
The Impact of Integrating ICT on Students' English Speaking Proficiency Enhancement in Rwanda Polytechnic: A Case Study of IPRC Kitabi

Jean De La Paix MURAGIJIMANA

Assistant Lecturer and Head of General Courses department, Rwanda Polytechnic – IPRC Kitabi; P.O.Box 330 Huye, Rwanda

Abstract. The current study explored the impact of instructional technology on the improvement of speaking skills for first-year students at Integrated Polytechnic Regional College Kitabi. It included both qualitative and quantitative methodologies, and a sample of 132 respondents was chosen using purposive and census methods. SPSS was used to analyze the data that was gathered through interviews and questionnaires.

The study found that students as well as lecturers have positive mindset toward using ICT as a tool to improve English-speaking skills. It proved that using the pertinent instructional technologies to help students and lecturers enhance their speaking skills was beneficial. Conversely, the study identified some challenges that hamper the efficient use of these technological tools. It revealed that students face a variety of hurdles, including not having personal technological gadgets to utilize wherever and whenever they wish and a lack of enough ICT facilities at the college. Therefore, this study postulates that English language lecturers should effectively use ICT as a teaching tool to develop their English-speaking abilities, and the college authorities should consider the importance of ICT as a teaching and learning tool and increase ICT infrastructure to serve this purpose.

Keywords: ICT in education, languages, speaking proficiency, education, ESL

Introduction

Background

In the digital world, where technological innovations are pervasive throughout daily life, we should do it in the field of education, particularly when it comes to imparting speaking abilities. The majority of lectures utilize educational technology during their sessions to improve delivery and sometimes even clarify material. ICT has a significant impact on education, both for teachers and students, in terms of knowledge acquisition and absorption, according to Tinio (2002). Additionally, instructional technology offers a range of media exposure options that improve learning, such as films, exciting material, database use, guided music, and massive open online courses (Finger & Trinidad, 2002).

Utilizing technology serves a purpose because it gives students experience speaking English by mirroring native speakers' pronunciation. The use of web-based systems via the Internet, with conversation mode properly set on computers with microphones and loudspeakers, according to Hsu (2010), who backed up the aforementioned point of view, enhances students' English speaking abilities to a sufficient degree.

Additionally, Chiu, Liou, and Yeh (2007) discoursed on how to enhance the speaking abilities of English learners. They highlighted an innovative program for computer-assisted language learning called Automatic Speech Recognition (ASR) in their study report, which can assist students in having meaningful speech exchanges and can assist English classes in engaging in speech-act training that leads to improved speaking skills.

Technology for Language Learning (TELL) is defined by Uwizeyimana (2018) as "the use of any information and communication technology instrument that aids in the effective teaching and learning of a language. Nikou and Economides (2016) assert that "digital

technologies play an important role in language classrooms since they motivate and enhance students' confidence, as well as positively affect both their achievement and attitudes."

A study on the Effect of Mobile-Assisted Language Learning on Rwandan University Students' Proficiency in English as a Foreign Language was conducted by Uwizeyimana (2018) at the University of Rwanda. His research showed that the use of digital technology, notably mobile devices, in language teaching and learning, particularly English, contributes significantly. Thus, teaching and learning English as a foreign language, as well as utilizing it, may become more effective once language learning technology is incorporated into formal language classes. In order to efficiently and successfully improve students' English-speaking abilities, instructional technology needs to be used.

Problem Statement

The 21st century learner must be able to articulate their thoughts on a variety of topics, make themselves understood by others, and effectively communicate at work and in groups. This requires them to be proficient in speaking a language of instruction, herein English. Students are mostly judged on how they interact in the second language, whether in or out of the classroom. One of the most significant issues that most students face when learning English as a foreign language is their inability to speak English fluently.

Though there are a variety of reasons for learners' poor speaking skills, one of the most debatable hindrances is a lack of opportunities to be interactive in the classroom, as it is difficult to engage in natural oral communication activities with a large class within a limited time and to incorporate speaking activities into a traditional grammar-focused curriculum. Gass et al. (2005) asserted that if all of the students manage to talk in small groups, the teacher will be unable to listen to all of them, and pupils will be more inclined to lapse into their mother tongue. Students frequently do not gain from this feedback unless they have the opportunity to interact and produce an output.

Alharbi (2015) stated that once the curriculum does not provide enough time for learners to practice using language in context due to the large number of students in class, students' low proficiency and cultural-related factors are in vain. Correspondingly, Rwanda Polytechnic's curricula, specifically the English curriculum of level 6 at IPRC Kitabi, allocates only 50 learning hours (5 credits) to the English language, which has to be taught within a week. This leads to limited time for classroom speaking practices. Due to the low level of practical activities, students lack communicative and linguistic competence and often code switch to use Kinyarwanda, be it in and/or out of class. Kagwesage (2013) avows that there is a time when both teachers and students code-switch from the language of instruction to the mother tongue to illuminate, converse, increase the quality of information flow, and engage in classroom activities.

However, using instructional technology that allows students to participate in oral-gap exercises and role-plays outside of the classroom with or without the participation of the teacher, who can subsequently access the tape of the dialogue to provide feedback to the students, can be a potential solution to the lack of classroom speaking practice. In other words, the utilization of digital technology to create in-class and/or out-of-class opportunities to practice speaking skills with specific prompts appears to be a viable alternative to traditional handouts.

In Rwanda, specifically at Rwanda Polytechnic/IIPRC Kitabi, no research has been carried out on the impact of instructional technology on enhancing English-speaking skills. As a result, the purpose of this study was to investigate the impact of instructional technology on the improvement of speaking skills for students at Integrated Polytechnic Regional College Kitabi once it is used effectively.

