



Benefits of Computers and Mobile Assisted Language Learning in English Language teaching and learning in upper primary

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Abstract: The emergence of educational technology has become part of modern world. This study aimed to investigate the benefits of computers and mobile assisted language learning in English language teaching and learning in upper primary. The study applied the sociocultural theory as developed by Vygotsky (1978) and advanced by Lantolf (2007). The study adopted a qualitative research design. The study location was kyso sub-county; kitui county. The target population was English language grade 5 and 6 pupils and teachers. Purposive sampling method was used to determine the sample size of the study which was 40 pupils and 72 teachers. Data were collected through interviews and observation schedules. The findings of the study revealed that computer and mobile apps encourage both independent and collaborative learning experiences. The study observes that computer and mobile learning methods support contingent learning, where learners can react and respond to their environment and their changing experiences. The study recommends that teachers should be able to select appropriate computer and mobile applications according to the needs and interests of the pupils and incorporate into their classes.

Keywords: English language learning, Mobile learning; computer applications; language teaching.

1. INTRODUCTION

One area that has had an impact on language teaching and learning is the emergence of CALL and MALL. One of them is learning and teaching English using Computer Assisted Language Learning or CALL or mobile (MALL). CALL is a computer aided learning media used in the field of education which easy to access, spread and stored. Research in CALL is the search for and study of applications of the computer in language teaching and learning (Levy, 1997). Levy & Hubbard (2005) observe that the adaptation of CALL adopts development trends; for instance replacing "Computer" with "Technology" or use "Enhanced" rather than "Assisted". Egbert (2005) portends that CALL means learners learning language in any context with, though, and around computer technologies. He further observes that research in language learning and technology has broadened thus the current CALL research is more inclusive in embracing computer technologies and language learning. Jung (2005) notes that CALL is a research field of language learning and technology that covers research of every way of using computers for language learning purposes, from software explicitly designed for language learning to web-based environments such as virtual environments, social software and computer gaming. Jung further points out that the four basic language competences of reading; listening, speaking, and writing are represented in existing CALL research studies.

Gitsaki observes that CALL covers not only a variety of technologies and software available for language learning, but also

theoretical principles and concepts underlying CALL design, research, and practice. Thus, CALL has become instrumental in the advent of cognitive and sociolinguistic approaches to language teaching that emphasizes pupils and students participation in authentic, meaningful, and contextualized discourse. CALL has advanced and it encompasses encompasses more sophisticated language learning multimedia software as well as a vast array of web resources, Web 2.0 tools and social networking software (blogs, wikis, chat, podcasts, Twitter, virtual learning environments, audio/video and conferencing), learning management systems (LMS) and instructional tools (Canvas, BlackBoard, Moodle, Interactive Whiteboards) as well as mobile technologies (laptops, ipads, cell phones) that can be utilized both inside and outside of the classroom for language teaching and learning (Gitsaki, 2012; Peterson, 2009).

MALL is a narrower niche of CALL. Geddes (2004) defines MALL, or mlearning as "the acquisition of any knowledge and skill through the use of mobile technology, anywhere, anytime, which results in an alteration in behavior". This implies that MALL differs from CALL in its focus on personal, portable devices that enable quick, continuous access and interaction across different platforms and contexts. This has led to a shift a pedagogical shift from a didactic, teacher-centered approach to more participatory, student-led learning (Wang & Shih, 2015). Both MALL and CALL have introduced a great revolution in the field of learning a language.

Kenyan government has attempted to integrate CALL and MALL in the Competence Based Curriculum. This study attempts to examine the benefits of computers and mobile assisted language learning in English language teaching and learning in upper primary. Warschauer and Meskill (2000) observes that, almost all language learning and teaching activities need to use a specific sort of technology. Therefore this study focused on the benefits of CALL vocabulary learning, podcasts and toontastic 3D recording in support of listening and speaking skills, Moodle readers in support of reading skills and Google docs in support of writing skills. It is hoped that the study adds knowledge on the teaching and practice of second language learning.

2. Literature Review

Various studies demonstrate that the use of technology motivates the students and makes them easier to talk, read, listen and write (Gordon, 2007; Ilter, 2009; Traore and Kyei-Blankson, 2011, Zhou, 2012). The studies revealed that the use of technology in classrooms in English as a foreign language can provide an important and attractive approach to language study. However worth noting is that technology is not enough to teach ELLs alone. Schwartz & Pollishuke (2013) note that the use of technology needs a teacher with clear targets, who knows the curriculum and effective education strategies and can provide children with learning experiences to increase and encounter with previous knowledge.

Further, using technology improves the reading and writing skills of learners, (Perego & Boyle, (2012; Rodinadze & Zarbazoia (2012). The findings of these studies showed that the tools used in technology enhance the ability of learners to write and read because they are user friendly. Moreover, technology assists students and teachers in their quick access to course materials. Cutter (2015) study found that using classroom technology encourages English students to promote their success in English. Schrooten (2017) examined the potential benefits of integrating information and communication technology (ICT) into language education and found that ICT allows for a high degree of differentiation, where individual needs and abilities can easily be accommodated, and also offers enriched content and allows a more intense, multi-sensory learning process. Rassaei (2017) agrees with the above findings when he observes that modern technologies have supported English as a foreign language (EFLs) to participate in the educational context of language learning.

