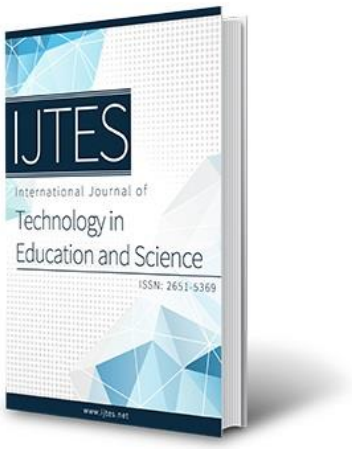

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Abstract

This paper assessed teachers' perceived role and limitations on using ICT as a pedagogical tool in enhancing English language fluency. The study employed a descriptive case study design in which interviews, focus group discussions and document analysis were used to collect data. The collected data were analyzed qualitatively through recording the data for thematic procedures. It was found that teachers perceived ICT as an important pedagogical tool for enhancing grammar, vocabulary and accurate pronunciation. However, the use of ICT for teaching English language was limited due to poor ICT infrastructures, insufficient training, teachers' readiness and unclear policies. The study recommends the government to make a critical investment in ICT facilities and ensure high internet connectivity in secondary schools. A practical training for English teachers on the adoption and integration of ICT through virtual platforms would certainly improve the practice.

Introduction

The impact of information and communication technology (ICT) on enhancing English language fluency (speaking and writing skills) has been acknowledged globally to the point that the integration of ICT in teaching English language fluency has become indispensable in today's teaching-learning environment (Viatonu et al., 2014). English language has become a tool of communication to facilitate both national and international interactions in business, science and technology, education, foreign relations, and other areas, according to current educational demands. English is also a second official language and a medium of instruction in secondary schools in Tanzania. This makes it important to equip students and teachers with appropriate skills to enable them to cope with the paradigm shift from content-based to competence-based teaching and learning (United Republic of Tanzania, 2015). In the context of this study, ICT can be defined as a wide range of software and hardware technology components such as computers, projectors, and the internet; radio; television; printing machines; digital audio like wireless speakers; visual devices; and teachers' resource websites that help teachers in teaching and learning (Almasi et al., 2018).

The use of ICT in teaching English was introduced by countries that regard English as foreign language (EFL) that saw the potential to improve English language fluency particularly in speaking and writing (Bećirović et al., 2021; Umar & Hassan, 2015). Further, evidence indicates that the frequent use of ICT multimedia tools like YouTube videos, with respect to their affordances of captions and their adjustable settings like font size and color,

play a positive role in improving students' writing accuracy (Alobaid, 2021). This indicates that the use of ICT in countries where English is regarded as a second language and/or foreign language provides opportunities for students to improve language fluency and for teachers to use ICT as a tool to substitute other learning activities and use ICT as a communication tool to deliver intended English subject lessons.

Countries such as Thailand, Malaysia and Vietnam have made efforts to use ICT in teaching English subject in secondary schools through making reforms in education and putting emphasis on application of ICT at all levels (Akarawang et al., 2015; Pham et al., 2018; Raman & Mohamed, 2013). For instance, Thailand established e-learning strategy in which teachers conducted blended teaching which is a combination of traditional method and ICT to enhance English language fluency (Quigley, 2011). Again, with the establishment of e-learning strategies like website platforms and web-based language applications majority of teachers in Thailand could not adequately use ICT in teaching and learning (Akarawang et al., 2015; Quigley, 2011). In response to the high demand for ICT integration, the governments of Vietnam and Malaysia introduced ICT training manual based on the TPACK model and deployed necessary ICT infrastructures where teachers are guided to use ICT in teaching and learning English language fluency while dealing with technical issues (Giang, 2016; Raman & Mohamed, 2013). Further, the established ICT training programs to teachers failed to deliver the content timely due to time wasted as teachers encountered technical challenges in the process. However the programs managed to develop fluent speakers who could communicate using English with confidence (Giang, 2016).