Research Questions

This study was guided by the following specific objectives in order to meet the major objective set out above:

- To evaluate students' and lecturers' perceptions of the use of ICT as a tool for learning to enhance English language speaking abilities.
- To determine the benefits of students (males and females) using instructional technologies towards speaking proficiency enhancement.
- To investigate challenges related to technology access for both students and lecturers.

Review of Related Literature

Difficulties Related to Learning Speaking Skills

English is widely used as the primary language of education in several African nations. Although they do not effectively master this language, learners choose to create a bilingual environment because of their poor proficiency in the medium of instruction.

Despite being given less emphasis in the classroom or in curricula due to the limited time allotted to them, speaking abilities are the most important skill when it comes to learning a foreign language. Given the limited amount of time available, most professors prefer to teach it by having their pupils memorize the dialogues or discussions or practice the drills. On the flip side, students should be trained to think critically and communicate effectively in order to adapt to the twenty-first century. Or, to put it another way, teaching speaking techniques should help students improve their communication abilities so they can express themselves and learn to adhere to the cultural and social conventions that apply in each communication environment.

Foreign language learners should prioritize mastering speaking skills. In most cases, language classrooms are essential for the setting in which foreign language acquisition occurs in daily life (Richards, 2006). However, speaking is the most challenging ability for the majority of English learners, and they are still unable to talk orally in English. There are several potential causes for this. One of them is that learner error is one of the most serious speaking issues. Low motivation is a different issue. Students become demotivated and do not participate in the oral course for a number of reasons, including the repetition of boring subjects and exercises as well as the use of outdated materials and approaches.

Another issue that most students face is a lack of practice. Lai (2011) stated that many challenges are associated with the scarcity of practice pupils. The first is a lack of vocabulary as a result of the students' lack of experience. The main explanation for the lack of vocabulary is a lack of practice. Once learners are given enough time to practice, their vocabulary will improve. In another sense, a lack of practice can impair vocabulary and grammar usage. Consequently, students' abilities may increase if they practice on a regular basis. Students required practice in order to improve their skills in learning tasks such as speaking.

There have been numerous studies done that have examined the speaking difficulties that students of English as a Foreign Language have. For instance, Zhang and Aikman (2007) looked into Turkish EFL and the problems that prevent students from speaking English during class. According to the report, two of the biggest barriers are anxiety and a fear of speaking English. One of the contributing factors is the worry that they will be harshly evaluated if they make a mistake, especially in front of their friends. According to the study, pupils who think their English is "poor" are less comfortable and less inclined to interact in English than those who think it is "very good." Speaking involves some degree of present-time audience exposure. Farahnaz et al. (2013) emphasize this viewpoint and suggest that "teachers routinely encourage students to express themselves in front of the class when teaching speaking". However, they need to be mindful that this could make students feel anxious while doing speaking activities.

Educational Technologies that Enhance Speaking Skills

Teachers now have access to cutting-edge equipment that supports the teaching of English. When current technology is employed as an addition to the classroom teaching method to create a lively environment in the classroom, traditional teaching methods like the chalk and talk approach seem antiquated. It is essential to incorporate modern technologies to enhance English instruction. Modern technology enables students to fully immerse themselves in the subject rather than see it as a challenging assignment to complete.

Technology can also help learners be playful by immersing them in a variety of situations. With the use of technology, students can participate in "self-directed practices, self-paced interactions, privacy, and a safe environment where errors are addressed and specific feedback is supplied." Machine feedback is valuable because it can identify errors and send students to exercises that concentrate on particular issues. The value of technology is raised when references, linkages, and explanations are provided.

Computer-Assisted Language Learning (CALL)

"Any visual, audio, text, or graphic format associated with the conveyance of information via technology, whether synchronously or asynchronously, where learning aid occurs" is how Smith and Craig (2013) define CALL. The potential for merging virtual worlds and game-based virtual learning into language teaching and learning has been thoroughly researched by many computer-assisted language learning researchers.

In the framework of CALL, computers are no longer seen as a technological tool but as a tool for teaching and learning languages, encouraging students to engage and communicate with those who speak the target language, including their teachers. Carrió-Pastor (2015) continues, "Teachers and students must be continuously trained and informed on how to use current and emerging technical tools in order to improve their teaching and learning processes in order to make successful use of CALL." It's crucial to note that CALL can be used in conjunction with a variety of tools and programs to teach and develop vocabulary, pronunciation, listening skills, writing skills, and even reading skills.

Mobile Assisted Language Learning (MALL)

Chen (2013) defines Mobile Assisted Language Learning (MALL) as "any type of formal or informal language learning that is aided or supported by the use of mobile phones or other devices". MALL is a relatively recent field in relation to the others. It includes technologies that facilitate language teaching and learning, including personal digital assistants, smart phones, and tablets.

MALL uses any mobile technology, applications, or programs accessible to enhance language acquisition in both formal and informal educational settings. MALL emphasizes learner-centeredness by enabling students to learn from anywhere, at any time, and at their own speed. This practice is known as learning customization." Hazaea and Alzubi (2016) state that "permanence, accessibility, immediacy, interaction, and the location of educational activities" are all components of optimal MALL practice. Mobile learning is viewed as durable by Uwizeyimana (2018) because it is convenient and available to learners whenever and wherever they need it.

Robot-Assisted Language Learning (RALL)

Robot Assistant Language learning is regarded as specific language learning because it contacts learners and engages them in the educational process as if they were native speakers of the target language. It also accommodates real-life behavior (Han, 2012).

In comparison to the other TELL types, which behave as though they were humans, the right usage of robotic technology in an academic setting increases user engagement (Han, 2012). In order to immerse students in the teaching and learning process, RALL, as the name suggests, uses real-life behaviors. A further statement made by Thrun (2004) was that "Robots can communicate with people directly without any middleman." RALL also improves

classroom activities by enabling students to readily and actively participate in role plays and group debates, which are seen to be among the most crucial outputs in a second language. As a result, conversing in a foreign language becomes more appealing from the perspective of RALL best practice because robots and humans have many similar traits and behaviors.

