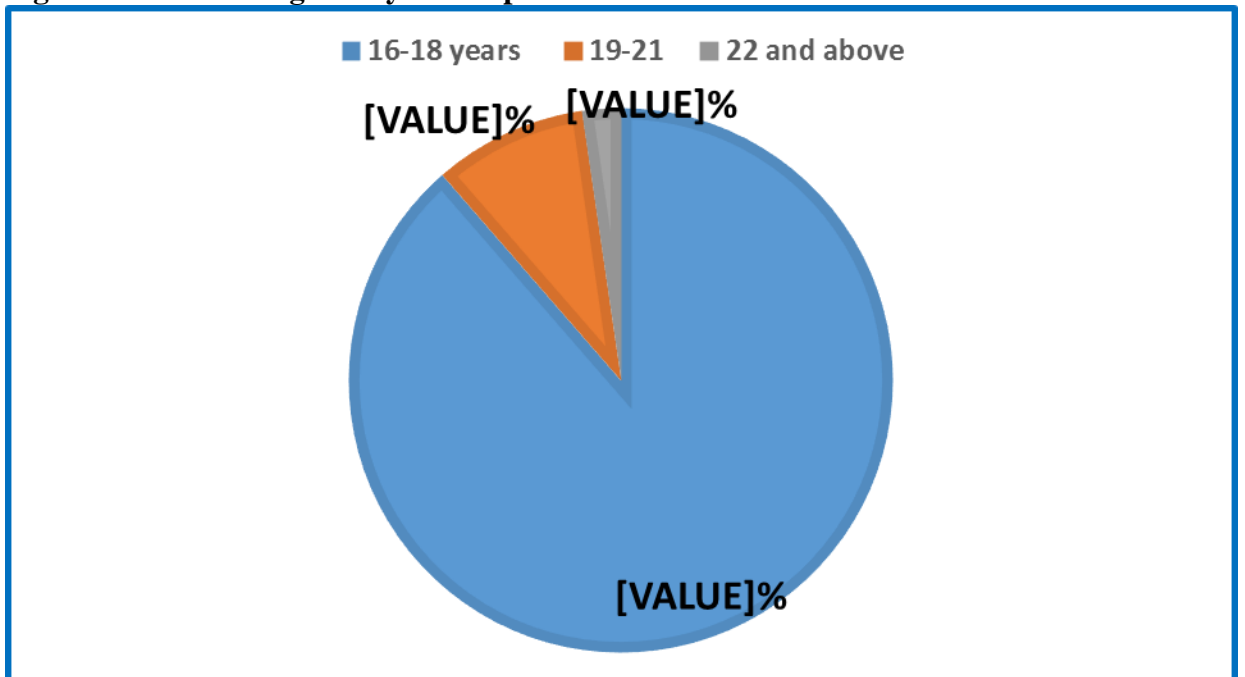
<i>Age interval</i>	<i>Teachers</i>		<i>School Staff</i>		<i>Total Percent</i>	
	F	%	F	%	F	%
<i>25 years and below</i>	1	6.7	-	-	1	5.8
<i>26-35 years</i>	8	53.3	1	50.0	9	52.9
<i>36-45 years</i>	5	33.3	-	-	5	29.4
<i>46- 54 years</i>	1	6.7	1	50.0	2	11.8
<i>56 years and above</i>	-	-	-	-	-	0.0
Total	15	100	2	100	17	100.0

Source: Field survey (2022)

Results in Table 5 displays that most teaching staff's age range between age brackets of 26-35 years and 46-54 years at 50.0 % for each age interval. However, the majority of teaching staff had their ages vacillated between 26 to 35 years at 53.3 %. This denotes that there was fair representation of the population as almost all age classes were represented except age brackets 56 years and above. This is an indicator that all teachers and school staff in sampled area are mature and old enough to use apply computer assisted approach (British e-dictionary) to enhance English pronunciation among students.

According to Dondi Kurniawan (2020), there is a high frequency and rate of using technology (computer, smart phones and I-PAD) in teaching activities by most young teachers than older teachers. In this research, we have a greater number of young teachers who have the ability to use technology during the teaching of English pronunciation. Further their age range allows them to provide meaningful and valid responses to the questionnaires.

Figure 1. Students' age analysis and presentation



Source: Field survey (2022)

Reference was made in Figure 1, and it is clear that most students under the study were of age between 16-18 years old with the highest percentage of 88.6%. Students whose age range 19 - 21 accounted to 9.1% of the total sampled students while students aged 22 years and above was 2.3% of total students in the study sample size. Thus, the majority of the students were old enough to participate in academic research and they are assumed to be a knowledgeable source of

information related to the application of computer assisted approach (British e-dictionary) to enhance their English pronunciation in their setting.

3.5.3. Qualifications of respondents and key informants in the sample

To be able to investigate the education qualification of teachers and director of the studies in the respondents' sample, I operationally defined and categorized the level of education into two intermediate variables (secondary and university (diploma, bachelor's degree, masters and PhD/Doctorate). The emphasis was put on the respondents' educational qualification because education level can provide a n indicator on how individuals are willing to contribute to the development of research knowledge on a given subject and study area.

Table 5: Qualifications of respondents and key informants in the sample

LEVEL OF EDUCATION	OF SCHOOL STAFF		TEACHERS		TOTAL PERCENT	
	F	%	F	%	F	%
Secondary certificate	-	-	1	6.7	1	5.8
Diploma (A1)	-	-	4	26.6	4	26.6
Bachelor's degree	2	100	9	60.0	11	64.7
Master's degree	-	-	1	6.7	1	5.8
PhD/Doctorate	-	-	-	-	-	-
Total	2	100	15	100	17	100

Source: Field survey (2022)