In most developing countries such as Kenya, Rwanda, and Burundi, there was an introduction of ICT policies that aimed to mobilize the use of ICT in teaching and learning, develop ICT literacy skills, ensure connectivity, and provide relevant ICT devices in schools (Farrell & Isaacs, 2007; Mugisha et al., 2021; Murithi & Yoo, 2021; Ozturk, 2023). Although the use of ICT in basic education is still emphasized, there are several challenges that limit teachers' effectiveness in integrating ICT in enhancing English language proficiency. These include: a lack of enough resources like computers, inadequate teachers' comprehensive training on the use of ICT as a pedagogical tool, poor connectivity, sporadic electricity, and unrealistic policies (Murithi & Yoo, 2021; Tedla, 2012). This is an indication that the use of ICT in teaching and learning in most developing countries is not adequately given the required priority. Thus, teaching is dominated by chalk and talk and is teacher centered (Bui, 2022; Halai & Tennant, 2016). Most studies indicate that majority of teachers in developing countries lack essential pedagogical and technological knowledge to facilitate their teaching (Kafyulilo et al., 2015; Murithi & Yoo, 2021; Rubagiza et al., 2011). This is also evident in the Tanzanian context in which the integration of ICT as pedagogical tool is very minimal (Kihoza et al., 2016; Ndibalema, 2014).

Although there have been several efforts made on ICT policy for basic education (URT, 2007), ICT framework for teachers (United Republic of Tanzania, 2015) and the vision 2025 (United Republic of Tanzania Planning Commission, 1999), recognize role of ICT in educational transformations, particularly in enhancing English language fluency (URT, 2010) still, it is minimally integrated in teaching (Mwalongo, 2011; Ndibalema, 2014). Limited integration of ICT in teaching among teachers has been linked with inadequate preparation to teaching with technology (Andersson et al., 2014). This is an implication that ICT is not integrated fully to enhance language fluency among learners as the teacher education programs focus on ICT as a lesson instead of

pedagogical tool (Andersson et al., 2014; Mwalongo, 2011; Swarts & Wachira, 2010). The recent study by Lubuva et al. (2022) indicates that tutors in teachers' colleges do not effectively integrate ICT in teaching and learning practices, despite showing satisfaction on the ICT infrastructures available in these colleges (Swai et al., 2022). Further, evidence indicates that the use of ICT in enhancing English language fluency is insufficiently used due to lack of competence in the use of ICT in enhancing English language fluency, lack of exposure to ICT devices and facilities, and insufficient support from mentors and ICT experts (Kweka & Ndibalema, 2018; Ndibalema, 2022).

There is no doubt that in the 21st century, ICT is linked with teaching and learning and teachers are expected to be competent in engaging learners in learning with several technological pedagogical strategies but this has not been fully realized in the Tanzanian context. It is possible to claim that teachers are inadequately prepared in the country where teachers sometimes lack readiness to take the responsibility of integrating ICT in their teaching (Kisalam & Kafyulilo, 2012; Ndibalema, 2022). The implication of this is that there is a gap between teachers' ICT pedagogical competency and learners needs in the 21st century.

It is likely that teaching will continue to be dominated by chalk and talk if deliberate measures to empower teachers in ICT pedagogical development are not given adequate consideration. Some studies have indicated that despite teachers' readiness and positive perceptions of the use of ICT, most teachers lack adequate ICT competencies in teaching and learning (Kweka & Ndibalema, 2018; Ndibalema, 2022; Ngeze, 2017). This could make their teaching ineffective and inhibit them from using ICT, particularly for enhancing English language fluency (Barakabitze et al., 2019). However, studies found that secondary students in Tanzania do not have good speaking and writing skills, so they mostly rely on the Kiswahili language (Lupogo, 2014; Makewa & Ellen Tuguta, 2013; Vuzo, 2018). Again, the available educational reports from Tanzania indicate expansion of secondary education in recent years, but one could note disparities in the acquisition of necessary communication skills caused by inadequate investment in ICT (URT, 2007, 2014, 2015). Therefore, the essence of this study was to assess teachers' perceived role and challenges of using ICT in enhancing English language fluency among secondary school students.

Research Questions

The study was guided by the following research questions;

1. What are the teachers' perceptions toward the role of using ICT as a pedagogical tool in enhancing English language fluency?
2. What are the teachers' perceived challenges regarding the use of ICT as a pedagogical tool in enhancing English Language fluency?