Theoretical and Conceptual Framework

Two schools of thinking supported this study. Since they both make substantial contributions to the field of education and are particularly well suited to the teaching and learning of second languages, constructivist and connectivist theories have a strong relationship to the subject of this study.

Constructivist Learning Theory

Driscoll (2000) termed learning as one's experience and interaction with society, which results in a lifelong change in man's performance. Constructivism deals with instructions in the classroom and the learning environment. According to Piaget (2013), what students learn depends on the prior knowledge and experience they already have. In other words, this theory encourages discovery rather than spoon-feeding the students. The student's own discovery of the knowledge depends on effective learning resources, among which ICT is included.

This study is connected to constructivism in that when students are exposed to carefully chosen educational technology that improves oral skills, it stimulates their eagerness to speak and encourages frequent practice of this activity rather than sitting and reading what is written in the textbooks or what is being lectured. With the emphasis on what students already know, this paradigm encourages a learner-centered approach. In this way, students' interaction with ICT tools in the classroom will help them develop their oral competence in meaningful and applicable ways.

Connectivism Learning Theory

Connectivism theory is a learning theory that takes into account the digital age. This theory clearly demonstrates how using technology has increased the potential for teaching and learning in the educational setting (Siemens (2005), It is enhancing the in-class session with support. The learner-centered approach, in which a student can learn at any time and from any location, is also promoted by this philosophy. Technological innovations are being released daily in this digital age. Students have access to radios, mobile phones, computers, tablets, and even the internet. This implies that a lot of learning can occur online, where a guide or facilitator will serve. The connectivist theory encourages students to conduct independent research using technology.

Garcia, Brown, and Elbeltagi (2013) stated that the practical use of this learning theory should be based on how society adapts to new technologies. Establishing connectivist theory's primary objective is to offer a model for teaching and learning that integrates ICT, such as computers, the internet, speech recognition software, podcasts, e-learning, computer-based training (CBT), technology-enhanced learning (TEL), computer-aided instruction (CAI), Personal Learning environments (PLE), m-learning, and other tools for better understanding (Siemens, 2005). This theory and study are related to the fact that when a lecturer uses technology tools to teach speaking abilities, it enables students to repeatedly practice speaking English by emulating native speakers' pronunciation whenever and wherever they choose. They unwittingly and freely enhance their speaking proficiency.

Methodology

Research Approach

This study is explanatory in nature, as the objective is to find out what it would mean for IPRC KITABI to effectively use instructional technology to teach speaking skills for its

students' speaking proficiency enhancement. To this end, the methodological approach to be used to conduct this study was the *mixed method*. The mixed-methods approach has been chosen as it employs strategies of inquiry that involve collecting qualitative and quantitative data either simultaneously or sequentially (Creswell, 2003). He further affirms that "mixed methods research has come of age. To include only quantitative and qualitative methods falls short of the major approaches being used today in the social and human sciences. "

A student questionnaire was administered electronically and used to collect quantitative data. The qualitative data for the study was gathered using interview guides with English language and communication skills teachers in order to identify factors influencing students' speaking abilities and how they integrate technology in teaching English speaking skills.

The qualitative method

The qualitative method focuses on processes and meanings that cannot be quantified in terms of number, amount, intensity, or frequency. The qualitative method allows for a more in-depth knowledge of the phenomenon in its context. On the other hand, quantitative researchers place a premium on the measurement and study of causal correlations between variables. It may be impossible to develop exact hypotheses, research questions, or operational definitions when there is minimal theoretical underpinning for a phenomenon (Sullivan, 2001). Qualitative research is appropriate in these situations since it can be more exploratory.

The quantitative method

Sullivan (2001) state that quantitative research is appropriate for measuring both attitudes and behavior. They added, "Quantitative research can be used to develop models that predict whether or not someone will hold a given opinion or behave in a certain way based on an observable trait". Quantitative research methodologies use some form of statistical analysis to quantify data. A quantitative strategy was chosen after evaluating two research approaches. We developed a model by examining relevant literature and formulating research assumptions.

Population

A study population is any group of people who share one or more characteristics that the researcher is interested in, as well as the entire population that will be studied (Stenbacka, 2001).

The research respondents came directly from the Integrated Polytechnic Regional College-Kitabi. These included all 189 first-year level six students (AY 2020–2021) from five programs, namely Tourism Destination Management, Tours and Travel Management, Forestry Resources Management, Forest Engineering and Wood Technology, and Wildlife and Conservation Technologies. They are studying and learning English as their second language as well. The targeted population also includes four lecturers assigned to modules. This implies that the entire target population equals 193 people, as shown in the following table.

Sampling Technique and Sample Size

Bartlett, Kotrlik, and Higgins (2015) define a sample as a subset of the population chosen to accomplish the study's goals. In other words, a sample size is a smaller group of people drawn from a large population. They added that "this group was chosen with care to be representative of the entire population and to have the relevant features." Specifically, the kind of sampling to be used for this study is *purposive sampling*. 189 first-year level six students (AY 2020–2021) from the above-mentioned five programs and the four lecturers assigned to the above-mentioned modules were the target population of this study.

Sample size I. Students

The sample size is determined by the amount of confidence, the margin of error that can be tolerated, and the variability in the population being investigated. Since the main population of this study did not have much variability, the research used a confidence level of 95% and

marginal errors of 5%. Given that the students population was 189, the statistics calculations shown that we must choose a sample size of 128 students.

Sample size II. Lecturers of English and Communication Skills

Since the population was small, all the lecturers were interviewed in order to gather more reliable information.

Therefore, the following table illustrates the proportion of sampled students from each program and their lecturers. Furthermore, the table summarizes the methods used to sample the targeted respondents.