Recent studies show the importance of technology in language learning. Regarding negative emotions, Dogan (2020) investigated the effect of online and traditional learning on learners' foreign language anxiety. Khojah and Thomas (2021) study on the other hand found that task designs via digital technologies in educational contexts can raise learner engagement in language skills. Liuet al. (2021) studied grit in mobile learning contexts among EFL learners. The findings of the study show that grit has a significant relationship with academic performance in mobile EFL learning. Furthermore, educational technology can foster learner engagement (Chiu, 2021).

The above literature shows that ICT has had impacts on the quality of teaching, learning, and research, particularly in learning English, and it may improve teaching and learning by providing dynamic, interactive, and relevant information.

2.1 Theoretical Framework

This study applied sociocultural theory (SCT) (Vygotsky, 1978; Lantolf, 2007). SCT theory focuses on learning as situated in a social and cultural context, looking at learners in connection with the social and material environment where they interact (Wells, 2000; Warschauer, 2005). The study mainly applied the concept of scaffolding a term that was first introduced by Bruner (1986). The term has been interpreted as social assistance. Bruner observed that children acquire their first language while their parents offer scaffolding in the form of continuous help to them through conversational –formats. Lantolf (2007) observes that one way in which learners scaffold is through collaborative interaction. Such collaboration would lead to the co-construction of linguistic knowledge. The concept of scaffolding suggests that the knowledgeable person (adult, teacher, or peer) help the less knowledgeable (child, or student) to accomplish a task which he or she would not otherwise be able to do by himself or herself. It is also interpreted as anything a learner benefits from or consults with, which might be a dictionary, grammar books, the traditional classroom technique of Initiation, Response, and Follow up (IRF), or any corrective feedback offered by the teacher. The study considers integration of technological applications in support of development of language skills as form scaffolding by the learners and the teachers. The study focused on collaborative forms of learning through pedagogical forms by means of CALL and MALL. The aspect of scaffolding is also applicable in CALL and MALL research targeting ELLs involvement in joint activities with others.

3. Research Methodology

This study employed a qualitative approach where data collected were based on both teachers and pupils' reflective responses during the semi-structured interview and observation schedules. According to Creswell (2012), a qualitative study is exploratory in nature and appropriate when the purpose is to understand people's experiences and growth paths inside a specific educational context. In this case, it attempted to gain insights from the pupils on the use of CALL vocabulary learning, podcasts and toontastic 3D recording in support of listening and speaking skills, Moodle readers in support of reading skills and Google docs in support of writing skills. The research was carried out for 8 weeks. The study was specifically carried out in Kyuso Sub County in Kitui County. Kyuso sub-county was found appropriate for the supply of the necessary data since efforts have been made to provide technology in schools. The target population was Grade 5 and 6 teachers of English of these schools. The target population was teachers of English of these schools. The researcher purposively sampled 72 English language teachers and 40 pupils from Kyso Sub County to participate in the study.

This study employed qualitative data gathering methods. The data consisted of pupils' recorded interviews and observation schedules with the pupils and teachers. The reflective journals were written by pupils after each CALL and MALL session and depicted their feelings as well as what they like or dislike about the use of Podcasting, Toontastic 3D, google docs and moodle readers. In addition, a semi-structured interview with pupils and teachers was conducted by the end of the study to gather in-depth information of the benefits of CALL and MALL methods. The data from interviews and observation schedule were transcribed and analyzed using thematic analysis by Braun and Clarke (2006).

4. Results and discussion

The analysis focuses on the benefits of Computers and Mobile Assisted Language Learning in English language teaching and learning in upper primary. The use of CALL and MALL has become an essential factor in the process of language learning. This research synthesis aimed to analyze the benefits of CALL and MALL in English language and teaching. Thus, the analysis unveils the use of CALL and MALL technology in teaching and learning in English classrooms in upper primary. The analysis focuses on the following thematic areas: CALL and MALL on language learners' motivation, collaborative language learning with CALL and MALL and CALL and MALL assessment. The specific CALL and MALL applications that were utilized in this study are: CALL vocabulary learning, podcasts and toontastic 3D recording, Moodle readers and Google docs.

4.1 CALL and MALL on learners' motivation and confidence

Second language learners' emotional states like motivation have played influential roles in English language learning. Zhu (2012) observes that motivation is normally characterized as a learner's willingness or desire to be engaged in or commit effort to compete a task. Without the desire to learn learners are likely to cooperate, take self-responsibility or fully engage in language learning process. Moreover, motivation is regarded as critical emotional state that affects second language achievement. The findings revealed that due to CALL and MALL applications such as CALL vocabulary learning, podcasts, Moodle readers and Google docs in the teaching and learning of English language skill the pupil's performance improved significantly. The study correlates the significance differences in results to academic motivation as propagated by the use of CALL and MALL applications.