Theoretical Context

This study was guided by the Unified Theory of Acceptance and Use of Technology (UTAUT), which has four core constructs (performance efficacy, effort expectancy, social influence, and facilitating factors) as direct

determinants of behavioural intentions and ultimately behaviour on the use of ICT to enhance language fluency, and these constructs are moderated by gender, age, experience, and voluntariness (Venkatesh et al., 2003). In the context of this study, this means that UTAUT core constructs and their determinants are important predictors which are useful in assessing teachers' perceptions on the role and challenges of using ICT to improve language fluency in classroom activities. The degree to which English language teachers' belief in using ICT as a pedagogical tool can improve, ease, and be useful in teaching English language fluency is referred to as performance expectancy. Effort expectancy refers to the extent to which teachers perceive ease in using ICT in teaching, while social influence refers to the degree to which teachers perceive that important others like school administration believe in their ability to use ICT and support them in enhancing language fluency. Lastly, facilitating factors are associated with the teachers' belief that an organisation or technical infrastructure exists to support them in the use of ICT (Venkatesh et al., 2003; Venkatesh & Davis, 2000). To have a positive attitude towards the role of using ICT to improve students' English language fluency, teachers must have positive beliefs about the usefulness of ICT (performance expectancy), the ease of using ICT (effort expectancy), the need to use ICT (social influence), and the availability of ICT facilities (facilitating factors), which will result in teachers' usage behavior to use ICT as a pedagogical tool in secondary school.

Methodology

This descriptive case-study was conducted in Moshi municipality, Kilimanjaro region, Tanzania. The study employed a qualitative approach. A case study design is simply an empirical investigation that investigates a contemporary phenomenon (the case) in depth within its real-world context, particularly when the boundaries between the phenomena are not clearly evident (Creswell, 2014). The study employed semi-structured interview, and document analysis to review ICT devices found in visited schools and to complement the data obtained through interview (Bowen, 2009); in order to allow detailed description of data (Ary et al., 2010). Interview data were complemented by using Tanzania basic education statistics (URT, 2021).The study sample size was 20 English language teachers and 4 school principals from 4 selected secondary schools in Moshi municipality. Purposive sampling was used to select English language teachers and school principals. English language teachers were included in the study based on the assumption that they had the required information in relation to English language fluency, particularly in writing and speaking skills. Again, they were curriculum implementers in teaching English, and thus it was believed that they were aware of modern and traditional forms of ICT that could be used to teach English language subjects because some of them had been participating in developing the English language syllabus (TIE, 2005). Therefore, it was assumed that they could share and give their perceptions on the role of using ICT in enhancing English language fluency.

In this study, data were analysed qualitatively. The data were recorded digitally and prepared for thematic procedures (Johnson & Christensen, 2017). The process involved data transcription in Kiswahili, in which interview and focus group discussion was conducted. The process included listening and re-listening to audio recorded materials to develop verbatim text on a Word spreadsheet.

Trustworthiness of the data was ensured through member checking and bracketing to ensure accuracy and

encourage alternative interpretation of the data (Creswell, 2014). While member checking was ensured by returning the verbatim text to the study participants' (teachers and school principals) to confirm the written responses (Candela, 2019); bracketing was conducted through organizing the data by bracketing some ideas or phrases that fit or represent a particular data (Creswell, 2014). Then, the data were translated into English for codebook development. Further, data were coded in order to develop the categories of codes reflecting the codebook. After coding, all codes were extracted and exported to an excel spreadsheet for analysis. Pivotal analysis was used to merge the recurring codes and develop the categories and themes of responses. The development of themes and sub-themes was repeated until the qualitative narratives were related to each other (Christensen & Johnston, 2017; Creswell, 2014).

Ethical Clearance

This research adhered to the ethical standards and procedures of the University of Dodoma. The research design for each study was approved by the university's ethical research committee.

Results and Discussion

The results are presented as per the research questions as follows;

Teachers' Perception toward the Role of Using ICT as a Pedagogical Tool in Enhancing English Language Fluency

Teachers shared their perspectives with regard to how they were feeling about the role of using of ICT as a pedagogical tool for improving English language fluency. The analysis of the responses revealed four categories which included improving writing skills, speaking skills, arousing students' interests, and improving students' retention abilities. Figure 1 gives more description on the specific English language fluency skills as mentioned by teachers.

