COMPUTER ASSISTED LANGUAGE LEARNING (CALL); ITS IMPLICATIONS FOR TEACHING SISWATI.

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ABSTRACT

The emergence of technology has not only affected and influenced teaching and learning of languages but altered their pedagogical approaches greatly. The use of current technologies to enhance teaching and learning of siSwati is irresistible in that teaching, technology, and learning are closely linked and intertwined. Their intersection has led to the emergence of the two terms in education; Educational Technologies (EdTech) and Computer Assisted Language Learning (CALL). The main aim of this paper is to suggest the urgent need to digitize instructional programs for siSwati through adopting CALL. It is modeled by the ultra-modern approach to teaching and learning a language. The ultra-modern approach advocates for the three; the teacher, computer, and students as key players that interact during the teaching and learning of language. It gives much attention to the computer as a major resource between the teacher and the students. This paper suggests that the use of CALL in siSwati cannot only enhance its teaching and learning but preserves and widens its use all over. CALL can be offered in the form of tutorials, gamification, and through demonstrations.

KEYWORDDS: EdTech, Computer Assisted Language Learning, SiSwati, technology.

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INTRODUCTION

SiSwati is a national language spoken by a majority of the population in Eswatini. It is so far the only language entrusted with the promotion of cultural and linguistic homogeneity and is a pillar towards the achievement of sustainable development. Thus, there is a great need for Emaswati to develop siSwati. Computer Assisted Language Learning (CALL) is a new learning paradigm that seeks to infuse Information Communication Technology (ICT) in the teaching and learning session. The notion of computer-assisted learning of languages come in as a quest for modernization, hence modernization is viewed as playing a major role in the promotion of languages especially those at the verge of dying (Bamgbose, 2011). The main aim of this paper is to suggest the use of CALL in siSwati as a means to develop the siSwati language.

Background of the paper

Language, learning, and culture have since become major components of sustainable development. Therefore, they have to be integrated in order to sustain human life. Besides helping learners acquire the linguistic rules of siSwati, teaching and learning of siSwati also exposes learners to the literature and culture components, thus equipping them with knowledge, skills, attitudes, values and ethics of the siSwati language. Research reveals that ICT is the best means for dissemination of information and skills that are necessary for life (Rhalmi, 2017; McNutty, 2018). This is justified by the ability for ICT forums to allow for easy storage, interpretation, transmission and designing of all sorts of information (Rhalmi, 2017; McNutty, 2018). Therefore, such forums are considered best for use in language teaching and learning.

SiSwati is a heritage language to be treasured and preserved for future generations. There is therefore a great need to ensure its future sustainability. Sustainability of a language entails that countries embark on efforts to ensure its widespread and usage all over. This paper argues that the school and ICT are two most convenient forums for the development of siSwati. Thus, the aim of this paper is to encourage the use of CALL in teaching siSwati. Development of a mother language is key to achieving sustainable development in that it helps people to contribute to the economic, political, and social transformation of the country at large using a familiar language (Magwa & Mutasa, 2007). Magwa and Mutasa (2007) further argue that language and culture are key to development such that development that comes in a foreign language is artificial development that does not last longer. Research reveals that three processes determine the sustainability of language; legality, social use and material production (Ward, 2002; Bamgbose, 2011). Together, the combination of the three does not only make the language viable but gives it global recognition as well.

Legal status accorded siSwati as a mother tongue

The major challenge faced by siSwati has been that of legal status and equal recognition with other languages existing in Eswatini. As efforts to accord the siSwati language legal status, siSwati has been declared an official language together with English. It is entrenched as a compulsory and core subject to be taught to all learners at all levels of schooling. It is also used as a medium of instruction from the first four grades of schooling after which English is expected to take over (Constitution of the Kingdom of Eswatini, 2005; Ministry of Education and Training (MoET), 2018 as cited in Eswatini Education and Training Sector Policy).