The analysis of the use of podcasts in development of listening and speaking skills illustrated that podcast motivated the learners to learning speaking. Podcasts have an impact on learners, motivation because they take learners closer to the target language. The learners gained confidence to speak in English by recording themselves. This implies that CALL and MALL builds a classroom environment in which learners' social and emotional needs as well as their academic needs are met. Through the questionnaires the teachers reported how the use technology helps create a classroom environment that is less threatening and English language learners feel safe to interact with others and the language. Some teachers described how learners develop their self-confidence in their abilities to use technology:

"The use of technology allows the learners to freely explore and apply their existing speaking skills and gain confidence in their abilities by recording themselves."

The researcher observed that motivation and confidence depends on how the teacher organizes the class. The findings show that the teaching activity identified by the teacher during the speaking skills lesson must support the learner and create enjoyable learning. The researcher observed that podcast motivated less confident learners to participate in speaking. This was achieved by the teacher/researcher giving learners opportunity in making their own podcast and share with other learners. Moreover, the use of computer and mobile based activities helped learners to build confidence since a safe and authentic learning environment was provided by the researcher. Some learners recorded themselves while at home and sent their recordings to the researcher. This

showed that CALL and MALL can make learners to be more focused and confident in speaking English using podcast. Therefore, the learners believe that by using podcasts they can increase their confidence in speak English. Through interviews the learners reported that podcast are certainly very useful for speaking skills and that they give them opportunities to become more confident to speaking English.

Podcast were efficient in helping learners in pronunciation and vocabulary since they recorded themselves, repeat and delete the podcast that they felt that was bad. This was also seen in the creation of digital story telling. Podcast also can be reflection place and correction for learners' speaking proficiency. The learners enjoyed recording their voices on the podcast; they even imitated how the native speakers speak English especially on the speaking aspect such as the pronunciation, intonation, fluency. The recorded audios were later shared with the peers and the researcher for listening purposes. The emotional and intellectual support from peers encouraged learners learning and promoted self-confidence. Therefore, CALL and MALL activities provided a way for teachers to support the self-confidence and self-esteem of English language learners, in terms of their language learning and mastery of content. Consequently, when self-esteem is heighten, English language learners become more motivated to learn language and the learners can develop speaking English performance. Moreover, the learners received in-person immersion which is a desirable way to speed up language training since all activities must be completed using the English language. The use of podcasts increased the quality of language learning in traditional environments since the learners could record themselves in the English language and other learners could listen and provide feedback in the classroom.

Learners also found the use of podcast very enjoyable since podcast are easy to use. This then implies that CALL and MALL applications are important motivational pieces that encourage language learning. The researcher observed that the learners were less emotional or anxious when expressing ideas in English which implies that the use of podcast provided a technologically advanced environment that enhanced classroom conditions. The presence of ipads, phones and computers, videos were seen as essential motivational components to language learning. Thus, CALL and MALL provides a risk-free environment that encourages Learners to Learners to explore and experiment with language.

The assignment on Digital storytelling through toontastic 3D recording to support speaking skills involved using computer-mediated tools to tell stories which provided rich opportunities for self-reflection that are difficult to accomplish through written assignments. Self-reflection was made possible since in their narrations learners were not put on the spot and could think about what they want to say before recording it or even go back, delete, edit and re-record it. The researcher gave learners the opportunity to listen to all of the podcasts from other groups which increased motivation, encouraged creativity and gave learners a better understanding of their own abilities. The learners would then suggest the best recording. The researcher observed that the integration of digital story telling into English upper primary classroom fosters participant learning. Digital story telling gave learners the opportunity to practice new vocabulary and listening comprehension, feedback, improvement of oral competence, confidence and also digital literacy. Through a one on one

interview in week 8 the learners reported the following about digital story telling:

'I think it is a great opportunity to improve your skills in speaking. It was an interesting experience and a good way to practice speaking skills because we had to record it many times before it was perfect. I could improve my English because I could hear my own mistakes. It seems to me if I would produce podcasts more often I could really improve my English' the use of videos helped me to recognize words when listening

The above opinions show that CALL and MALL contexts of learning is very important to motivating the learner and gaining language development. The pupils therefore appreciate podcasts as a tool for learning. This gives CALL and MALL applications the same status as any other educational material, generating the same motivation and language development as other tools. CALL and MALL applications offers learners an environment where they can develop the ability to use the language in the real world rather than only to make grammatically correct, and propositional sentences. The use of podcasts give learners opportunities to practice using English, especially orally, get them speaking in the classroom, and teach them where to find opportunities to practice speaking English outside class.