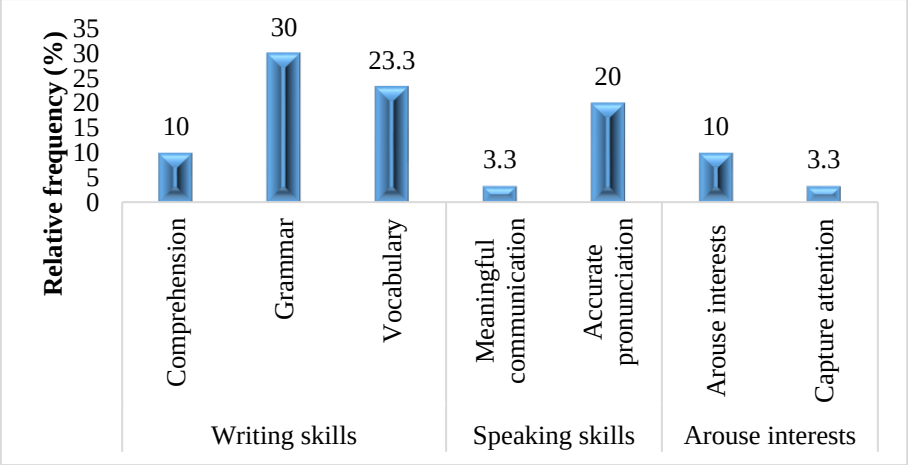

Figure 1. Teachers' Perception toward the Role of Using ICT as a Pedagogical Tool in Enhancing English Language Fluency

The results in figure 1 indicate that teachers prioritized using ICT as a pedagogical tool to enhance grammar (30%) while capturing students' attention (3.3%), and meaningful communication (3.3%), both of which were rarely mentioned by participants. One teacher for example, stated: "*When we use multimedia content particularly the animated texts, it helps learners to develop writing skills. Animated texts displayed on a screen can assist students in comprehending how to write paragraphs and use appropriate words and grammar" (Teacher A18, School Z).* The above quotes indicate that, when learners are exposed to multimedia content, there is possibility of learning how to form sentences and paragraphs while adhering to accurate grammatical structures. Participants also noted that multimedia content and other software are vital in the development of vocabularies and pronunciation skills for learners. In their view, electronic dictionary and grammar checker, for example, enable the learner to model appropriate pronunciation. One of the teachers said: "*The use of ICT tools such as online dictionaries provide proper pronunciation to learners. They can develop speaking skills if teachers are properly guiding their students"* (Teacher A13, School Y).

Meaningful communication was the least mentioned by participants as the aspect of enhancing speaking skills. Although some teachers felt that ICT could enhance meaningful communication among learners, they were worried about the availability of adequate technological tools. One teacher explained: "*I use ICT devices like wireless speakers to help my students recognize appropriate intonation and phrasing as they listen to the recorded speech or story. I pause the video and ask them questions, but the problem is that I sometimes cannot access the devices*" (Teacher A4, School X).

Another teacher remarked: "*In my opinion, the use of ICT tools like video or radio to teach English language subjects makes me feel happy. I am telling you, if we had those tools in our school, you could never see any student dozing in the session. Nevertheless, we need to be oriented on the proper use of digital tools to support our teaching*" (Teacher A1, School W).

The above quotes imply that some teachers had limited digital skills to support their students in acquiring the necessary English fluency skills. The results of this study are consistent with the results of the previous studies that reported the use of audio-visual tools in increasing students' interest and motivation in learning (Akram et al., 2022; Shadiev & Wang, 2022). Evidence also indicates that teachers have limited skills (Kweka & Ndibalema, 2018; Ndibalema, 2022; Ngeze, 2017).The limited use of ICT for enhancing teaching could be reflected during the outbreak of COVID-19 in which there was a transition to online learning, but this problem has continued to affect secondary schools teachers in Tanzania. Some initiatives were taken to migrate to online learning. However, lessons were being broadcast through television and radio which were less interactive (Manyengo, 2021). It is on this basis that, Oreku (2022) stressed that ICT and Digital learning in Tanzania are implemented in pockets, based on small projects, with limited government control of the programmes.

The findings of the current study indicate that the role of ICT in supporting meaningful communication was the least mentioned aspect of enhancing speaking skills. The existing evidence indicate that use of computers creates a collaborative and interactive learning environment that enables teachers to improve students' ability to have good intonation and stress when pronouncing words or sentences and, ultimately, have good communication skills

(Saed et al. 2021; Shadiev & Wang 2022). While the ICT framework for teachers in Tanzania insists that teachers should design collaborative teaching activities and engage all students when using ICT as a pedagogical tool to enhance (United Republic of Tanzania, 2015), teachers seem to be less prepared. Likewise, Ndibalema, (2022) and (Ngeze, 2017) assert that teachers in Tanzania are less prepared for using ICT and designing collaborative learning tasks that can stimulate meaningful communication, and they also seem to have no digital culture in the school and classroom context. Lack of digital culture may possibly explain why there is negligence and lack of knowledge for effective integration of technology in teaching. Given the complexity of technological integration, there should be ways for teachers' ample exposure to various technological solutions that enhance their effective use of ICT to improve English language fluency.