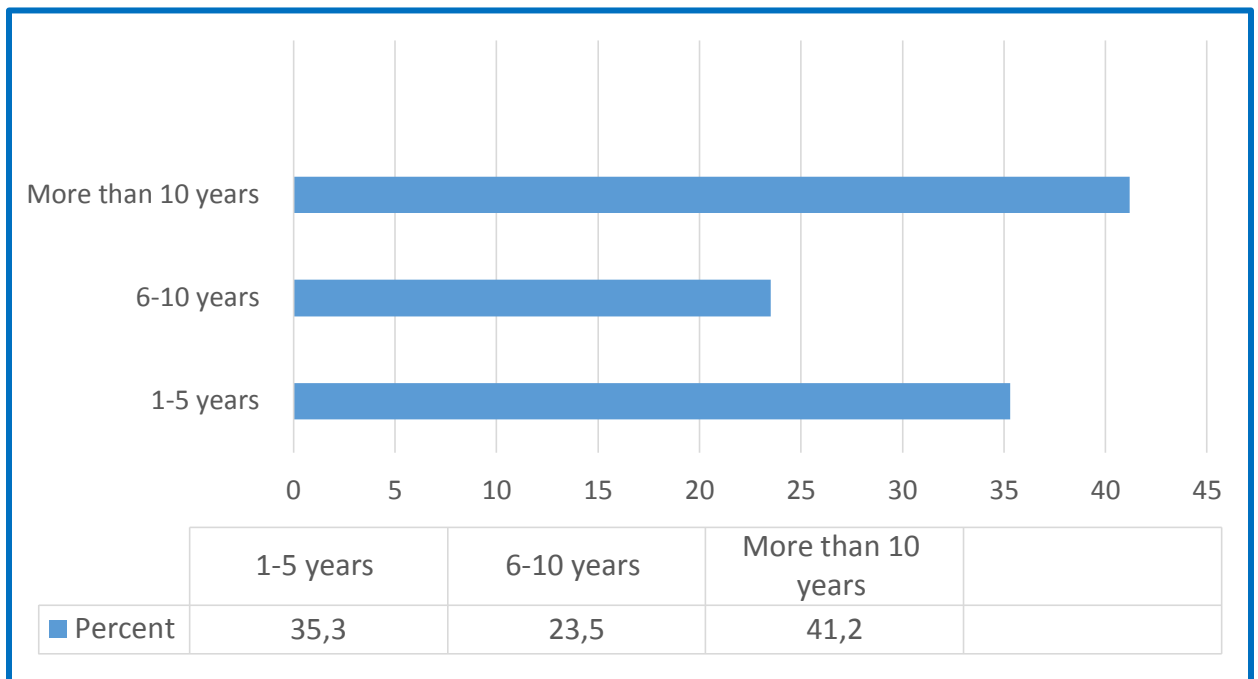
Table 6 shows that 100% of director of studies have bachelor degree and among 15teachers who participated in the study, 9 (60%) have bachelor degrees as well. 4 teachers (26.6%) who hold diploma , 1 teacher (6.7%) holds a secondary certificate and 1 teacher (6.7%) holds a masters degree. On the whole, all respondent hold acceptable degrees to teach English in their respective level as a result, they are the ones to provide enough information on the causes of poor English pronunciation

among ordinary level students in Masaka sector, to describe the effectiveness level of applying computer assisted approach in English class and to understand the significance and impact of computer assisted approach during the teaching and the learning of English pronunciation

3.5.6. Distribution of staff and teachers' experience

Another variable of interest sought to examine how long the respondents have been responsible in carrying out education duties. Period spent in education industry is important as it helps explain the respondent's knowledge on the effectiveness level of applying computer assisted approach in English class to boost speaking ability among O' level students.

Figure 2 . Qualifications of respondents and key informants in the sample



Source: Field survey (2022)

The survey results highlight that of 17 respondents (2 Director of studies and 15 teachers), 7 respondents (2 Director of studies and 5 teachers) (41.2%) have more

than 10 years teaching and operating in education duties and 6 (35.3%) respondents have 1 to 5 years of teaching experience while 4 (23.5%) of respondents have between 6-10 years of teaching experience. The implication of the results is that most teachers at G.S Rusheshe and G.S Ayabaraya have enough experience vast knowledge in teaching English using different teaching and learning approaches in boosting the learners' English pronunciation.

3.6. Sample Design

In my view, the sample design implies the formulation of a plan of collecting information about sampling frames and their handling. Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which a judgment or inference about the aggregate or totality is made (Yin, 2003). In the same line, Miles and Huberman (2014) quoted by Keith F Punch (2016), stresses that “You cannot study everyone everywhere doing everything”. This implies that all empirical research involves sampling. Thus the researcher needs to think about sampling aspects of the study in order to achieve the objectives. Sampling therefore, serves to extract a portion of a population from which the generalization to the population can be made.

.3.6.1. Sampling techniques

Homogeneous sampling technique may be beneficial to this research as it includes people of the same conditions and ordeal. Using this technique in sampling may reduce variations among students because they share English background. Moreover, it assisted in simplifying the analysis of information and facilitates in making focus group interviews. This comparative study examined if using computer assisted approach (British e-dictionary) during vocabulary teaching can improve the pronunciation of English words among ordinary level students of the same class regardless of their performance differences. Furthermore, the research seeks to respond to the research questions surrounding the pronunciation of English

among the students of the same class rather than individual student. Another sampling technique which may work with this type of the study is probability sampling or simple random sampling to pick a class sample from sampled students in two schools.

Exactly, this study used simple random and purposive sampling techniques. Simple random sampling was for students in order to avoid researcher bias and to ensure that each respondent get an equal chance of being selected. Simple random sampling gives each member of the target population an equal chance of being included in the sample, addresses confounding variables and bias is often reduced by the random selection of participants. On the other hand, purposive sampling was applied to select teachers and director of the studies. According to Amin (2005), randomization is effective in creating equivalent representative groups that are essentially the same on all relevant variables thought of by the researcher. The purposive sampling technique, also called judgment sampling, is the deliberate choice of an informant due to the qualities the informant possesses. This implies that the researcher in this study had the flexibility in selecting participants who assumed to possess invaluable and relevant information to address research questions.

The logic and power of the purposeful sampling lie in selecting information-rich cases for in-depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling. Purposeful sampling is applied to select teachers to whom the questionnaire was administered and school staff to which interview protocols are conducted since their number is small to manage and they possess all the necessary information. Therefore, simple random sampling and purposive sampling were used in selecting respondents.

3.7. Data Collection Methods

Data collection is a term used to describe a process of preparing and collecting data. The purpose of data collection is to obtain information to keep on record, to make decisions about important issues, and to pass information on to others (Creswell, 2004). The researcher used both primary and secondary data which was obtained from analysis and review of books, journals, papers and other available literature on community.

According to Kothari (2005), primary data are those data which are collected afresh and for the first time, and thus happen to be original in character; while secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. Normally they prove to be useful and help to supplement information obtained from primary sources. The study also reviewed empirical evidence from other countries that have used a computer assisted method in English class to boost speaking ability and comparing English speaking proficiency. The reviewed literature further helped in making a sound conclusion on the research problem under study.