In the past decades siSwati has been competing with English, the second language in Eswatini. However, latest developments are that siSwati is at par with English, reads Circular No. 12 of 2017 Selected Circulars from the Ministry of Education and Training (MoET). "*The Kingdom of Eswatini has two official languages. These are siSwati and English as per the constitution of the Kingdom of Eswatini. English and siSwati should be treated in the same equal status at school levels*". Though the Kingdom of Eswatini does not have a language policy, the above education policies and declarations are slight efforts towards status planning aimed at elevating siSwati. Elevating siSwati status is a good move, what remains are efforts to ensure it spreads through corpus planning. Corpus planning, is a process that comes after a language has been given status. It deals with the internal structures of the language such as standardization of orthographic conventions/spelling, development of dictionaries, new vocabulary and scientific terms and the production of literature in the language (Mkhatshwa & Masango, 2014). The authors of this paper believe that corpus planning of siSwati can easily be done through use of CALL.

Social use

By virtue of siSwati being an official language, it is used in formal and informal domains. Therefore, siSwati must be readily available in ICT forums, otherwise it will soon become a perishing/diminishing language. Also, by international standards, social use of a language is determined by accessibility, implying that siSwati should be easily used and accessible within and outside the Eswatini community. This paper argues that ICT can best be used to restore the gradually diminishing siSwati. This is because ICT is viewed as a conducive forum for the development and teaching of any language (Rhalmi, 2017; McNutty, 2018; Al-kamel & Chouthaiwale, 2018). However, research reveals that the inversion of ICT has worsen the ever growing marginalization of African languages mainly due to the issue of shortage of resources (Bamgbose, 2011; Mkhonta, Nxumalo & Mohammed, 2022).

Besides marginalization, siSwati is facing attitudes and negative criticisms such that it is referred to as a vernacular language; a language of low status, mostly used as spoken form as opposed to the written form. According to Mngometulu (2017) this is worsened by the limited and inadequate material available in the siSwati language. Lack of siSwati online material has become a major crisis as observed by Nxumalo, Mkhonta & Oloyede (2022) in their analysis of teachers' voices on teaching siSwati online. Teachers recommended that there is an agent need for siSwati textbooks to be published online. *"Tincwadzi tesiSwati nako konkhe lokufundvwako akusale kukhacekwa kutebuchwephesha"* (B. Simelane, personal communication, March 22, 2017). Consequently, there are emerging dialects of siSwati, a practice that creates a frail not only with the linguistic structure of siSwati but also with cultural disunity as well. The social use of siSwati in ICT platforms can therefore help in the standardization of this language and further preserve it for future generations to come. This paper underscores that the first step towards the widespread and social use of siSwati in ICT forums is through the adoption of CALL.

The issue of diminishing or dying languages is a worldwide outcry that does not only affect African languages but Western too. Villa (2002) reports that in the United States, English language native speakers are gradually diminishing, only the oldest members of the community speak it. This signals the death of the cultural and

linguistic heritage. Villa (2002) therefore, notes that ICT can be used not only to teach languages but preserve and sustain them as well.

Material production

The introduction of CALL calls for a shift even in language preservation strategies. This implies that even the literature that serves as powerful recordings of history, traditions, and culture, siSwati can be preserved better online (Ward, 2002). Though writing and storytelling has been valued and treasured for so long as means of preserving siSwati, the digital age requires that the two should be preserved through technology. Thus, a shift from traditional text-based to online means.

One of the main advantages of preserving material for siSwati online is accessibility; it becomes readily available for use not only by Emaswati but other natives as well. Secondly, the siSwati indigenous ideas, concepts, values, cultures and ethics get recorded down memory lane. Thirdly, online allows for documentation and handling of information or material of the siSwati language in different formats; audio, video, word, power point, pdf etc. It makes the siSwati language flexible for use by both the literate and illiterate. In a speech during the launch of a siSwati Dictionary (Z. Dlamini, personal communication, March 04, 2022) cited that preserving information in technology allows for the evolving use of the language; opens avenues for new research and further engages the youth in understanding the past. In support for the notion of using ICT to preserve language authentic materials, Villa (2002) adds that ICT can also be used to preserve ancestral voices as recordings, original texts and films, thus politically empowering Emaswati as the speakers of the language.