Evidence indicates that when teachers expose learners to educational speaking technology, there is high improvement of speaking performance compared to the students who learn conventionally (Alasela et al., 2017). Students who learned through educational speaking technology were fluent, coherent, and accurate in their speech, rich in lexical resources, used a variety of grammatical ranges, and were better in pronunciation (Asratie et al., 2023). Integration of technology in teaching and learning requires teachers to employ more interactive strategies that promote active participation and collaboration among learners (Akram et al., 2022). Through collaborative learning strategies enhanced by technology, learners and teachers may be able to engage in more hands-on activities such as speaking through various software applications, thus improving the practices.

Challenges of using ICT as a pedagogical tool in enhancing English Language fluency

With respect to challenges, teachers felt that lack of clear policy, poor infrastructure; insufficient training and teachers' readiness were the major barriers limiting effective integration of ICT in teaching English language fluency. Figure 2 provides number of responses per aspect.

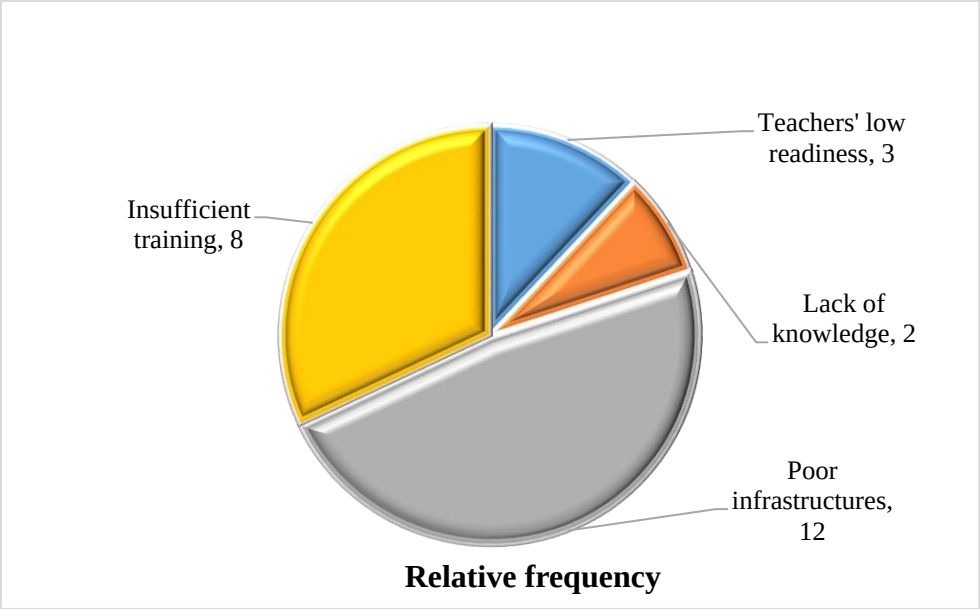

Figure 2. Challenges of Using ICT in Enhancing English Language Fluency

The analysis of the data revealed that teachers mentioned poor ICT infrastructures as the major factors that was

limiting their ability to integrate technology in their teaching. One teacher said: "*I don't use the available computer lab because the available laptops in the lab are donated by the government of Canada specifically for students with visual impairment. The computers have been installed with a particular programme that suits such students* (Teacher A10, School X).

This indicates that the available computers were not suitable to facilitate teachers' use of ICT as a pedagogical tool to enhance language fluency. Poor ICT infrastructure was also noted by one head of school Y who remarked: "*There are only 26 computers in our school. These computers are connected to the Ubuntu program. This is a software package that contains books for all subjects. The program was purposely installed for students, not for teachers*" (Head of school Y).

Another teacher from school Z added, *"I don't use the available computer lab because the available laptops in the lab were donated by the government of Canada specifically for students with visual impairment and they not enough to accommodate all learners"* (Teacher A20, School Z). Inferring from the quotes, one can understand that there is a digital divide in terms of accessibility of technological devices. This implies that the prevalence of digital divide may have a significant effect on learning as learners have limited accessibility to digital content.

Similar digital divide was noted in the number of available technological devices in the schools involved in the study. Figure 3 shows the distribution of technological tools in four schools.