3.8. Data Collection Instruments

In this study, Self-Administered Questionnaire (SAQ) and interview guide were used to collect data from respondents. According to Cooper & Schindler, (2011), in this study questionnaire constitute the main research instrument because it generates data in a very systematic and ordered fashion. The researcher formulated a questionnaire in line with the research questions which was given to the big portion of the respondents (44 sampled students: 16 students from G.S Ayabaraya and 28 students selected from G.S Rusheshe) and 17 teachers from two secondary school and they were given the feedback. Furthermore, the semi-structured interviews were used since they are more appropriate to such categories of people who do not have time to fill questionnaires (key informants). Besides, experience

shows that such people need some level of respect and serving them with questionnaires is in most cases counterproductive, they perceive it as if the researcher has underrated them. In my view, interview increases the interaction between the researcher and the interviewee also increases the rapport between them which leads to more chances of getting much/truthful data.

In addition to self-administered questionnaires, this study gathered primary data through use of interview guide. The interview refers to as “a data collection method when the interviewer directly communicates with the respondents in accordance with the prepared questions” (Mathers 2017). Besides, interviews help in cross checking responses given in the questionnaires to ensure consistence and validity of the responses (Hair, 2018). In this study, the interviews were specifically designed for the directors of studies of two sampled secondary schools in Masaka sector as they tend to be a bit technical.

3.9. Procedures of data collection

- The researcher provided the students with words to read and record each individual reading,
- The researcher provided the students with computers with e- dictionary installed so that they can better their pronunciation by repeating after a fluent model,
- The researcher asked the students to read the second time and record the reading.

3.10. Validation of instruments

As for Sekaram and Bougie (2013), validity is established by correlating the scores with a similar instrument. In order to ensure that the instruments used are valid, the researcher conducted a pilot study at G.S Gako and G.S Masaka in Masaka sector in order to predict an appropriate sample size, improve the chances of getting clear outcomes and to avoid any form of statistical variability in data analysis and

interpretation (Lodico, et al. 2010). In this study, the research tools to be used were handed to other researchers who provided its validation.

3.11. Reliability of instruments

A test is seen as being reliable when it can be used by a number of different researchers under different but stable conditions, with consistent results. Reliability reflects consistency over time. Reliability is the degree to which a test is free from measurement errors, since the more measurement errors occur the less reliable the test (Susan & Corrol, 2012). To ensure that the data collection instruments are reliable, a pilot study was conducted on respondents with similar characteristics.

3.12. Data Analysis Procedures

In my understanding, various data analysis procedures/approaches are used based on appropriate research design. According to Sarantakos (2018), data processing involves translating raw information into meaningful and relevant information for easy interpretation in order to reach proper findings. In this study data was collected from various sources, coded, categorized, and analyzed for producing final findings. Quantitative data was analyzed by using SPSS, while qualitative was edited and later disseminated into themes in reflection with my research questions.

3.13. Ethical Issues

The ethical integrity of the researcher is a critically important aspect of ensuring that the research process and the researcher's findings are trustworthy and valid (Hesser-Biber, 2016). Babbie (2014) stated that some of the ethical issues in social research involve voluntary participation of the participants, no harm to the respondents (unless they are willing to accept the risk), informed consent; anonymity, confidentiality, accurate reporting of findings, justifying the use of deception and the active role of the institutional review boards for reviewing research proposals (that involve human subjects). The core ethical values of this

research were respect to the participants and ensuring that the participants in the study were treated justly and fairly. Thus, a proposal to give interview and questionnaires to the respondents was submitted for approval to the University of Rwanda (UR) Ethics Committee before the interview and questionnaire were used. Also, consent forms were provided to the participants in order for them to register their willing consent, orally or in writing, before data collection commenced.

The researcher assured the respondents of anonymity for partaking in the study and that no form of harm or injury, be it physical or psychological, was inflicted on the respondents during the course of the survey. Also, the participants of the study were allowed the freedom to withdrawal if they felt uncomfortable in answering the interview/questionnaires. Lastly, the participants were also informed that their interviews would be recorded before the commencement of the interviews; that the transcripts of the interviews were provided to them before the data analysis is written and the final report of the study was presented to the participants involved in the study.

3.14. Conclusion

This chapter discloses the research methods used in conducting this research. Questionnaires were used to collect data. The analysis of data used tabulation containing both frequencies and percentages. Questionnaires and interview methods were used to identify the causes of poor English pronunciation among students in secondary schools, assess the effectiveness level of applying computer assisted method in English class to boost speaking ability in secondary schools and determine the significance of computer assisted approach during the teaching and the learning of English pronunciation as well as examine the impact of e-dictionary and online listening tools on speaking proficiency among learners in secondary school in Masaka. The results of the findings are discussed in chapter four.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

The fourth chapter of this thesis presents how data related to the objectives of the study were analyzed, presented and interpreted as well as triangulated with support of secondary data. It is ordered in the following sections: Firstly, presentation of how research tools were distributed to the respondents and how the tools were received back. Secondly, presentation and discussion of findings in line with research questions:

- 1) To what extent do teachers contribute to computer assisted approach in promoting English pronunciation among students in ordinary level in Masaka sector?
- 2) What are the causes of unsatisfactory English pronunciation among ordinary level in Masaka sector?
- 3) What is the effectiveness level of applying computer assisted approach in English class to boost speaking ability in ordinary level in Masaka sector?
- 4) What is the significance and impact of computer assisted approach during the teaching and learning of English pronunciation?

4.2. Distribution and collection of research tools

This study involved a total of 63 respondents (2 key informants, 17 teachers and 44 learners). All 17 teachers were given questionnaire for their respective areas while 44 learners participate in assessment exercise except 2 key informants (Director of studies) who were given interview at their respective areas. Table 3 shows distributed, filled and returned questionnaire.

Table 6: Questionnaire items distributed and returned

Categories of respondents	of Items distributed	Items returned	Return rate
Teachers	17	15	88.2%
Students	44	44	100%
Total	63	59	93.6%

Source: Field survey (2022)

Table 3 shows the percentage rate on which respondents answered questionnaires. Among the sample of 17 teachers who were given questionnaires, 15 copies accounted 88% were retrieved and 2 copies of questionnaires 12% were not returned.

The sample of 44 students who were given pronunciation exercises participated on 100%. In accordance with Mugenda (2003) when an average of respondents for example 60% of the participants responded, their responses are adequate enough and they reduce the risk of bias of data analysis and interpretation.