The analysis on Moodle reader for supporting the development of reading skills illustrated how effective use of CALL and MALL can increase motivation and engagement of English language learners. The findings in section 4.3.3 revealed that Moodle readers and other CALL and MALL applications such as hypermedia can be used to motivate and engage English language learners in the development of literacy and reading skills. The researcher observed that Moodle reader can help motivate learners to be more engaged in reading, especially when they interact with the text using certain interactive technological tools such as hypermedia. The researcher used Moodle readers to introduce comprehension activities to learners. The use of CALL and MALL applications can be used to enrich instructional activities which motivate the learners. Moreover, the use of Moodle reader helped learners to understand and develop their knowledge with enthusiasm.

The findings suggest that through the use of short reading passages on Moodle reader site with accompanied supplementary technology driven activities motivated the learners and the authentic materials helped them to build up interest for other cultures. Therefore, the study concludes that through the utilization of CALL and MALL language learners gain a "sense of freedom, motivation, and encouragement they need for learning. The researcher one-on-one interviews reveal that CALL and MALL empowered the learners. The learners appreciated the use of audio-visual technology available which they stated gave them an understanding and a confidence that would not have had from the reading of the passages only.

Thus, providing authentic literature to English language learners is crucial in motivating them to read. However, literature in combination with multiple technologies such as Moodle readers can offer additional support for English-language learners. The use of CALL and MALL for teaching and learning motivates learners to a much greater degree than print-based literacies alone. The researcher observed that excitement over the digital tools available made learners eager to work on reading assignments. The use of Moodle readers as an application for teaching reading skills at

upper primary was efficient because it supports the teaching and learning skills such as reading, comprehension, accuracy and fluency. Moodle readers have a positive impact on reading fluency which is important in the linguistic development of English language learners. This findings are in line with Krashen & Torrel, (1983) natural theory in the sense that reading creates a valuable influence to developing language acquisition, benefiting the confidence and competence of learners. Therefore, the integration of computer and mobile-assisted language learning programs into English language instruction in English language creates new and effective practice environment.

Combining technological tools or devices with passages have a positive effect on English language learners' motivation to learn a second language. It can be claimed that conventional teaching methods only are not effective in reading instruction. Many studies also show that second language learners struggle with comprehending reading passages in English. These problems were attributed to many reasons including lack of confidence, lack of linguistic knowledge, vocabulary recognition and retention, boring reading materials, poor question design in student textbooks, and traditional teaching practices. Traditional teaching methods are not motivating since learners are passive recipients and have on opportunities to communicate in English as the way Moodle readers does. This clearly reveals that computer and mobile-based activities should be incorporated in traditional teaching methods as a mean of motivating and for the purpose of getting the desired achievement of teaching reading skills. The findings reveal that students enjoy the use of computers and mobile applications especially if the content is interactive and simulates real-life situations.

The analysis of Google docs in support of the development of writing revealed that Google docs is an online digital tool that provides exciting and interesting features that motivated learners. During the treatment, Google docs allowed learners to take decisions about their own learning, especially during self-learning activities. For instance, the feature was very helpful for learners writing English such as searching words in English digital dictionary, antonym or synonym and provides spelling grammar checking. In addition, allowing the learners to use CALL and MALL applications and phones in the classroom, which are usually banned altogether, may have catalyzed their sense of autonomy and learning ownership which has translated into more time-on-task and, consequently, more expedient learning. Google docs therefore provided learners with opportunities for autonomous learning that are inherent in computer and mobile learning which consequently may help them gain autonomy, learning ownership and self-confidence.

The findings therefore reveal that CALL and MALL exposes learners to contextualized activities that require greater involvement by learners than occurs in drill and practice exercise. Moreover, through the use of word processors, language learners can develop language and communication skills. By utilizing various kinds of Google docs, language learners gain a "sense of freedom, motivation, and encouragement they need for learning. One teacher expressed "the integration of technology has had a very positive effect on learning of English language...

My pupils are extremely enthusiastic and very motivated to work. Another one stated the use of CALL and MALL as pre-teaching strategies can support and motivate learning a second language.

In analysis of listening skills and vocabulary the researcher observed that the use of videos excited and motivated learners. The findings in chapter four revealed that due to the use of videos in both vocabulary and listening skills there was an improvement in listening skill, vocabulary, and pronunciation. This was because the learners were exposed to authentic video materials. Moreover, by listening to video materials, the English language sounds would be familiar to them which itself led to an improvement in their listening comprehension. Videos also prepared learners with the real spoken language.

The analysis above reveals that CALL and MALL applications foster the academic motivation required for learning and understanding English as a second language. CALL and MALL applications provides teachers with opportunities to create proper methods of instructions. The findings reveal that CALL and MALL applications provide purposeful attractiveness and usefulness that can positively affect the learners motivation. The results show that the different CALL and MALL applications exhibit a positive outlook on technologies among the participants. This positive outlook of CALL and MALL applications strategy is enough to generate motivation and confidence in a learner. Thus, CALL and MALL applications provide learners with competent support to learn language. Moreover, CALL and MALL can provide a learner-centered approach to teaching, granting the teacher more time to support each pupil (cf. Vahdat and Eidipour, 2016). Therefore, in spite of using traditional mode of teaching opportunities of individualization within CALL and MALL must be considered broader than with regular text books, thus motivating different proficiency levels.