The issue of multilingual education that has become a buzz word in education cannot be taken for granted too. Ward (2002) describes ICT as a Unicode forum that handles different languages. This ICT feature therefore makes it helpful in translating siSwati into other languages. Online translation of siSwati can promote global communication, the advantage of which is global economy. Publishing companies also need to shift from the traditional text-based approach to internet/ICT-based approaches (Ward, 2002). One of the reason for such a transition is   that today's children are described as tech-savvy. They are born with technology at their fingertips and ICT is 'the' teaching tool and application that has already occupied many teaching forums. However, it does not mean that the cultural and linguistic structures of teaching siSwati are genuine. One way to restore the reputation of siSwati is through adaptation and provision of online resources. To concur with the idea of online publishing, Simelane during the Eswatini 2017 Mother Tongue Conference, encouraged that Emaswati oral literature can be taught, delivered, read and listened to via the audio-visual and other ICT facilities "*indzaba seyingafundvwa nobe icocwe kutfwetjulwe loko kungene kungcondvomshini*" (Simelane, 2017, p. 7 March 21- 23).

This paper therefore, suggests that CALL can slowly but surely restore the image of the siSwati language. Agarwal and Novickis (2014) suggest the mobile phone, television, computer, the overhead projector as simple devices that can be used to aid the teaching of a language online. The use of ICT to enhance the teaching of siSwati is helpful not only for integrating the siSwati language, literature, and culture but also

acquisition of other necessary skills and literacies. Though the development of the four language skills; reading, writing, speaking and listening are still the core, the 21st century has brought 5C skills as popular; communication, critical thinking, collaboration, creativity and ICT. Such skills are therefore integrated better through the use of CALL. Consequently, scholars describe ICT as a professional resource that allows for acquisition of not only content but skills, attitude, values and ethics necessary for life, college, and the work place (Agarwal & Novickis, 2014; Al-kamel & Chouthaiwale, 2018; McNutty, 2018). Thus, call for a shift from traditional approaches to CALL.

Problem statement

Research and observation reveal that efforts to develop the siSwati language are slow and already there is a great erosion in the cultural and linguistic tradition of the siSwati language (Mkhonza, 1987; Mkhonta-Khoza & Nxumalo, 2021). It is this erosion that is raising fears on the prosperity of siSwati especially because it carries the Emaswati culture.

Theoretical framework

The paper is modeled by the three approaches to language learning; classical, modern and ultra-modern (Agarwal & Novickis, 2014). In the classical approach the two; teacher and students are enough as key players for dissemination of information in the classroom. In this approach to language learning, the teacher is a disseminator of facts while the student is a passive receiver. The modern approach was introduced during the invention of the computer, therefore, puts the computer and the student as classroom resources to interact (Agarwal & Novickis, 2014). Though this approach is learner-centred and constructivist in design, the absence of the teacher creates a void. Contrary, the ultra-modern approach advocates for the three; the teacher, computer, and students as major resources and key players that interact. The ultra-modern approach further gives much attention to the computer, which has to be at the center of communication between the teacher and the students. The implication of the ultra-modern approach to the teaching and learning of siSwati is that, the best way for the teacher to reach students is through ICT means, same thing applies to the students. It also compels that both the teacher and learner resources should be found in the computer, a move not intended to do away with the textbook but a shift from traditional textbooks to online texts. Scholars who are proponents for this model argue that, though the model gives importance to the computer as 'the' classroom resource, there is a need for clear definition of roles for the teacher, the computer and the learner to avoid conflicting roles (Sharma & Barrette 2007; Alkamel & Chouthaiwale, 2013).

REVIEW OF RELATED LITERATURE

Amongst studies reviewed, Villa (2002) studied the integration of technology into minority language preservation and teaching efforts in New Mexico State University. The findings revealed that current technologies can be used not only to support teaching and learning of indigenous languages but also to restore their dying images as well. Villa (2002) recommends the agent need for countries to train people in the use and manipulation of advanced ICT so that they can be able to preserve and archive material.