4.3. Results on the contribution of teachers to computer assisted approach in promoting pronunciation of English words among ordinary level students in Masaka sector

This section presents and analyzes data on how many teachers contribute to the use of computer assisted approach in promoting pronunciation among o''level secondary school

Table 7: Respondents' reactions on the application of computer electronic dictionary

Do you apply British e-dictionary to enhance English pronunciation among students?	Frequency	Percentage
Yes	10	66.6
No	5	33.3
Total	15	100.0

Source: Field survey (2022)

The study shows that 66.6 % of the respondents affirmed that they apply computer assisted approach (British e-dictionary) to enhance English pronunciation among students when teaching English while the remaining 33.3% of teachers in sampled schools were do not use computer assisted approach (British e-dictionary) to enhance learners' English pronunciation while they teach English. This implies that the level of application of computer assisted approach (British e-dictionary) to enhance English pronunciation among students at G.S Rusheshe and G.S Ayabaraya is not effective because some English teachers are not able to apply it. Fortunately, 66.6% respondents who used the approach said that students appreciate the approach because of demonstrations, clarification on English sounds and videos it provides. Additionally, learners are interested and attracted in listening how new vocabularies are pronounced. This is in support (Ghasemi, Hashemi & Bardine, 2011) who observed that the approach has been hailed to stimulate and motivate learners and teachers for the past few years. . Additionally, using e-dictionary during pronunciation class backs up The Affective filter. The hypothesis stresses the reduction of negative feeling such as lack of motivation, low self-confidence and learning anxiety during second language lessons (Du, 2009, p. 162).

As for me when I used the approach during pronunciation lesson, all students were excited. Some learners enjoyed the approach because they believed that it provided the authentic materials, highlighted segmental features of a word. Further, they enjoyed listening to a foreigner speaking fluently and they liked the video too. After an exercise, some of the learners pronounced some vocabulary confidently. Considering all the points, by using computer assisted approach during pronunciation learning, teachers can increase the number of words learners are able to pronounce correctly.

On the contrary, those (33.3% of teachers) who said no, they indicated that:

- The approach would be appreciated by students but the time to take them in smart classroom is inadequate
- It would be an effective way of teaching pronunciation but they prefer sticking to a traditional way of teaching.
- The materials are available at teachers 'work place but using computer assisted approach is not feasible because of the way the teaching of English is structured.
- English pronunciation skill is a challenging endeavor that entails acquiring a wide range of new English skills including words, syntax /grammar, gesticulations, sounds, and mastering these skill requires extensive practice by the L2 learner. Nevertheless O' level students lack opportunities to maintain practices. For example learners can only access computer and internet at school and only when they are in smart rooms. Those who can access smartphones at home may not have internet always. Over all, application of British e-dictionaries to enhance pronunciation is too expensive and complicated to new each learner and untrained English teachers as well whenever they need to practice independently. Not only do these teachers have difficult using the approach, Hinks (2003) argued that pronunciation models and tools demand a strong connection and many materials. I am of the point that internet is not always strong, two smart rooms are enough for the whole school and the appliance to use demand an IT specialist to assist during the lesson. This may make some of the teachers discouraged.

4.3.1. Causes of unsatisfactory English pronunciation among ordinary level students in Masaka sector

In this section, the researcher presented, analyzed and interpreted the views of different respondents related to the causes of unsatisfactory English pronunciation among ordinary level students in Masaka sector as shown in Table 8:

Table 8: Causes of unsatisfactory English pronunciation among students in Masaka sector

Causes	Frequency	Percent (%)
Dearth of live inter-school English completion and debate	2	13.3
Insufficient tools to enhance learners' English pronunciation	3	20.0
English language pronunciation variety (British & American)	3	20.0
Poor ability of English learners	1	6.7
Unsatisfactory English reading, listening and speaking skills	2	13.3
Poor English language background	4	26.7
Total	15	100.0

Source: Field survey (2022)

Table 8 presents the opinions of teachers about the major causes of poor English pronunciation among ordinary level students in Masaka sector. It shows that 26.7% of teachers mentioned poor English background as the main cause of poor English pronunciation, 20.0% of teacher respondents pointed out insufficient tools to enhance learners' English pronunciation and the English language pronunciation variety (British & American) as the major causes. Moreover, 13.3% of respondents blame poor English pronunciation among students to unsatisfactory English reading, listening and speaking skills and dearth of live inter-school English completion and debate. Furthermore, 6.7% of teachers believed that poor learners English learners ability leads to poor English pronunciation among learners. .

The above findings rhyme well the empirical findings which point to insufficient materials (books and computers) and low learners' motivation to speak English outside the class and schools as the leading causes to the poor English

pronunciation and speaking (Roger, 2011). (Venuste and Andala, (2020); Sibomana, (2016); Sibomana 2014) also attribute the failure to attain a perfect speaking ability to the lack of pronunciation knowledge fluency, and applying listening and speaking exercises during English class. While I was teaching English at G.S Ayabaraya, it seemed to me that learners fail to pronounce English words correctly due to their background and changes in the language of instruction.

Lack of valuable facilities

The above quantitative findings are in confirmatory with the interview output of the director of studies who reported that English teachers sometimes use e-dictionaries before or after carrying out teacher's class visit or often while preparing teachers CPDs. Also, the effectiveness level of computer assisted method in English class is low due to the lack of relevant facilities. Further, the findings rhyme well the empirical findings which showed that lack of materials (books and computers) and low learners' motivation to speak English outside the class and schools lead to the poor English pronunciation and speaking (Roger, 2011).

Complexity of English sounds

One director of studies replied that English language pronunciation variety (British & American) ,lack of perquisite knowledge about English sounds and alphabet and inadequate reading, listening and speaking practices lead to poor English pronunciation of students at Masaka sector especially at G.S Rusheshe and G.S Ayabaraya.