4.2 CALL and MALL in Collaborative Learning

This section is based on the tenets of Sociocultural Theory that emphasizes that the language process necessitates social involvement and collaboration among learners and their social surroundings (peers, instructors, and parents), with sociocultural approaches to mediation and the ZPD assisting in this process. The findings of the study reveal that one of the benefits of using CALL and MALL based activities is that they support Collaborative Learning (CL). CL stems from the principles of sociocultural theory and the constructivist approach. According to Vygotsky (1978), cognitive development is the result of learners' interaction during collaborative activities to advance their Zone of Proximal Development (ZPD); the difference between what a learner can achieve individually and what he/she can attain due to guidance provided by more capable skillful peers.

A collaborative (or cooperative) learning approach involves pupils working together on activities or learning tasks in a group small enough to ensure that everyone participates. Collaboration is a powerful and authentic instructional method used to engage, improve, and direct student/pupils learning. Pupils in the group may work on separate tasks contributing to a common overall outcome, or work together on a shared task. In the study CL was characterized by the sharing and construction of knowledge among participants using technology as a common resource in a classroom learning environments. Thus, CL is a teaching strategy for group

instruction that emphasizes learning that is facilitated by learners rather than the teacher.

The analysis on CALL and MALL applications such as; CALL vocabulary learning, podcasts, toontastic 3D recording, Moodle readers and Google docs in support of language skills development revealed that all these applications give learners free and unlimited opportunity to participate in the learning process, minus the usual drawbacks of individuals being unable to cope with curricular pressures, peer fear and inhibition owing to an inability to perform in the class, and, most importantly, losing interest as an outcome of poor motivation.

4.2.1 Videos in Collaborative Learning

The analysis on the use of CALL vocabulary learning where videos were utilized to teach vocabularies revealed that that group work and collaborative activities contributed the greatest to the learning experience, which was supported by the posttest results. A total of six videos were watched in six weeks to introduce learners on children rights and responsibility, Cultural and Religious celebrations, Etiquette telephone, Emergency Rescue Services and Our tourist attractions. The use of Videos in class served the purpose of providing comprehensible input (cf. Krashen, 1985). The researcher observed that the integration of videos for vocabulary teaching enhanced the linguistic competence of the learners by providing extra-linguistic information. When learners watch videos, they can comprehend the message using their background knowledge and also they can use extra-linguistic factors in movies. The learners in groups of three were then asked to make meaning from the videos they had watched.

The results indicated that pupils became engaged and motivated when asked to complete assignments in a team setting. The findings illustrate how CALL vocabulary learning gives teachers an opportunity to let pupils create their own learning. CALL and MALL applications provide learners with many opportunities to work in groups. The learners after watching the relevant videos together they engaged in group work discussion with a common purpose of sharing their thoughts. The study observed that group discussions to deduce meaning encouraged the social aspect of education and enhanced learners understanding. In this sense, CL is a necessary contributor to active learning (Kieser and Golden, 2009; Zeng, 2017).

The group nature of CL also promotes interactions as was seen in the classroom. The activity was also beneficial for upper primary learners since they practiced using English language. The researcher also observed that learners discussed with their peers with reduced anxiety. The findings depicts Lantolf's (2000) idea of mediation, the zone of proximal development (ZPD), 'scaffolding', and collaborative engagement aspects of Sociocultural Theory. The use group discussions after watching videos the pupils enhances social and collaborative interaction in classroom setting, where peers provide 'scaffolding,' or assistance that permits pupils to acquire the ZPD.

Therefore, CALL and MALL collaborative activities have a positive impact on learners' English vocabulary. The study observed using video watching increased collaborative activities in class hence; learners were able to expand their interests while also learning English vocabulary. By week seven learners' interest in using online learning environments had grown, and this can be an excellent supportive agent to learn English language inside and

outside the classroom. The learners were developed interest in the video material for specific lesson since they provided learners with visual, contextual, and non-verbal features and these features helped learners to compensate any lack of comprehension.

4.2.2 Podcast and digital story telling in Collaborative Learning

The analysis on the use of podcast for supporting the development of listening and speaking skills revealed that classrooms generate the most intellectual excitement when they serve as “learning communities” in which pupils share responsibility for knowledge production, invite each other into dialogue, and learn from each other’s diverse perspectives. In listening and speaking skills lessons pupils worked on structured activities in small groups at the pre listening and speaking stage, whilst listening and speaking stage and at post listening and speaking stage by dividing the work equitably, and join together to meaningfully engage in the podcast, video material and pictures exposed to them.

The study observed that podcast gave learners opportunities to work together and generate new ideas. The pupils in interpretation of the pictures exposed to them engaged in conversations that encouraged them to use the target language. Therefore, CL offered learners the opportunity to complete a task together and to increase their own and each other’s learning. The learners in different groups also encouraged each other to work together on lesson activities as well as helped each other with classroom assignments since they wanted their groups to be the best. Podcast provided opportunities for deep discussions since the pupils agreed, disagreed, and mutually criticized reasoning, allowing them to take advantage of the social aspect of learning with the ultimate objective of allowing members of the small group to ‘scaffold’ one another.