Belal (2011) studied perceptions of students in Computer Assisted Learning (CAL). The findings revealed that though students enjoy CAL, they have insecurities as the hype for CAL might make educators think that ICT can replace educators yet the reality is that ICT cannot replace the support and guidance they receive from their teachers. Consequently, Belal (2011) suggests the need for clear roles for each; the teacher, the learner and the ICT device as well.

Erben, Ban & Castaneda (2009) studied the teaching of English Language learners through technology and found that different ICT tools can be used to perform different functions and skills with the learner. Amongst those are; e-creation tools, e- communication tools, reading and writing facilitative e-tools, listening/speaking - facilitative e- tools and e-assessment tools.

In Eswatini, Mkhonta-Khoza and Nxumalo (2021) analyzed ICT in language learning; teaching and learning of siSwati. The analysis suggested the cellular or mobile phones, computer, e-mail, Wikis, films, blogs, overhead projectors, YouTube, language laboratories, libraries, radio, television and so on as ICT tools that can be used to assist in teaching siSwati. Amongst the tools, Mkhonta-Khoza and Nxumalo (2021) motivated the use of those that are within reach. A major conclusion drawn by Mkhonta-Khoza and Nxumalo is that the teaching of siSwati online during the COVID-19 online lessons is a slight effort towards CALL. The authors of this paper suggest that CALL could rescue the extinction of siSwati.

SUGGESTED WAYS OF USING CALL

According to Barker (2021) CALL can be offered in different ways; as tutorials, gamified learning, and through practice/demonstrations**.**

Tutorials

In CALL, tutorials can be used to substitute the teacher/instructor. Tutorials are conducted in a software where information on different topics of the language have been loaded. Tutorials offer exercises that measure/evaluate learners' understanding of the content and further give learners immediate feedback (Barker, 2021).

Gamified learning

In gamified learning, teaching and learning of siSwati can be done through games. Gaming is an interactive process that helps learners not only master content of the siSwati subject but also develop and acquire the 5C skills of the 21st century. The major advantages of gamified learning is its ability to allow for a sequential learning of concepts according to the learners' cognitive ability. Learners do not advance to the upper levels of learning unless they demonstrate ability to have mastered the lower concepts (Barker, 2021).

Practice/demonstrations

Practice or demonstrations refers to the use of technology to put to practice content, as a way of making abstract ideas concrete and engaging learners deeply with the content. Teaching siSwati through practice can be through using flashcards, pictures, objects, charts, and downloaded videos from YouTube to enhance

understanding and illustrating ideas. Besides the above, teachers can engage on auditory technologies, offer listening activities like recorded conversations, poems and play music to help learners enjoy the use of siSwati in a natural setting. Teaching a language through practice is the best way of digitizing the popular content (Barker, 2021).

Benefits of using CALL to teach siSwati

Amongst the major advantages of using CALL to teach siSwati are; provision of instant and constant feedback, enhancing active participation and use of the siSwati language, individualized learning and its ability to cater for diverse learner needs.

Provision of instant and constant feedback

Computer technologies have applications for assessing students' learning and performance (McNutty, 2018; Barker, 2021). Teachers/instructors of siSwati can use these tools to help learners identify their mistakes and provide steps towards the correct information as a way of helping them improve. CALL feedback tools make teaching to be highly informative in that immediate feedback encourages and reinforces learning while delayed feedback affect content mastery.

Promotes active participation and use of the siSwati language

CALL exposes learners to a variety of information in different formats; pdf, word, audio, video, as mentioned earlier. Not only that, technology has a variety of tools, devices, applications and soft wares (Al-kamel & Chouthaiwale, 2018; McNutty, 2018). As learners try to grasp the siSwati content presented in each of the formats, they are likely to enjoy and absorb more siSwati vocabulary than they would have done in a traditional teaching and learning environment. The more learners fiddle with the information, it is the more they are able to construct knowledge on their own and use the siSwati language in real situations. In this way the teacher/instructor and technology device become scaffolds who offer minimal help or guidance towards the learners' understanding of concepts and necessary growth (Vygotsky, 2011). The use of CALL to teach the siSwati puts learners at the center, thus, aligned to the tenets of the Eswatini General Certificate of Secondary Education (EGCSE) curriculum philosophy, which views learners as active participants who come to class loaded with existing knowledge, skills and talents. The classroom should therefore allow room for use and further development of such. The implication is that teachers/instructors of siSwati should design animated graphics and problem solving techniques to enhance learner participation.