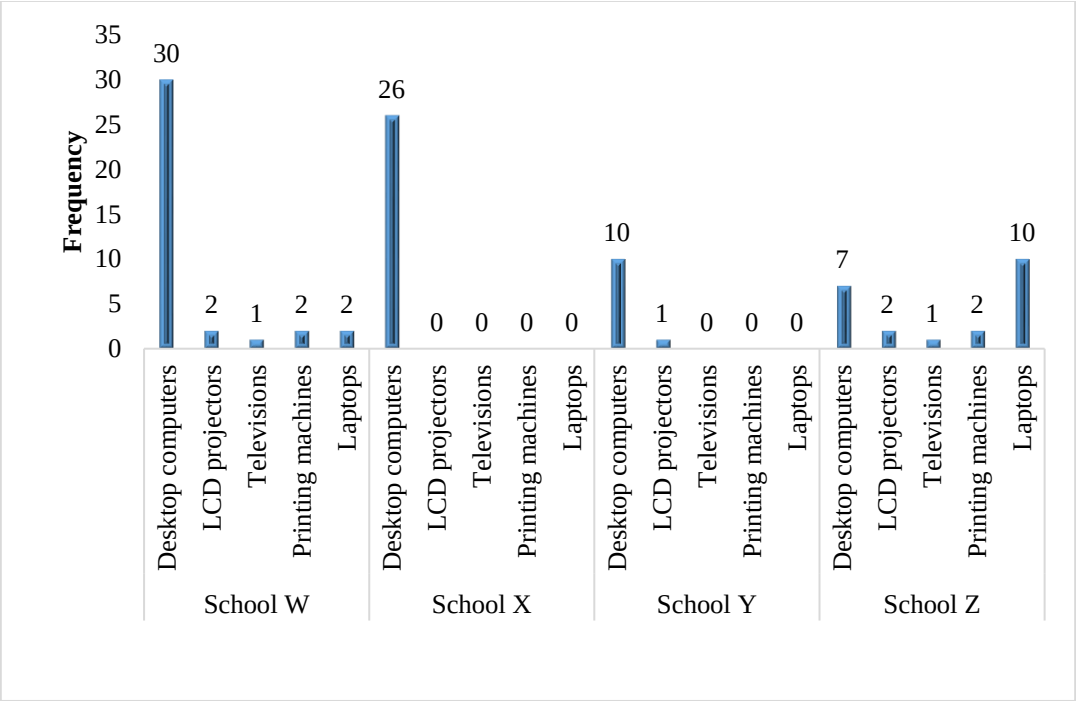

Figure 3. The Number of ICT Facilities Available in the Four Schools

Results in figure 6 indicate a significant disparity in the number of computers across schools. For instance, school Z had only 7 desktop computers while school W had 30 computers. It was also noted that there was a mismatch on the number of computers and number of students. Figure 4 provides the number of students per school.

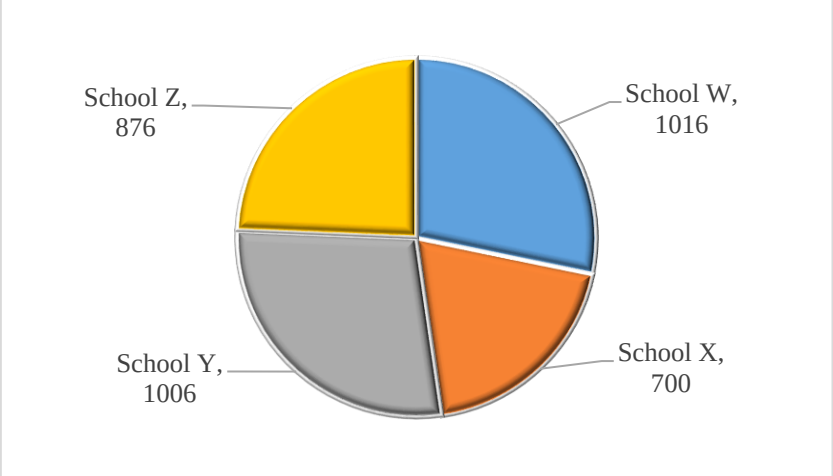

Figure 4. The Number of Students in the Four Schools

Limited teacher training opportunities on the use of ICT for enhancing teaching and learning was also reported by teachers who participated in the interviews. Regarding this, one teacher remarked: *"I attended the training on computer basics 9 years ago. The training was provided in cycles. Before the training, we were oriented by the instructors that once a teacher performed well in the examination provided at the end of each cycle, such a teacher would be allowed to go to the next cycle. Although the training was expected to have 3 cycles, we ended up in cycle 2. We were promised to be awarded a certificate, but we haven't got it yet"* (Teacher A11, School Y).