Table 1: Distribution of the sample

Type of respondents	Population	Sample size	Method used
Students	189	128	Purposive sampling
Lecturers of English and communication skills	4	4	Census technique
TOTAL	189	130	

Data Collection Methods and Research Instruments

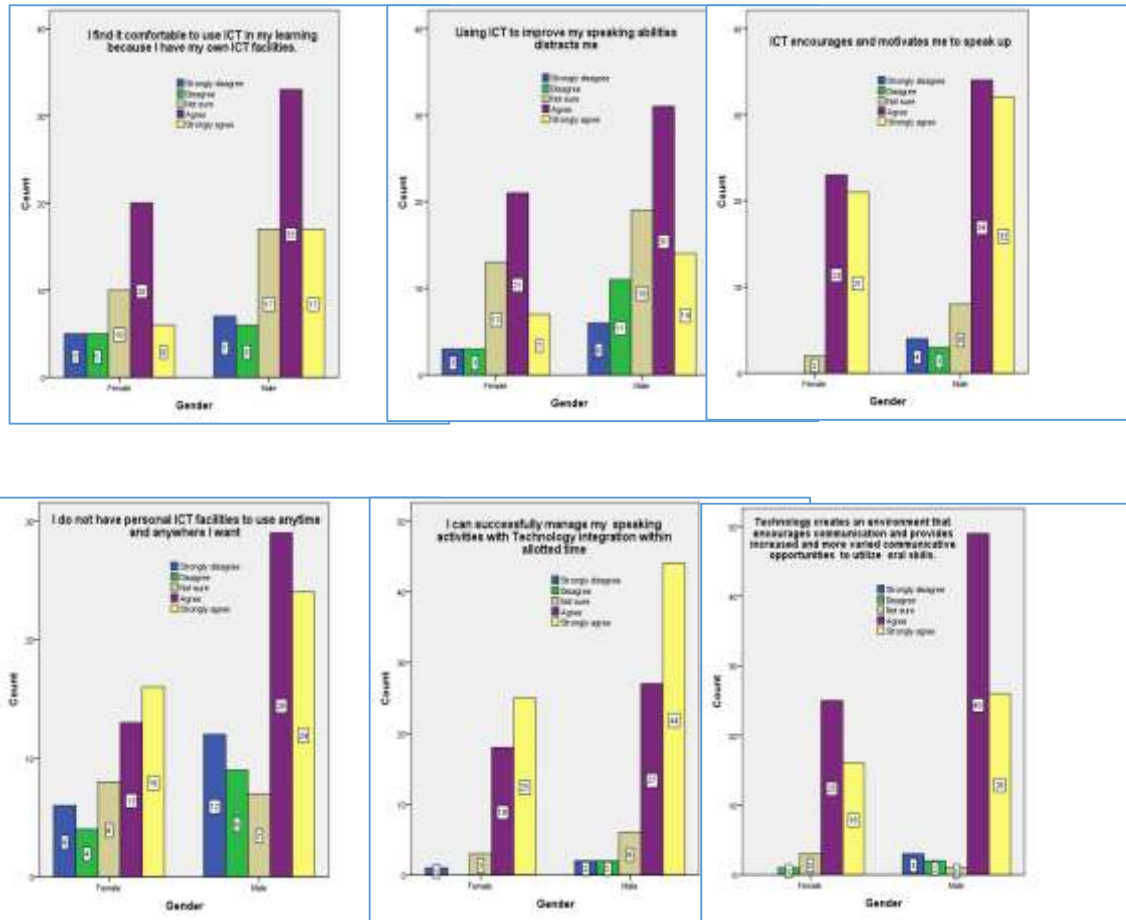
The data collection tool is commonly recognized as being critical to the effectiveness of survey investigations (Dörnyei & Zoltán, 2011). As a result, this research relies on a variety of data collection methods, including student questionnaires and interviews with instructors. Due to a variety of factors, the researcher had to conduct the students' questionnaires online. At the Integrated Polytechnic Regional College-KITABI, an online survey with open-ended and closed-ended questions was prepared to gather information from the target population about the implications of instructional technology in learning and its impact on English speaking skills enhancement, while lecturers' interviews were conducted face-to-face with the researcher present. It also included document analysis (prior studies) and the researcher's reflection on historical experiences.

Result Presentation and Discussion

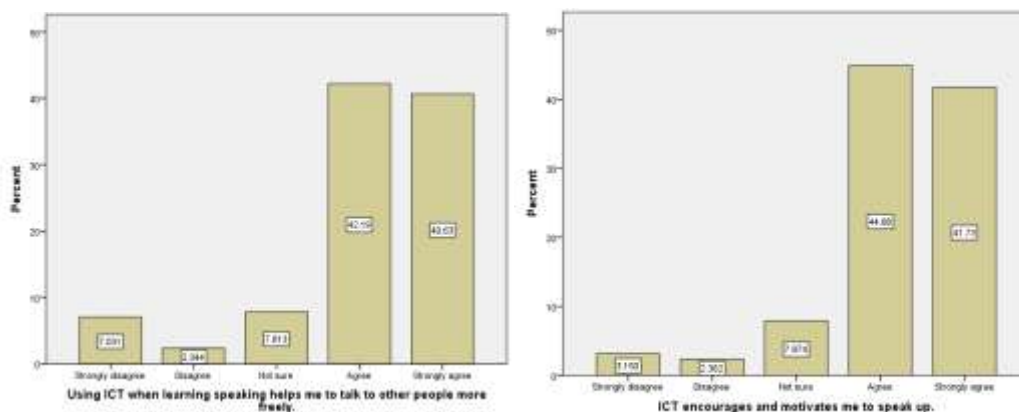
Analysis of Students' Questionnaire

Students' perceptions of the use of ICT as a tool for learning to enhance English language speaking abilities

Largely, the results in Figure 1 indicate that the majority of respondents believed that their English-speaking abilities had improved as a result of their use of ICT. Fifty-three students (41.40%) agreed that they were comfortable using ICT during their learning because they owned their own ICT facilities, which had become increasingly useful to them. Additionally, most respondents said they could successfully manage their speaking activities with technological integration within the time limits. This is evidenced by the fact that 69 (59.90%) of the sampled individuals agreed with the assertion. 118 respondents made implicitly positive statements about the usage of internet audio and video resources, indicating that doing so greatly enhances their speaking talents. 77 respondents (60.15%) overwhelmingly agreed—strongly—that using online audio-visual materials enhanced their speaking ability. Furthermore, the assertion was supported by 41 respondents (32.03%).