4.3.2. The level of effectiveness in applying computer assisted approach to boost speaking ability among O' level students

The second research question of this study was to assess the effectiveness level of applying computer assisted approach in English class to boost speaking ability among O' level students in Masaka sector and findings are presented using frequencies and percentage, interview results and the key empirical references. Details of these analyses are shown in Table 9 as below:

Table 9: The effectiveness level of applying computer assisted approach to boost the students' English pronunciation

Effectiveness application level	Frequency	Percent (%)
A very high effectiveness application level	0	0.0
A high effectiveness application level	0	0.0
An average effectiveness application level	2	13.3
A low effectiveness application level	10	66.6
A very low effectiveness application level	3	20.0
Total	15	100.0

Source: Field survey (2022)

Improving and boosting the students' English speaking and pronunciation is a key tool to achieving a good results and satisfying the needs of good way and standard pronunciation of English words that can even help to excel in other subjects because in Rwanda, English is the sole medium of instruction in secondary schools. However, the application of computer assisted approach to boost the students' English pronunciation should be effective if it is coupled with actions. This implies that teachers have to effectively use computer assisted approach in smart classrooms by sharing required tasks and responsibilities with the school leaders to boost students' English pronunciation skills and abilities.

Table 9 presents the data into categories that are numerically appropriate to the research. This means that, 10 respondents (66 percent) said that the effectiveness level of applying computer assisted approach to boost students' English pronunciation in Masaka sector is "*low*" whilst 3 respondents (20.0 percent) said that the effectiveness level of applying computer assisted approach to boost students' English pronunciation in Masaka sector was "*very low*", against 2 respondents (13.3 percent) who said that the effectiveness application level was "*average*".

Lack of valuable facilities

The above quantitative findings are confirmatory with the interview output of the director of studies who said that English teachers sometimes use e-dictionaries before or after carrying out teacher's class visit or often while preparing teachers CPDs. What's more computer assisted method in English class is low due to the lack of relevant facilities. Further, the findings rhyme well the empirical findings that lack of materials (books and computers) and low learners' motivation to speak English outside the class and schools lead to the poor English pronunciation and speaking (Roger, 2011).

As it is said, teachers may use e-dictionary to check pronunciation or any other feature of a word before they go in class or in CPD. Their experience confirms Summers, (1988) who argues that since EFL teachers have their own pronunciation problem, dictionaries are the only reliable source for both teachers and learners. Nonetheless, they ignore that e- dictionary may be a useful tool to students too. From my perspective, learners who had smart phones and internet are eager to know how to use them to improve their English. Besides, taking them in smart class and teach pronunciation using e-dictionary would encourage them to practice independently using their smart phones. Ongo'onda & Muindi (2016) as well, support the idea that in EFL settings where students rarely get comprehensive native input, e -learning tools may be reliable choices to mend the break for restricted real life pronunciation practice.

4.3.3. The significance and impact of computer assisted approach in teaching and the learning of English pronunciation.

The third research question of this study was to determine the significance and impact of computer assisted approach during the teaching and the learning of English pronunciation. Findings from both respondents and key informants indicate that computer assisted approach during the teaching and learning process enables learners to understand more and improve their proficiency.

Table 10: The significance and impact of computer assisted approach in teaching and learning of English pronunciation.

The significance and impact of computer assisted approach in teaching and learning of English pronunciation.	F	%
It enables students to find appropriate word sounds and phonology	4	26.6
It provides correct British received pronunciation	2	13.3
It improves students' speaking skills	1	6.7
It helps the students to correct pronunciation errors and mistakes	3	20.0
It helps students to know proper English word pronunciation through error analysis on word Processor (WP)	5	33.3
Total	15	100.0

Source: Field survey (2022)

Key: F: Frequency %: Percentage

Table 10 shows teachers' opinion whether computer assisted approach is significant in enabling students to acquire appropriate and standard English word pronunciation or it cannot. Most teachers show positive attitudes towards this issue. 33.3% of teachers were in view that British e-dictionary helps students to know proper English word pronunciation through error analysis on word Processor (WP), 26.6 % of teachers replied that British e-dictionary enables students to find appropriate word sounds and phonology whilst, 20.0% of respondents contended that it helps the students to correct pronunciation errors and mistakes. Besides,

13.3% and 6.7% of teacher respondents stated that online dictionary provides correct British Received Pronunciation and improves students' speaking skills respectively. Considering the above points, it is clear that computer assisted approach works as an error analyzer which reflects another advantage of applying computer assisted approach (British e-dictionary) to enhance English pronunciation among the students in o' level secondary schools in Masaka sector.

Computer assisted approach is useful in pronunciation lesson

The director of study reported that computer assisted approach during the teaching and learning of English pronunciation enhances pronunciation practices and help English learners to become fluent in English language. In addition, the approach helps the teacher to access his/her learners' pronunciation ability so as to improve their speaking skills. It further enhances quick and accurate understanding appropriate English word pronunciation through error analysis on word Processor (WP)". This is in agreement with Rogerson-Revell (2021) who alludes that through learning with computer assisted approach; the approach guides their vocabulary, grammar, spelling and other skills. Students can learn self-directed learning, overcome their fear of learning English and correct common English word pronunciation errors and mistakes

Students can learn self-directed learning through computer assisted approach to overcome their fear of learning English and correct common English word pronunciation errors and mistakes. (Samuelson and Freedman (2010,p195) likewise, advanced the idea that sing e- dictionary during pronunciation lesson can reduce affective filter linked poor speaking ability and promote easy comprehensible input access. This means that the utilization of an electronic dictionary will familiarize learners with segmental features of English language correct vowel, consonant and stress hence improving the way they pronounce words

4.4. Impact of computer assisted approach in teaching and the learning of English pronunciation.

The researcher applied the computer assisted approach twice, during data collection in the two selected schools to record its impact on learners' English word pronunciation. The pronunciation change and Feedback are presented in Table 11 as below:

Table 11: Recorded results related to the application of British e-dictionary at the two schools (G.S Rusheshe and G.S Ayabaraya).