Addressing training needs, another teacher said: *"I have never had an opportunity to attend the training related to the use of ICT for teaching. I would like to update my pedagogical skills through digital resources, but opportunities are limited"* (Teacher A3, School W).

Lack of regular training on ICT as a pedagogical tool was also linked with teachers' low readiness to integrate technology in their teaching. Nevertheless, most of the interviewees highlighted the lack of awareness of emerging digital solutions that could enhance their pedagogical skills in teaching English language fluency. One of the teachers remarked: "*All computers available in the computer lab are connected with Non-Visual Desktop Access (NVDA), and they were donated by the Canadian government. We lack clear user policy guideline to inform us on what to do. There are new emerging mobile apps, but we lack proper guidance and understanding on how to deploy them in teaching English language fluency" (Teacher A18, School Z).*

The quotes above indicate that teachers had limited technological skills which imply the prevalence of knowledge gaps in coping with new technological innovations in teaching. Although teachers are expected to raise students' intellectual abilities and creativity; it has been a global concern that most teachers do not fully integrate technology into their teaching. While Tanzania's ICT framework standards for teachers emphasizes on the need to integrate technology in teaching, one could notice that there has been a mismatch between the framework requirements and the actual situation in the classrooms. It has been argued that schools in Tanzania lack a specific institution to track ICT initiatives and oversee ICT operations which has also contributed to the duplication of technological platforms for learning (Oreku, 2022). Schools lack adequate monetary support to create a secure ICT learning environment for learners, capacity strengthening among teachers and availability of resources (Daudi & Nzilano,

2019; Fidelis & Onyango, 2021; Mfaume, 2019; Oreku, 2022). It has been also reported that some quality assurers who are supposed to provide pedagogical instructions to teachers lack ICT knowledge of basic computer applications (Nihuka & Ngonile, 2021). Although there have been government efforts in Tanzania for establishing ICT policies and framework that indicate necessary skills for teachers, they still have limited ICT competency, lack comprehensive ICT training that focuses on effective integration of ICT in teaching and learning (Barakabitze et al., 2019; United Republic of Tanzania, 2015). Similar gaps were also reported from other African countries such as Kenya and Rwanda which formulated ICT policies that outline the significance of ICT pre-service and in-service training, but the policies have limited information on compulsory contents to be covered and the resources required to accommodate teachers in the training (Murithi & Yoo, 2021; Republic of Rwanda, 2017; Rubagiza et al., 2011). While some developed countries such as Spain managed to engage students in online during COVID-19 (Palau et al., 2021), other developing countries such as Rwanda and Tanzania rarely managed to do so, hence some students had to repeat an academic year of their study (Manyengo, 2021; Ngwacho, Areba, 2020; Uwizeyimana, 2022).

Even before the outbreak of the COVID-19, many secondary schools in developing countries, Tanzania in particular, lacked adequate ICT tools that could be used to facilitate learning. For example, Barakabitze et al., (2019) remarked that schools were equipped with small computer laboratories and few computers that were used for teaching computer literacy. Although some schools had few computers, they lacked the financial capacity to pay maintenance costs (Rubagiza et al. 2011). This may be possibly a reason why teachers did not use ICT in their pedagogical practices to enhance English language fluency. In support, Ndibalema, (2014) and Tang, (2015) maintained that without critical investments in ICT infrastructures, learners in secondary schools in Tanzania will have limited chance to develop the 21st century skills such as promoting English language fluency and effective communication. While teachers' awareness and readiness to integrate technology partly depends on the availability of technological devices and effective training, the findings of this study indicated that there was limited accessibility in the schools involved in the study. The situation reflects the national data regarding the accessibility of ICT devices in secondary schools which indicate a critical mismatch between the number of students and that of the facilities.