Benefits of students using instructional technologies towards speaking proficiency enhancement

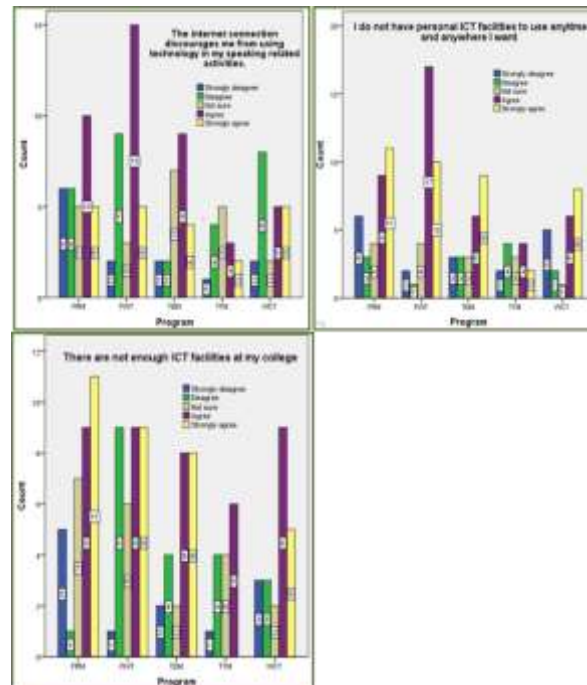


The results demonstrated that approximately all students have enhanced their speaking proficiency due to using instructional technology in their learning. 54 students, equal to 42.19% of the respondents, agreed that learning speaking through the use of ICT has helped them talk to other people more freely. Additionally, 52 out of 128 (40.63%) students strongly asserted the aforementioned statement.

On the other hand, the findings showed that the majority of the students agreed that the integration of ICT has a positive impact on their speaking proficiency as it encourages and motivates them to speak up. This is true since 57 (44.88%) of the targeted students agreed that

ICT encouraged and motivated them to speak up, whereas 53, which is equivalent to 41.74%, strongly agreed with the above statement.

Issues related to technology access for both students and lecturers



Forty-two (42) corresponding to 33% of respondents were found to agree that the internet connection discourages them from using technology in their speaking related activities. Among from them, males over-numbered females since their proportion equivalent to 58% is high. The highest proportion of the respondents (41) corresponding to 32% agreed that they do not have enough ICT facilities at their College. Their agreement upon to this statement was also asserted by 33 respondents, equivalent to 27.78% who strongly agreed with the statement. They do not have personal ICT facilities. This is the highest. Surprisingly, the highest proportion 42 of the total respondents, equivalent to % stated that they do not have personal ICT facilities to use anytime and anywhere they want. This is of no big difference with the 40 who strongly agreed with the statement. On the other hand, the lowest number of respondents (13) were found to disagree with the statement.

Analysis of Lecturer's Interview

The use of ICT tools to improve speaking skills in class

All the four lecturers agreed with the posed question, which means they use these technological tools every day in their personal and professional lives.

It is principally concluded that English lecturers do believe that ICT supports their teaching and learning processes in the English-speaking classrooms. Some extracts from the respondents are as below (EL refers to an English Lecturer):

EL1: "...I agree that ICT are powerful tools of teaching. Compared to printed books, ICT are more interesting. The students will not feel bored when learning English. For example, students can directly watch conversation videos and find many pictures related to the lesson. ICT makes teaching time efficient and makes teaching easier. If we do discussions using ICT, the information that we get is more varied. It makes discussion easier."

EL4 added “It is easier to teach with ICT. One reason for this is that we know that some students learn better through visual or audible cues, which they can obtain through technology.”

ICT as a motivating tool for students in English speaking class

All of the lecturers believed that EFL students had good views regarding the usage of ICT since technology has such a strong impact on them outside of the classroom that it keeps them engaged inside.

It was also evidenced by EL4 who declared that ICT acts like a catalyst in English speaking sessions. For him, With ICT, students can watch videos that are closer to real life presentation compared to printed books.

EL4: “...yes, ICT tools work on students’ interest. Visualization and deliverance of some contents are easier which makes learners learn quickly...”

English speaking abilities improvement in students after using ICT tools

This question was answered affirmatively by all teachers, indicating that they observe some improvements in their students after using ICT tools in the classroom.

EL3 stated “... after using audio-visual aids, I noticed that my students became more active and engaged in conversations on purpose, they also became motivated and focused and demonstrated a positive reaction towards the used tools...”

Therefore, it should be concluded that students must practice listening to imitate the language in order to build speaking abilities. ICT devices provide a variety of listening options. Oral expressiveness is thought to be significantly linked to listening capacity in humans, and it can be altered with audio ICT techniques. EFL students will learn more about how to participate, communicate, and interact with one another in English by using ICT resources such as headphones, speakers, and data-shows.