The researcher also asked pupils to create “learner-created podcasts”. The study observed that podcasts allow pupils to “construct and represent knowledge” by narrating about the lesson. In this way, podcasts gave the participants opportunities for “enhanced reflection, self-expression, enriched communication, increased self-knowledge, and creativity. Moreover, through one on one interviews the pupils shared that they enjoyed the chance to explore a new medium, to experiment with technology, and to make something of their own. They appreciated an assignment that allowed them to speak rather than write and to engage with course material in a more “casual” way. In creation of learner-created podcasts the participants developed clear and creative theses in their videos and even shared their personalities and senses of humour. In a nut shell, podcasting certainly offered participants the kinds of opportunities for argument-building, knowledge production, and creative self-expression.

The study observed that CL in podcasts was fruitful due to participants listening to one another. The participants had the following sentiments about listening to another recorded videos:

Podcasting was simply more “fun” and “easier” than reading each other’s work. Another participant noted that: “hearing each other’s voices was fun.”

From the above data, it is observed that the participants appreciated the opportunity to listen than read. Moreover, listening to their peers’ podcasts also provided participants with models for their future thinking and writing. One participant remarked that:

“One thing I liked about group work is on the way they had organized their story. I think it was really connected well,” X’s decision to talk about examples of child labor improved their work.

Therefore by participants listening to how their classmates organized and presented their thoughts, they were able to see (or rather, hear) examples of successful approaches to thinking and writing and ponder how they might use similar strategies in their own work. Hence, the podcast assignment promoted CL since participants were able to work together on their podcasts more than they would on traditional papers; they created work in collaboration and engaged in constructive dialogue about the specific topics of discussion such as child labour, the city, culture and festivals among others. Moreover, the podcast assignment also urged the participants to practice critical listening skills. By listening to each other’s podcasts, they had to get used to hearing each other’s voices at length and sitting with others’ ideas before they respond. These sustained listening practices and gave participants opportunities to encounter other ways of writing and thinking, expand their own views on the topic of discussion.

Finally, and perhaps most importantly, the assignment on listening to leisure activities song encouraged participants to share their affective responses to the songs they were discussing. In this way the podcast gave participants a medium to communicate their emotional reactions to the song they heard listened, learn from, and reflect on each other’s feelings. In short, the podcast assignment allowed participants to build the kind of community that associates with the “liberatory” pedagogy. The study observed that through podcasting, participants created intimate, relational webs based on collaborating, listening, and sharing intellectual and affective ties. The analysis above illustrates that CL is particularly useful in keeping the learners’ schematic knowledge alive by encouraging the process of thinking together in their classrooms.

Therefore, CALL and MALL applications through collaborative learning are crucial for development of liberal classroom that enabled pupils to build a “classroom community”. The study observed that CL through podcasts made the classroom a communal place that allowed pupils to take interest in one another, in hearing one another’s voices, in recognizing one another’s presence. This was clearly illustrated in creation of digital story telling through toontastic 3D recording. The learners in groups of three were requested to create a story on *My family, A wedding I attended and Children rights*. The stories were to last 3 to 5 minutes in length and each week they could do a self-reflection of their recordings and redo the recordings. The learners were then asked to listen to at least two of their peers’ recordings on toontastic 3D. The recordings on toontastic 3D gave pupils the opportunities and environment to converse and engage in the English language.

The findings in chapter 4 demonstrated that digital storytelling engaged pupils in the story’s content not just by encouraging motivation and curiosity but also by instilling confidence in their ability to speak in English. The results from one on one interview indicate that digital storytelling facilitates 21st-century learning by allowing interactive and CL that encourages pupils to speak English. The study observed that the participants cooperated, engaged, shared ideas, assisted, and encouraged one another during digital storytelling hence it was a significant and successful social approach to improve learners’ speaking abilities. The findings are

in line with Vievitsou et.al (2017) who claimed that collaborative tasks in digital storytelling improve students' knowledge because they are required to work in groups to capture content and to actively interact in a natural and technological environment for knowledge generation and skill development.

The study observes that the activities utilized in digital storytelling such as conversations, peer discussion about telling and performing tales with a competent third party allow pupils to collaborate on the creation and organization of multimedia resources for storytelling. The findings revealed that collaborative digital storytelling enhanced motivation and engagement, particularly among upper primary learners. Collaboration allowed pupils in the digital storytelling assignments to share their ideas which are a fundamental element of learning in sociocultural theories. Thus, the digital story telling assignments gave learners a chance to improve communication skills within their groups resulting in enhanced group dynamics and CL.