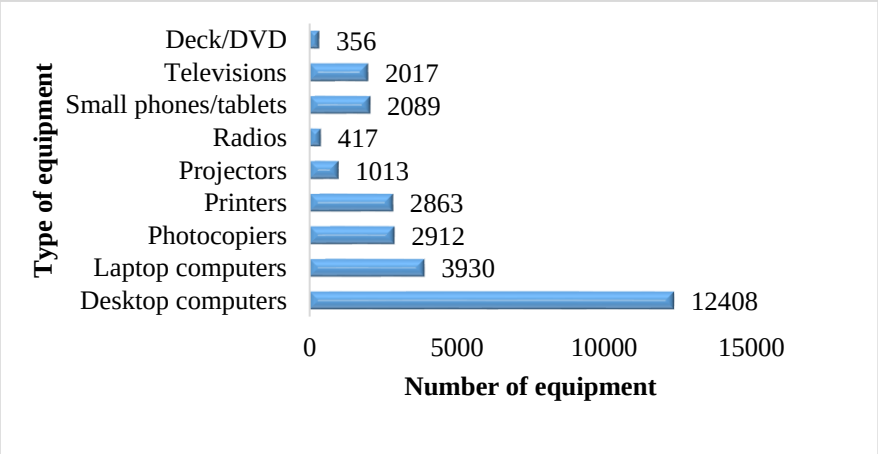

Figure 5. The Total Pieces of Equipment Available Nationally

Source: United Republic of Tanzania (2021)

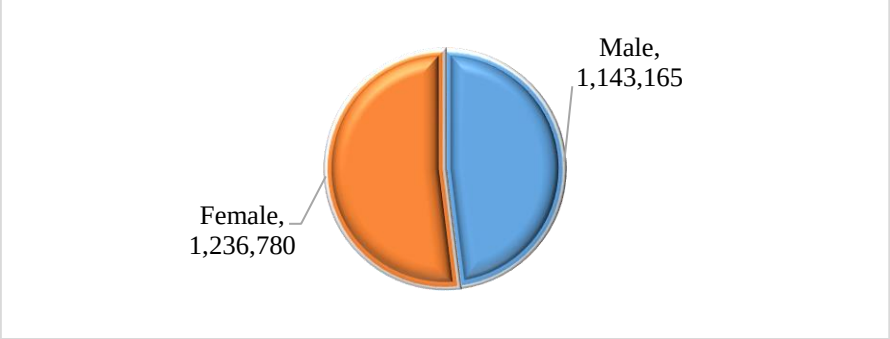

Figure 6. The Total Number of Students in Public Secondary Schools

Source: United Republic of Tanzania (2021)

The available number of ICT facilities in secondary schools in Tanzania gives little hope for English language teachers to develop digital culture which is essential in achieving the 21st century skills. Evidence indicates that the possibilities of developing digital culture among teachers in Tanzania is limited due to the inadequate technological tools available in schools where even the available ones are not properly utilized (Daudi & Nzilano, 2019; Fidelis & Onyango, 2021; Joseph, 2021; Malekani, 2018; Zlotnikova et al., 2016). Similar challenges could be noted in other sub-Saharan countries such as Kenya, Ethiopia, Malawi and Rwanda in the sense that schools lack infrastructure and funds to afford purchasing of the equipment needed to support acquisition of digital skills among teachers (International Labour Organisation, 2021; Laban et al., 2021; Yalley, 2022). The lack of access to electricity and other ICT facilities has compromised teachers' ability to participate in the digital world thus not realizing the technological applications in the settings (Samarakoon et al., 2017). It is likely that teachers' decision to adopt or reject the use of technology in teaching depends on the availability of technological infrastructures (Badran et al., 2021). Although the availability of digital resources does not guarantee that teachers will integrate technology in their teaching, there is a high chance for teachers to develop digital literacy skills which are essential for the acquisition of language fluency skills.

Conclusion and Recommendations

Teachers believed that the use of ICT in enhancing English language fluency helped students in many ways, such as fostering writing skills and speaking skills and arousing their interests in learning. Fluency was revealed to have two important components of good communication skills, which are writing and speaking skills. These two skills are critical in the twenty-first century. However, it was found that the majority of teachers were not using ICT to enhance English language fluency; instead, a few teachers were using ICT to teach computer literacy. Teachers' use of ICT was limited by several factors such as poor ICT infrastructures and insufficient ICT training. The study, therefore, recommends to the government to make critical investments in ICT infrastructure and train teachers to use ICT in their pedagogical practices to enhance English language fluency. Again, the government should establish supporting infrastructures that enable the use of online and distance learning to improve English language fluency in response to various circumstances that prevent physical meetings, such as the COVID-19 explosion. The current study did not engage students to seek more perspectives about learning English language fluency using technology. The findings of this study would give more insights if more samples of students were

included. Therefore, future research may examine the effects of educational technologies through quasi-experimental procedures. Again, future studies that examine students' technological learning environment and influence on academic achievement would certainly add to our understanding of the opportunities and constraints of integrating it into teaching in secondary schools.

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