Difficulties related to the use of ICT materials inside the speaking class

The participant lecturers elaborated on their point of view. They also virtually unanimously agreed on the reasons why using ICT tools can be difficult at times. For example, they stated that the first and most important cause would be a lack of materials (computers, projectors, speakers, etc.), in which case they would occasionally have to utilize their own personal equipment. Another explanation could be a slow or non-existent Internet connection, or a lack of electricity. They also highlighted the fact that some students confront a variety of challenges, including, but not limited to, a lack of personal technical devices and a lack of ICT facilities at the college.

For instance, EL2 reported that the access to these tools is not always available, which necessitates more labor.

EL2 highlighted “... there are insufficiency of ICT tools and infrastructure in general at the college. We have one ICT Lab with only 70 computers even if all of them are not in a good condition. This does not serve all the target students and lecturers. This hinders the purpose it would serve...”

EL1 added “... ICT facilities are accessible but still limited. For example, the students have to wait for the chance to use the computer library. It would be more efficient if the college provides sufficient ICT infrastructure proportioned to its students’ number. We also have a problem of low Internet connection. I often waste time just to deal with internet issues, sound systems etc. So, luckily, I have the tools I need myself. I always bring a laptop, my own router to support me in a case, and a set of loud speaker. But not all students can afford that. More infrastructure is needed if the college wants to make the most use of ICT in teaching...”

The use of ICTs as a main teaching tool in English speaking class

The purpose of this question was to determine whether or not English lecturers who utilize ICT in the classroom consider it a key teaching tool. After collating the responses, three lecturers replied "yes," stating that ICT provides many and various sources of information in a short period of time and that students should have access to technology. It is significant in the

way it supports lecturers in arranging the course and designing lesson presentations to optimize student motivation. It also adds to the energy and brightness of the classroom. However, the other respondent stated that they do not have to be slaves to technology in order to modify how they teach and that they must be flexible enough to satisfy the needs of conventional teaching. ICT tools and techniques at school are accessible but still limited.

For example,

[... the teachers have to wait for the chance to use the projector. It would be more efficient if the school provides one projector for each class so we can use it properly without wasting time to wait for a projector from each other. We also have a problem of low Internet connection. I often waste time just to prepare the tools provided by the school. So, luckily, I have the tools I need myself. I always bring a laptop, a small projector, a set of loud speakers and any kind of cables in my car. But not all teachers can afford that. More money is needed if the school wants to make the most use of ICT in teaching...]

Lecturers' suggestions on how the use of technologies improve speaking skills

Different kind of technological tools were reported to be used by English lecturers during the English-speaking sessions. They include computer, projector, internet, and speakers among from others. These ICTs play a great role in improving speaking proficiency of the students. EL4 stated as follow:

They help a lot in presenting content from which students acquire originally the content and that improves their fluency.

Discussion

The present study showed both students and lecturers' positive perceptions of using ICT as a learning or teaching tool to improve English language speaking abilities. ICT has been an essential ingredient in today's English-speaking related activities.

There results proved that the ICT use in English speaking class potentially reduces time and efforts when carrying out speaking related activities. The current study proclaims that the participants could successfully manage their speaking activities with technology integration within the time constraints. This is demonstrated by 69 (59.90 %) of the total sampled subjects strongly agreeing and 45 out of 128 respondents agreeing with the statement. The results show a well-correlated agreement with Khan et.al (2011) whose findings assert that the use of ICTs in classroom reduced the time that is necessary for achieving information for students. Besides, it was also found that the ICTs offer a great opportunity for every student to select the audio-materials which accommodates their learning style. This corroborates well with assertiveness of Fu (2013) who believes that the integration of technologies in learning supports access to online resources that use a powerful combination of audio and video prepared by specialists in a centralized facility and delivered to individuals or groups by technology.

On the same note, it was also evidenced by English lecturers that ICT acts like a catalyst in English speaking sessions. It was found that with ICT, students can watch videos that are closer to real life presentation compared to printed books. Similarly, Madiyoh, Hidayanto, and Putro (2018) looked into how watching movies affects the development of learners' speaking abilities. It was discovered that students improved significantly indicating that audio-visual media can be employed as a teaching tool to teach speaking skills. This result agrees with connectivism theory which accommodates the digital age. As put by Siemens (2005), this theory encourages the use of technologies because these technological tools provide a number of opportunities in teaching and learning. It is adding an assistance in in-class session.

The results of this study also highlight the benefits of students in using instructional technologies towards their speaking proficiency enhancement (e.g., enabling them to practice speaking anytime, talking to other people more freely, encouraging and motivating them to speak up, imitating the sounds and rhythms of the target language without the assistance of

explicit instruction, and paying more attention). In fact, the highest proportion of respondents (42.18%) asserted that learning speaking through the use of ICT helped them talk to other people more freely while 40.62% students strongly agreed the aforementioned statement. Shamsudin and Nesi (2006) proclaim that "...the willingness to communicate reflects students' confidence in language. Students frequently refuse to use English because they are embarrassed by their lack of fluency". Clément, Noels, and Deneault (2001) suggest that "...When the interactions were positive and enjoyable, students were inspired to speak freely. Be it outside or inside the classroom, they interact more frequently in the foreign language".

Furthermore, the results of the current study revealed that the integration of ICT has a positive impact on their speaking proficiency as it encourages and motivates the participants to speak up. This is proven by 44.5% of the targeted students who reported that they were motivated and encouraged to speak up because of using ICTs. Our results agree with Deaney, Ruthven, and Hennessy (2005) who pointed out that "The introduction of ICTs could serve as a catalyst for teachers and students to experiment with new teaching and learning strategies".

Integration of instructional technologies in improving speaking proficiency has shown great benefit since it allows students to independently develop their oral communicative ability without the assistance of their lecturers. Fifty-nine students making up 46.09% of the whole sample confirmed that they could imitate the sounds and rhythms of the English language without any assistance since technology offers rich resources of native speech as good models. For technology provides variety rich authentic resources that might improve one's speaking proficiency such as podcast, videos, and audios that can be accessible from anywhere and anytime, this alleviates student's ownership of enhancing their oral communicative segment.