Moreover, collaborative activities enable pupils of all levels of skill to work towards the same goals while allowing for various sorts of participation to increase pupils' engagement. By using digital storytelling, pupils could work together in groups with fewer members. The posttest results in Chapter 4 showed a positive improvement in results after the digital storytelling treatment. The results may be attributed to the fact that digital storytelling activities eventually permits individuals to develop their speaking abilities by organizing thoughts, communicating points of view, assessing, and synthesizing information. The participants used the language as in natural communication and the pupils were expected to discuss collaboratively and communicate actively in an informal setting, collaborative activities in digital storytelling which enhanced pupils' understanding and communication skills.

The findings are in line with Shahala's (2018) research that demonstrates how digital storytelling may be used to blend instructional materials with learning activities, resulting in more engaging and fascinating learning settings. Therefore, digital storytelling for teaching and learning is based on constructivism, which can be a powerful tool for combining digital media into creative teaching and learning (cf. Okumu, 2020). Thus, CL fosters the skills of cooperation, collaboration, and interaction among the learners, skills which are not merely language-oriented but are life skills in the real world of growing internationalism. Technology-integrated classrooms are yet another way of empowering the learners for this world.

4.2.3 Moodle readers in Collaborative Learning

Moodle readers for supporting reading skills are another exciting technique that the study focused on that foster collaboration in the classroom. Moodle reader's activities allowed peer based activities rather than traditional methods of teaching. Throughout the research, the activities using Moodle were both beneficial and enjoyable in promoting a habit of English reading outside and inside the classroom and providing a valuable platform of English language input. The findings are in line with (Jones, 2007) who states that collaborative tasks can maximize learning inside and outside of the classroom by allowing learners to go beyond what they would have learned alone, to share perspectives, and to accomplish tasks more effectively. In this experiment, pupils' general involvement and peer learning was significantly affected

by the grade weighting which boosted the pupils' enthusiasm and motivation to complete the assignments.

The study observed that using groups in Moodle reader allows the teacher to add an additional dynamic to interactive activities: giving groups of pupils a private or shared space to discuss and collaborate. Depending on the goals the teachers have for an activity, the teacher can determine how public the actions of groups can be. Overall, the participants indicated a high satisfaction of using the Moodle program due to peer interaction with the text. This then implies that computer based reading instruction such as Moodle reader allows for "increased interaction with texts, attention to individual needs, and increased independence through an ability to read texts they would not otherwise be able to read" (Robb, 2013).

The study observed that the use of technological based activities such as Moodle reader are beneficial to young readers with reading difficulties or for English-language learners as they help improve comprehension, phonological awareness, and encourage reluctant readers to read. Therefore, teachers are encouraged to use computer technology as an intervention strategy to reverse pupils' negative attitudes toward reading books in English. The pupils reported that Moodle reader was "beneficial for them and they had the desire and ambition to keep reading" which had a cognitive effect to them. They also reported that they regained confidence and interest in English and this was due to Moodle reader features such as oral reading, highlighting, animations, and music/sound effects. Moreover, Moodle reader provides learners with opportunities to receive massive amount of comprehensible input, and reading material is a primary way to receive such input.

4.2.4 Google Docs in Collaborative Learning of writing skills

The study evaluated the effectiveness of using Google Docs in an out-of-class collaborative writing activity. The findings of the study revealed that Google Docs enables collaborative activities and projects that can occur inside or outside of the instructional day. The study focused on lower-level skills such as spelling and word choice. The findings revealed that the learners can collaborate more efficiently on assignments involving writing skills using web-based word processing, spreadsheet, and presentation programs. Some of their sentiments are given below:

I learned to work in a team, negotiate and communicate, and be a good listener."

Learning writing skills using Google Docs is interesting and free of stress

The study observed that by using tools available through Google Docs the classroom was more productive, more engaging, and more effective. The pupils in their groups were able to use document creation tools to contribute, edit, and interact together. The pupils in groups of three were asked to complete tasks of writing using Google Docs. The power of Google Docs was seen in the learner's ability to share, edit, and work together in one virtual workspace. The study observed that Google Docs "made collaboration much easier," "was simple to use," and "encouraged editing and sharing among peers" as further revealed in the sentiments below:

"Google Docs helped keep everyone's work together," "provided an effective way for sharing and correcting the work among group

members,” and “is an easy and interesting method for communication.

Therefore, Google Docs encourage socially structured exchange of information between learners in groups and in which each learner is accountable for his or her own learning and is motivated to increase the learning of other. Through the use of Google Docs learners engaged highly in writing skills tasks by utilizing a variety of strategies that encouraged active participation and meaningful involvement. The learners worked together in small groups toward a group goal. Google Docs supported collaboration through smart spell checker with grammar support and by sharing and commenting for collaboration and immediate feedback.

Furthermore, findings showed that participants who used Google Docs engaged cognitively by asking questions that need explanations, giving examples and reasons, agreeing or rejecting modifications, providing justifications and explanations, making explicit and implicit revisions, and using dictionaries and Google resources. The findings are similar to Zheng et al. (2015) study that concluded that students felt that Google Docs helped learners to be more organized and facilitated the process of editing and making revisions.