Words	British pronunciation				
	Phonology/ appropriate sounds	Before using British e- dictionary		After using British e- dictionary	
		Good pronunciation	Mispronun- cia- tion	Good pronunciation	Mispronunc- ia- tion
damage	/'dæmɪdʒ/	18/44	26/44	39/44	5/44
alter	/'ɑ:l.tə/	20/44	24/44	42/44	2/44
neutral	/'nu:trəl/	12/44	32/44	27/44	17/44
research	/'ri:.sɜ:tʃ/ /rɪ's ɜ:tʃ/	21/44	23/44	44/44	0/44
substitute	/'sʌb.stə.tu:t/	30/44	14/44	36/44	8/44
structure	/'strʌk.tʃə/	29/44	15/44	35/44	9/44
weather	/'weð.ə/	11/44	33/44	30/44	14/44
workload	/'wɜ:k.ləʊd/	9/44	35/44	40/44	4/44
loan	/ləʊn/	29/44	15/44	42/44	2/44
apprehensive	/,æp.rə'hen.sɪv	16/44	28/44	37/44	7/44
activist	/'æk.tə.vɪst/	20/44	24/44	44/44	0/44
prejudice	/'predʒ.ə.dɪs/	7/44	37/44	32/44	12/44
assassinate	/ə'sæs.ə.neɪt/	11/44	33/44	38/44	6/44
thought	/θɔ:t/	13/44	31/44	31/44	13/44
democracy	/dɪ'mɑ:krəsi/	10/44	34/44	33/44	11/44
serial	/'sɪr.i.əl/	13/44	31/44	39/44	5/44
radio	/reɪdiəʊ/	34/44	10/44	44/44	0/44
television	/'tel.ə.vɪʒ.ən/	22/44	22/44	40/44	4/44
watch	/wɑ:tʃ/	18/44	26/44	39/44	5/44
editorial	/,ed.ə'tɔ:ri.əl/	15/44	29/44	32/44	12/44
bulletin	/'bʊl.ə.tɪn/	6/44	28/44	40/44	4/44
scene	/si:n/	2/44	42/44	29/44	15/44
nevertheless	/,nev.ə.ðə'les/	4/44	40/44	34/44	10/44

management	/'mæn.ədʒ.mən t/	16/44	28/44	41/44	3/44
road	/rəʊd/	23/44	21/44	44/44	0/44
diabetes	/,daɪ.ə'biː.təs/	1/44	43/44	32/44	12/44
Percentage		(430/1,188) = 36.2%	(758/1,188) = 63.8%	(851/1,188) = 71.6%	(337/1188) = 28.4%

Source: Field survey (2022)

Computer assisted approach (e- dictionary) is specifically designed to evaluate and improve pronunciation in English words. The approach does this by highlighting the correct pronunciation of each vowel and consonant, aids learners in knowing which part of the word is most emphasized (stress) and providing the right intonation. With the aforementioned abilities, the approach removes the confusion caused by different teachers and other people while mispronouncing certain English words. Although students do not need native like pronunciation, using authentic source of pronunciation is the only way to be sure that our learners are getting a Standard English pronunciation which will assist them in communication without causing confusion to the listeners. The researcher applied this system to examine the significance and impact of its utilization in boosting students' English words pronunciation skills at two sampled schools in Masaka sector. The findings in table 11 revealed how the approach helped the students to quickly and easily pinpoint errors and attempt to identify specific pronunciation mistakes at the word level. Before the application of the approach, only 430 learners out of 11,188 repeated number of students in the exercise to mean 36.2% of learners at G.S Rusheshe and G.S Ayabaraya were able to pronounce well the words given by the researcher during assessment exercises while the remaining 758 total frequent recorded learners out of 11,188 total learners or 63.8% mispronounced the given words during the assessment activity. However, after using the approach (Two times), the remarkable improvement was evident as 71.6% pronounced well the words against 28.4% of learners who failed to capture the standard British

pronunciation. This implies that through use of British e-dictionaries, learners' pronunciation abilities and skills were increased at 35.4% at G.S Rusheshe and G.S Ayabaraya in Masaka sector.

Basing on the findings in table 11, it is clear to say and confirm that using e-dictionary approach and on-line listening tools help and enable students to correct pronunciation errors on their own to enhance speaking skills. In my humble observation, the problem of learners' English pronunciation errors at the phonetic (segmental) and prosodic levels when producing speech in English which can be categorized into English sound substitution, insertion, deletion, and duration errors should be reduced and omitted when the British e-dictionary is effectively used and applied in secondary schools in Rwanda and in Masaka in particular. Another significant part of acquiring an intelligible English words pronunciation is through much practice. This implies that the approach may not lead to a big success if only used once but rather used continuously with learners either with their teachers or when in the independent study. Therefore, where there is no fluent teachers to provide a standard pronunciation and in environment where students don't have people (parents or neighbors) to converse in the language, the approach will help learners with the perfect pronunciation practice.

4.5. Conclusion

This chapter highlighted how primary data from the participants were analyzed, interpreted and presented using descriptive tables and narratives. Causes of poor English pronunciation among ordinary level students in Masaka sector were discussed with primary data under the following research questions: the contribution of teachers on CAA to improve pronunciation teaching, causes of poor English pronunciation, the effectiveness level of applying computer assisted approach in English class in order to boost speaking ability among O' level students, the significance and impact of computer assisted approach during the

teaching and the learning of English pronunciation in Masaka sector. All points considered, I recommend teachers of English to computer assisted approach with Oxford e-dictionary in order to teach pronunciation effectively.

4.6 Summary of demographic information

This study was done on 63 people from GS Ayabaraya and G.S Rusheshe. Among those were 44 O' level students randomly selected and those include 28 from G.S Rusheshe and 16 from GS Ayabaraya. There were also 17 English teachers among those, 10 came from GS Rusheshe and 7 came from GS Ayabaraya. On top of that, there were 2 heads of studies form both schools who purposively requested to partake in the study. A survey on respondents' gender shows that all school staff participants were males 100%; likewise, there were more male teaching staff than female whereby the males were 60.0 % while the females were 40.0%. On the contrary, there were more female students participants as compared to the male students. The female students 'participants were 61.4 % while the male students were 38.6 %.

Students' age also was analyzed. A survey showed that a large number of student was between 16-18 years old (88.6%), followed by students who were between 19 – 21 years old (9.1%) while students who were 22 years old and above accounted (2.3%) of total students in the study sample size. Moreover, the survey results highlight that out of 17 respondents (2 Director of studies and 15 teachers), 7 respondents (2 Director of studies and 5 teachers) (41.2%) have more than 10 years teaching and operating in education duties and 6 (35.3%) respondents have 1 to 5 years of teaching experience while 4 (23.5%) of respondents have between 6-10 years of teaching experience. The implication of the results is that most teachers at G.S Rusheshe and G.S Ayabaraya have enough experience, with vast knowledge in teaching English using different teaching and learning approaches in boosting the learners' English pronunciation.

CHAPTER FIVE: GENERAL CONCLUSIONS AND RECOMMENDATIONS

The study sought to determine and study the significance of applying computer assisted approach (e-dictionary) in English class to boost speaking ability and compare English speaking proficiency among learners who use e-dictionary and online listening tools with students who rely on a traditional class only while studying pronunciation. Conclusions, recommendations and suggestions are presented in the following sub-sections.