Besides, seventy-one students (55.56%) declared that ICT offers rich resources for native speakers of the English language and that this has been a huge opportunity for them to autonomously practice speaking skills related activities and later on enhance their speaking proficiency. The results are supported by Abbas (2013)'s views that "Technology has the potential to drastically alter language instructional techniques. ICT can provide learners with previously unimagined opportunities to practice English and immerse themselves in authentic language environments. Learners can use Skype Chat or social networking sites like Facebook or Twitter for oral practice in this situation."

Despite positive attitudes and perceptions and benefits of using ICT to enhance the speaking proficiency of the participants, this study also examined the issues that might hinder the effectiveness of these technological inventions. It found that the majority of students proclaimed that they do not have personal ICT facilities to use whenever and wherever they want. The statement was supported by 42 out of 128 people (32.8%). Besides, the findings assert that English lecturers experienced some challenges. They stressed the same reasons why using ICT tools can be difficult. They noted that there are instances when the internet is slow or unavailable, or when there is no power. They also elaborated on the reasons why some learners suffer from a variety of issues including but not limited to not having personal technological gadgets and insufficiency of ICT facilities at the college. Similarly, the access limitation, which refers to insufficient equipment or internet connectivity, has a detrimental impact on the application of educational technology (Warschauer et al., 2014). They went on to say that many students might lose interest in technology when they don't have consistent and reliable access to ICT facilities.

Conclusion and Recommendations

Conclusion

The aim of this chapter was to present the conclusions drawn from the results of the analysis of the students' questionnaires and lecturers' interviews and then make recommendations for further research.

The objectives of the study are restated as follows:

- ❖ To assess the students' and lecturers' attitudes towards the use of ICT as a learning instrument to improve English language speaking abilities.
- ❖ To assess the benefits of students using instructional tools to improve their speaking abilities.
- ❖ To look into issues relating to students' and instructors' access to technology.

The following conclusions emerge from the findings:

Referring to the first objective, this study examined disparities in students and English language lecturers' perspectives of using ICT as a learning tool to increase English language speaking abilities by program category, and discovered that both students and lecturers have positive attitudes toward using ICT as a learning or teaching instrument to develop English language speaking abilities. It was found that using ICT to teach and learn English speaking skills has the potential to save time and effort while performing speaking-related activities. The study shows that students are able to properly manage their speaking activities while adhering to time limits by incorporating technology. Besides, lecturers reported that integrating ICT in their teaching English speaking related lessons has eased the activity. In this sense, students can cover speaking sessions in a short amount of time. Instead of recording every single student speaking on a specific topic in a huge class, lecturers might ask students to record themselves and submit the recording within the specified time.

Using online audio and video resources in relation to their English language speaking competency were also evaluated in this study. The relevant audiovisual materials are highly beneficial in improving the students' speaking proficiency. These online resources have been shown to be advantageous to all students in terms of personalizing their learning based on their needs and speed, as well as selecting learning methods that suit their individual learning styles. Besides, the study shows that internet is a significant technological component that helps users explore and have access to the aforementioned online audiovisual materials. Its potentiality in delivering or establishing favorable language learning environment which contains rich digital interactive resources for oral communicative skill enhancement is vital.

In terms of the second objective, the study findings indicated the benefits that students get in using instructional technologies towards their speaking proficiency enhancement (e.g., enabling them to practice speaking anytime, talking to other people more freely, encouraging and motivating them to speak up, imitating the sounds and rhythms of the target language without the assistance of explicit instruction, and paying more attention). In addition, English language lecturers who participated in this study convincingly declared that approximately all students had enhanced their speaking skills due to using instructional technology in their study. Furthermore, it was also proven by English lecturers that ICT functions like a stimulant in English speaking sessions. It was determined that with ICT, students may watch films that are closer to real life presentation compared to written texts. Viewing movies affects the development of learners' speaking ability. It was revealed that students improved greatly demonstrating that audio-visual media can be implemented as a teaching tool to develop speaking skills, legitimate material is utilized. Hence, integration of instructional technology in developing speaking proficiency has demonstrated considerable usefulness since it allows students to autonomously build their oral communicative skills without the assistance of their lecturers.

Finally, despite positive perceptions and benefits of using ICT to enhance the speaking skills of the participants, this study also investigated the challenges that can hamper the efficiency of these technological tools. It was found that the ownership of ICT facilities is a major challenge for participant students. The study also discovered that certain students confront a number of obstacles in including but not limited to not having personal technological gadgets and lack of ICT facilities at the college. The majority of them assert that they do not have personal ICT facilities to utilize wherever and whenever they wish. Besides, the findings revealed that English lecturers had also certain obstacles. They mentioned that they periodically experience slowness or lack of internet access, as well as a lack of energy.

Recommendations

It is postulated and suggested that

- ❖ More researches should be undertaken on the impact of ICT on developing speaking proficiency of students in TVET school in Rwanda.
- ❖ English language lecturers should effectively use ICT as a teaching tool to develop their English language speaking abilities.
- ❖ Audio-visual media should be implemented as a teaching tool to develop English speaking skills as well.
- ❖ Students are encouraged to own their personal ICT facilities for efficient use of them to improve their English speaking proficiency.
- ❖ Due to the lack of enough ICT facilities at the college, the college authorities should consider the importance of ICT as a teaching and learning tool and increase ICT infrastructure to serve the purpose.