4.3 CALL and MALL and Assessment

Assessment and feedback are a part of the learning environment in school and one of the duties of the teacher is to show to which degree the individual pupil has reached the knowledge requirement within various subjects. The findings of the study revealed that CALL and MALL Apps offered learners with opportunities to assess themselves. Villada's (2009) prognosis for the future regarding the assessment opportunities within CALL and MALL Apps was positive. For instance, the participants indicated a high satisfaction of using the Moodle reader since the assessment it contained were more convenient for them in terms of time and place. Moreover, the learners were encouraged to complete the reading skills tasks because Moodle reader met their interests and preferences in the digital error, provided more exposure to the English language, increased their reading autonomy and provided them with an immediate feedback and marks.

Through interviews the learners reported the following about Moodle reader:

It was easy to submit the assignment,

My work was marked instantly

It was easy to respond to the many quizzes in the Moodle reader

The researcher observed that due to the above reasons the learners in their groups attempted to as many quizzes as possible using Moodle reader. Therefore, the use of Moodle reader to teach reading skills stimulates pupils' involvement and interest reading. Moreover, the Moodle reader assessments meet the learners' interests and preferences since the new generation is more technology-oriented. This encouraged both the motivated and less motivated learners to complete the Moodle reader assessments using the online Moodle mechanism. The study observes that motivation was a fundamental factor for learners to accomplish their assessment.

The analysis on digital storytelling for development of speaking skills revealed that: the integration of digital storytelling could

improve CL, as pupils were reliant on one another for a variety of reasons, prompting them to create their own stories. The study observed that during the recording of digital storytelling, group discussion, collaboration, peer correction, and self-learning were all observed. Therefore, learners enhanced the opportunities for communication by peer correction. The post test result showed a significant improvement which may be attributed to the instant feedback provided by the teacher/researcher and other group members.

CALL and MALL Apps are especially well suited to different environments simply because they are available in different contexts, and so can draw on those contexts to enhance the learning activity. Context-aware CALL and MALL devices can support students by allowing a learner to maintain their attention on the word and by offering appropriate assistance when required (Caballe et al., 2010). Therefore, through peer correction and self-learning the pupils learned how to organize, cooperate, and collaborate to achieve their goal throughout the narrative process. By week 7 the study observed that the learners who were engaged in the study gained confidence in their communicative skills.

The analysis on podcasts revealed that podcasts is motivating, as it gives learners opportunities to confront with a lot of authentic tasks that require them to solve a problem, make a comparison, or construct a hypothesis in relation to real life situation (Peterson, 2010). The learners found that the activities and the tasks in the Podcasts were appropriate, interesting and meaningful which could attract their attention, increase their motivation, and improve their comprehension. Therefore, they enjoyed learning listening and speaking through Podcasts. They believed that Podcasts supported them in improving their listening and speaking achievement. The learners reported that:

Podcasts gave me fun learning experience

We could listen to our voices and correct the mistakes we made

We deleted the videos we had created and perfected the final one

These statements inferred that using podcasts in learning listening and speaking had given the learners useful learning experience which led them to have positive perceptions towards the use of Podcasts in learning listening and speaking. The uses of podcasts simultaneously with peer interaction can be used to improve students' speaking skills of language. Therefore, podcasts not only facilitated them in learning listening and speaking but also helped them in improving their listening and speaking achievements. The task based activities that allowed learners to record their speaking provides a useful way of allowing learners to listen and make the corrections in order to improve their pronunciation where needed hence promoting their speaking skills. This then implies that pupils can improve their pronunciation through interaction with computer programs and voice recognition software (cf. Levis, 2007).

The assignments on writing skills through the use of Google Docs enabled pupils to discover and automatically detect grammatical errors by technology such as spell check among other auto corrections when writing. Thus, pupils were compelled to make corrections when they are writing. In this vain, the use of Google Docs encouraged cooperative writing. Learners in their groups could review their writings and of other groups and give feedback to each other. This encouraged learners to cooperate in writing of a language to improve to the next level.

5. Conclusion

This study focused on the benefits of Computers and Mobile Assisted Language Learning in English language teaching and learning in upper primary. Basing on the findings of the study it is concluded that CALL and MALL could be great motivator for English language development when used with deliberate planning. The findings revealed that within some areas, such as podcasts, Moodle reader and Google Docs that offers authentic experiences CALL and MALL is an unparalleled motivator. The analysis shows that teachers must know how and when and what to use to be able to motivate the pupils to further develop their language proficiency. That is, it is not enough to use a digital tool and expect a beneficial outcome. Therefore, teachers must carefully consider their options and act accordingly. The study shows that if CALL and MALL is used correctly and with explicit strategies the teacher can give the pupils an enhanced learning experience that will motivate them in their second language acquisition. The study revealed that new teaching methods and assessments surely will emerge with the growth of CALL and MALL. Consequently, this may promote motivation and development of English language learning and teaching. The study concludes that since the results illustrates positive utilization of CALL and MALL as a teaching method schools should consider embracing digital tools since they are not only an integral part of our world but also our future. Thus, both pupils and teachers need to move with the times.

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