5.1. General Conclusion

The following conclusions are based on the key findings of the study and are in line with the major research questions aimed at identifying the causes of poor English pronunciation among ordinary level students in Masaka sector and assessing the effectiveness level of applying computer assisted approach (e-dictionary) in English class to boost speaking ability among O' level students in Masaka sector as well as determining the significance and impact of computer assisted approach during the teaching and the learning of English pronunciation.

First and foremost, the study revealed that the level of application of computer assisted approach (British e-dictionary) to enhance English pronunciation among students at G.S Rusheshe and G.S Ayabaraya is not effective because some English teachers are not able to apply it. The application of e-dictionary in teaching English pronunciation and speaking at G.S Rusheshe and G.S Ayabaraya is ineffective because the length of English curriculum structure, the skills to be covered and the time allocated to pronunciation does not allow the teachers to use smart classes as needed.

Secondly, the factors that mainly lead to the poor English pronunciation among students are linked to insufficiency of necessary materials. It is well known that still some learners do not have any access to internet and it is a barrier to learning

how to pronounce English sounds through British e-dictionaries. Also, English language pronunciation variety (British & American) challenged learners and led to learners' fear of speaking and poor pronunciation. In addition, the key informants added that lack of prerequisite knowledge about English sounds and alphabet and inadequate reading, listening and speaking practices lead to poor English pronunciation among students at Masaka sector especially at G.S Rusheshe and G.S Ayabaraya”.

Thirdly, the Computer assisted approach during the teaching and learning of English pronunciation enhances students' pronunciation practices as they become fluent in English language.

Fourthly, the findings in table 11 revealed how the approach helped the students to quickly and easily pinpoint error and attempt to identify specific pronunciation mistakes at the word or level. This was clear in this study as before application of the approach, 36.2% of learners at G.S Rusheshe and G.S Ayabaraya were able to pronounce well the words given by the researcher while 63.8% mispronounced the words. However, after using the approach (Two times), the remarkable improvement was shown as 71.6% pronounced well the English words against 28.4% of learners who failed to capture the standard British pronunciation.

This implies that through use of British e-dictionaries, the learners' pronunciation abilities and skills were increased at 35.4% at G.S Rusheshe and G.S Ayabaraya in Masaka sector. It may be said that e-dictionary approach and on-line listening tools help and enable students to correct pronunciation errors by their own to enhance speaking skills.

5.2. Recommendations

On the basis of the current study findings on the undertaken objectives, the following key points are recommended to different stakeholders to improve the learners' English pronunciation among ordinary level students in Masaka sector.

- i. In order to apply British e-dictionary during the teaching and the learning of pronunciation, the teachers and learners should be trained and the government should ensure the accessibility of internet in every class.
- ii. Providing independent pronunciation practice. REB should ensure that secondary school teachers have a variety of training regarding the dozens of apps and websites so that they are able to choose the best app suitable for a certain pronunciation lesson as well as ensuring that English teachers are given opportunity to use the available tools while teaching. When this is done, teachers will be able to guide students in independent pronunciation practice, and to use other programs designed for other purposes which can also be adapted for pronunciation practice.
- iii. Teachers at G.S Masaka are recommended to correct and respond to students' recorded practice. Teachers often listen to learners' recordings and give feedback as a guide for future practice. This process can be simplified through tech tools.
- iv. Findings revealed that the use of computer assisted approach software in a pronunciation class can improve the students' English pronunciation and help them to learn more quickly and recognize their errors. Therefore, we recommend the use of automatic speech recognition and pronunciation guide (British e-dictionary) as a tool to support teaching English pronunciation, especially for secondary school learners at Masaka sector since most of them live in rural area where they have no access to people who speak English. To sum up, effective application of computer assisted

dictionary can act as a comprehensible input to the students hence increase their confidence during speaking practice.

- v. Teachers in Masaka sector should increase the application of e-dictionary through the use of smart classes already available in their schools. They should encourage learners to practice pronunciation by listening and repeating after the tool.
- vi. The study recommends REB to revise the way English skills are allocated time in the curriculum. Many periods are allocated to the study of grammar and reading– comprehension. Only few exercises for pronunciation and with limited time are provided. In my thinking, I recommend a CD. with vocabulary to listen to rather than a list of words with its phonetics. Radios to be used to listen to CDs during class rather than being obliged to take another day for a smart class and more than one or two smart classes so that they are available whenever needed.
- vii. Findings of the study indicated that it is not easy to apply the computer assisted approach (British e--dictionary) when there is poor signal, the government of Rwanda is recommended to provide and enhance/improve internet network in many areas of Masaka sector especial teaching environment.

5.3. Suggestions for future study

Other researchers are invited to carry out future research to fill the gap traced by this current research. Therefore, the following are recommended to the academicians:

- ❖ Investigating the challenges faced by learners in imitating English words pronunciation as results of use of E-Dictionaries in secondary schools in Rwanda.

- ❖ The Effect of computer assisted approach on Rwandan Students' English Pronunciation: A comparative study between urban secondary schools and rural secondary schools.
- ❖ The use of electronic dictionaries for pronunciation practice by students in secondary schools in their spare time and at home.
- ❖ Speaking ability of O' level students who live in environment where their neighbors and parents can speak English and the speaking ability of learners who rely on English provided at school as their only source of comprehensible input.

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APPENDIX I : QUESTIONNAIRE FOR ENGLISH TEACHERS

Consent letter to the respondents

Dear, respondent,

My name is ABEWE Benoitte. A student at the University of Rwanda (UR) studying for Master degree in Med with English Education. I am conducting a research on Applying computer assisted approach (British e-dictionary) to enhance the teaching and the learning of pronunciation among O' level students in Masaka sector. Therefore, I request for your assistance in this research by responding to this questionnaire for the purpose of information needed in the research. Information provided shall be handled with great confidentiality. Shall not be exposed to any person, with exception of the researcher and the supervisor. Thank you for your cooperation.

INSTRUCTIONS: Tick the correct number /answer provided in each question, and give the explanations if needed.

1. Name of the School.....

2. Sex of respondent/ teacher

- a. Male []
- b. Female []

3. Level of Education.

- a. Secondary education []
- b. Diploma []
- c. Bachelor degree []
- d. Masters []
- e. Doctorate/PhD []

4. Teaching experience

- a. One year to five years []
- b. Six to ten years []
- c. More than ten (please, specify).....