References

- Abbas, P. (2013). Factors Contributing to Teachers' Use of Computer Technology in the Classroom. *Universal Journal of Educational Research*, 1(3), 262-267. <https://doi.org/10.13189/ujer.2013.01031>
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal*, 19(1), 43-50.
- Carrió-Pastor, M. L. (2019). *Teaching language and teaching literature in virtual environments*. Singapore: Springer.
- Chapter 3 from: Uwizeyimana, V. (2018). *An Investigation into the Effect of Mobile-Assisted Language Learning on Rwandan University Students' Proficiency in English as a Foreign Language*. Stellenbosch: Stellenbosch University.
- Chen, X.-B. (2013). Tablets for informal language learning: Student usage and attitudes. *Language Learning & Technology*, 17(1), 20–36. <http://dx.doi.org/10125/24503>
- Chiu, T., Liou, H. & Yeh, Y. (2007). A study of web-based oral activities enhanced by automatic speech recognition for EFL college learning. *Computer Assisted Language Learning*, 20(3), 209– 233.
- Clément, R., Noels, K. A., & Deneault, B. (2001). Interethnic contact, identity, and psychological adjustment: The mediating and moderating roles of communication. *Journal of Social Issues*, 57(3), 559–577. <https://doi.org/10.1111/0022-4537.00229>
- Creswell, J. W. (2003). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Approaches to Research*. Upper Saddle River, NJ: Merrill/Pearson Education.

- Deaney, R., Ruthven, K., & Hennessy, S. (2003). Pupil perspectives on the contribution of information and communication technology to teaching and learning in the secondary school. *Research Papers in Education*, 18(2), 141-165.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. New York: Oxford University Press.
- Driscoll, M. (2000). Psychology of Learning for Instruction. [http://ocw.metu.edu.tr/pluginfile.php/9013/mod_resource/content/1/driscoll-ch10%20\(1\).pdf](http://ocw.metu.edu.tr/pluginfile.php/9013/mod_resource/content/1/driscoll-ch10%20(1).pdf)
- Farahnaz, R. N., Parviz, A., & Nazila, K. (2013). The Effect of Using Jigsaw to Enhance Female Iranian Intermediate EFL Learners' Oral Proficiency. *Australian Journal of Basic and Applied Sciences*, 7(9), 315-326.
- Finger, G., & Trinidad, S. (2002). ICTs for learning: An overview of systemic initiatives in the Australian states and territories. *Australian Educational Computing*, 17(2), 3-14.
- Fu, J. S. (2013). ICT in Education: A Critical Literature Review and Its Implication. *International Journal of Education and Development Using Information and Communication Technology*, 9, 112-125.
- Garcia, E., Brown, M., & Elbeltagi, I. (2013). Learning within a Connectivist Educational Collective Blog Model: A Case Study of UK Higher Education. *Electronic Journal of e-Learning*, 11(3).
- Han, J. (2012). Emerging Technologies: Robot Assisted Language Learning. *Language Learning & Technology*, 16(3), 1-9.
- Hazaea, A. N., & Alzubi, A. A. (2016). The Effectiveness of Using Mobile on EFL Learners' Reading Practices in Najran University. *English Language Teaching*, 9(5), 8-21.
- Hsu, M.-H. (2010). Proposing an interactive speaking improvement system for EFL learners. *Expert Systems with Applications*, 37(1), 414-418.
- Kagwesage, A. M. (2013). Coping with English as Language of Instruction in Higher Education in Rwanda. *International Journal of Higher Education*, 2(2), 1 – 12.
- Khan, M. M., Ahmed, I., & Nawaz, M. M. (2011). Student's perspective of service quality in higher learning institutions; An evidence based approach. *International Journal of Business and Social Science*, 2(11).
- Lai, E. R. (2011). *Motivation: A Literature Review*. Pearson Research Report.
- Li, S., Chen, Y., Whittinghill, D. M., & Vorvoreanu, M. (2014). A pilot study exploring augmented reality to increase motivation of Chinese college students learning English. In *ASEE Annual Conference*, Indianapolis, IN. Retrieved from <https://peer.asee.org/19977>
- Madiyoh, R., & Putro, N. H. P. S. (2018). The effectiveness of authentic short movies in enhancing students speaking skill. *International Journal of English Literature and Culture*, 6(3), 44-49.
- Nikou, S. A. & Economides, A. A. (2016). The impact of paper-based, computer- based and mobile-based self-assessment on students' science motivation and achievement. *Computers in Human Behavior*, 55, 1241-1248.
- Piaget, J. (2013). *The construction of reality in the child* (Vol. 82). Routledge.
- Richards, J. C. (2006). Developing classroom speaking activities: From theory to practice. *Guidelines-Singapore-Periodical for Classroom Language Teachers Then Magazine for Language Teachers*, 28(2), 3.
- Shamsudin, S., & Nesi, H. (2006). Computer-mediated communication in English for specific purposes: A case study with computer science students at Universiti Teknologi Malaysia. *Computer Assisted Language Learning*, 19(4-5), 317-339.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 3-10.

- Smith, K. & Craig, H. (2013). Enhancing the autonomous use of CALL: A new curriculum model in EFL. *Computer-Assisted Language Instruction Consortium*, 30(2), 252-278.
- Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management Decision*, 39(7), 551-556. <https://doi.org/10.1108/EUM0000000005801>
- Sullivan, A. (2001). Cultural capital and educational attainment. *Sociology*, 35(4), 893–912. <https://doi.org/10.1177/0038038501035004006>
- Thrun, S. (2004). Toward a Framework for Human-Robot Interaction. *Human-Computer Interaction*, 19(1–2), 9–24.
- Tinio, V.L. (2002). ICT in Education: UN Development Programme. (Retrieved from <http://www.eprmers.org> on January 2020)
- Zhang, P., & Aikman, S. (2007). Attitudes in ICT Acceptance and use. In J. Jacko (Ed.), *Human-Computer Interaction, Part I* (pp. 1021-1030). Syracuse, NY: Springer-Verlag Berlin Heidelberg.