5. Forms you are teaching now / was teaching previously

- a. Senior one []
- b. Senior two []
- c. Senior three []
- d. Advanced level []

6. Do you apply computer assisted approach (British e-dictionary) to enhance English pronunciation among students?

- a. Yes []
- b. No []

7. a) Is the approaches appreciated by students?

- a. Yes []
- b. No []

b) If yes or no, please, give reasons

.....

.....

.....

.....

8. What are the causes of poor English pronunciation among students in secondary schools in Masaka sector?

- a) Dearth of live inter-school English completion and debate []
- b) Insufficient tools to enhance learners' English pronunciation []
- c) English language pronunciation variety (British & American) []
- d) Poor learners' English acquisition []
- e) Unsatisfactory English reading, listening and speaking skills []
- f) Poor English language background []

9. What is the effectiveness level of applying computer assisted method in English class to boost speaking ability in secondary schools in Masaka sector?

- a) A very high effectiveness application level []
- b) A high effectiveness application level []
- c) An average effectiveness application level []
- d) A low effectiveness application level []
- e) A very low effectiveness application level []

10. What is the significance and impact of computer assisted approach during the teaching and the learning of English pronunciation?

- a) It enables students to find appropriate word sounds and phonology
[]
- b) It provides correct British received pronunciation
[]
- c) It improves students' speaking skills
[]
- d) It helps the students to correct pronunciation errors and mistakes
[]
- e) It helps students to know proper English word pronunciation through error analysis on word Processor (WP) []

I appreciate your cooperation

APPENDIX II: QUESTIONNAIRE FOR STUDENTS

Dear, respondent,

My name is ABEWE Benoitte. Student at the University of Rwanda (UR) studying for a Master degree in Med with English Education. I am conducting a research on Applying computer assisted approach (British e-dictionary) to enhance the teaching and learning of English pronunciation among students in o' level student in Masaka sector. Therefore, I request for your assistance in this research by responding to this questionnaire for the purpose of information needed in the research. Information provided shall be handled with great confidentiality and shall not be exposed to any person, with exception of the researcher and the supervisor.

Thank you for your cooperation.

INSTRUCTIONS: Tick the correct number/ answer in each question and provide short explanation where needed

1.Mention your age

- ❖ Under 15 years []
- ❖ 16-18 years []
- ❖ 19 to 21 years []
- ❖ 22 years and above []

2. Circle the teaching and learning approaches used in the class in boosting your English pronunciation among these:

(a) Small group discussion, (d) Question and answer, (e) Demonstration, (f) Debate, (g) Project, (h) Dialogue, (i) Role play, (j) E. learning. (k) Computer assisted approaches

2. Among these approaches, name the common one. Are you interested with them?

If yes or no, give reasons

.....
.....
.....
.....

3. How do you describe the way you pronounce English words?

- a. Correct []
- b. Incorrect []

4. If it is incorrect, what do you think is the leading cause of a poor pronunciation?

5. Do you use computer or smart classes to study English?

- i. Yes []
- ii. No []

6. Do you notice any difference between studying English pronunciation using smart class and studying it using a traditional class? Base your response on your pronunciation of the words in this table before and after using British e-dictionary to learn how to pronounce the vocabularies in this table.

No	Words	American pronunciation	British pronunciation
1	Damage	/ˈdæmɪdʒ/	/ˈdɑmɪdʒ/
2	Altering	/ˈɑ:l.tə/	/ˈɒl.tər/
3	Neutral	/ˈnu:trəl/	/ˈnju:trəl/
4	Research	/ˈri:.sɜ:tʃ/ /rɪˈsɜ:tʃ/	/rɪˈsɜ:tʃ/ /ˈri:.sɜ:tʃ/
5	substitute	/ˈsʌb.stə.tu:t/	/ˈsʌb.stɪ.tʃu:t/
6	structure	/ˈstrʌk.tʃə/	/ˈstrʌk.tʃər/
7	Weather	/ˈweð.ə/	/ˈweð.ər/
8	workload	/ˈwɜ:k.lʊd/	/ˈwɜ:k.ləʊd/
9	Loan	/ləʊn/	/ləʊn/
10	apprehensive	/ˌæp.rəˈhen.sɪv/	/ˌæp.rɪˈhen.sɪv/
11	Activist	/ˈæk.tə.vɪst/	/ˈæk.tɪ.vɪst/
12	prejudice	/ˈpredʒ.ə.dɪs/	/ˈpredʒ.ə.dɪs/
13	assassinate	/əˈsæs.ə.neɪt/	/əˈsæs.ɪ.neɪt/
14	Effect	/əˈfekt/	/ɪˈfekt/
15	Thought	/θɔ:t/	/θɔ:t/
16	democracy	/dɪˈmɑ:krə.sɪ/	/dɪˈmɒk.rə.sɪ/
17	Serial	/ˈsɪr.i.əl/	/ˈsɪə.rɪ.əl/
18	Radio	/ˈreɪ.di.əʊ/	/ˈreɪ.di.əʊ/
19	television	/ˈtel.ə.vɪʒ.ən/	/ˈtel.ɪ.vɪʒ.ən/
20	Watch	/wɑ:tʃ/	/wɒtʃ/
21	editorial	/ˌed.əˈtɔ:r.i.əl/	/ˌed.ɪˈtɔ:r.i.əl/
23	Bulletin	/ˈbʊl.ə.tʃɪn/	/ˈbʊl.ə.tɪn/
24	Scene	/si:n/	/si:n/
25	nevertheless	/ˌnev.ə.ðəˈles/	/ˌnev.ə.ðəˈles/
26	deforestation	/diːˈfɔ:r.əˈsteɪ.ʃən/	/diːˈfɔ:r.ɪˈsteɪ.ʃən/
27	management	/ˈmæn.ədʒ.mənt/	/ˈmæn.ɪdʒ.mənt/
29	Road	/rəʊd/	/rəʊd/
30	Diabetes	/ˌdaɪ.əˈbi:t.əs/	/ˌdaɪ.əˈbi:ti:z/

APPENDIX III: INTERVIEW GUIDE TO THE DIRECTOR OF STUDIES

- 1) What are the causes of poor English pronunciation among students in secondary schools in Masaka sector?

- 2) What is the effectiveness level of applying computer assisted method in English class to boost speaking ability in secondary schools in Masaka sector?

- 3) What is the significance and impact of computer assisted approach during the teaching and the learning of English pronunciation?

I appreciate your cooperation