Promotes individualized learning

CALL offers learners personalized experiences and progress (Barker, 2021; Scott, 2022). It allows learners to learn at the convenience of their own place, space and time. The same thing applies to the feedback offered in Educational Technology (EdTech), it allows learners to master the content at their own pace. Contrary, in a traditional classroom there is always the issue of time, periods and pressure applied by diverse learner abilities, leading to high achievers dominating, low achievers dragging behind. According to Barker (2021) individualized learning produce better learning outcomes because of its higher levels of personalized

engagement. While the traditional class makes learning highly competitive, CALL makes learning non-competitive in that it focuses on development of Knowledge, Skills, Attitudes, Values and Ethics (KSAVE) as opposed to content mastery. Further than that, in terms of assessment, CALL is criterion-referenced as opposed to norm-reference, therefore, is a relevant approach for teaching 21st century learners who have different learning abilities that cannot be treated as a whole.

Caters for diverse learner needs

CALL offers education and learning to learners with diverse needs in that ICT tools are a range and are diverse, thus they cater for the four types of learners; visual, audio, kinesthetic and lingual. This implies that teachers should feed the siSwati content online through different formats just as the notion of different learning styles is described as a pillar to be adhered to in the EGCSE curriculum (International General Certificate of Secondary Education (IGCSE) Consultative Document, 2005).

Disadvantages of using CALL

Research reveals the following as disadvantages of using CALL; distraction, cost- effectiveness, the revolutionalistic nature of Educational Technologies and over reliance (Madzima, Dube & Mashwama 2017; Barker, 2021).

Distraction

Besides academics, EdTech have other social websites appetizing to the youth and learners are therefore likely to visit those undesirable websites, thus distracting them (Madzima, Dube & Mashwama 2017; McNutty, 2018; Barker, 2021).

Cost effectiveness

Though technology is rich in a variety of applications, tools, devices and softwares customarily built for different educational purposes, each comes at a cost. Such costs are extreme as they range from; buying the tool itself, its installation and sustaining its everyday use which calls for frequent maintenance. Also, teachers/instructors and learners need to be proficient with use of all EdTech devices and this comes at a cost.

The revolutionalistic nature of Educational Technologies

ICT tools are fast changing devices, their daily use lead to new discoveries, amendments, reconceptualization and re-assessments. Therefore, teachers/instructors must continually monitor them to keep themselves up-to-date; otherwise, they are likely to feed content in outdated technologies. It also implies that teachers/instructors link with ICT developers in order to research on new pedagogical approaches for each EdTech.

Over reliance

Through use of CALL, the risk for teachers/instructors and learners' overdependence is high yet in some learning situations technology may not play a greater role. This means that it should be used when and where necessary. Also, there should be a clear understanding and line of demarcation such that EdTech should not replace the teacher per se; not compete with the teacher/instructor but complement or augment the teachers' effort (McNutty, 2018; Barker, 2021). Scott (2022) adds that EdTech must be used to supplement instead of directing the curriculum. Barker (2021) further advises that teachers/instructors should be careful not to find themselves altering their lessons in order to accommodate technologies but identify technologies that support, supplement and improve their lesson delivery. In the teaching of siSwati, teachers/instructors should know that there are EdTech for teaching the four skills; reading, writing, speaking and listening but very limited material for teaching literature and culture unless they have a way of linking their content to the EdTech.

CONCLUSIONS AND RECOMMENDATIONS

Regardless of all the pros and cons, CALL is a combo; it provides teaching material at the users' convenience, tools to use at the users' convenience, accessibility and information retrieval. Whilst remedial work in the traditional classroom has been argued for so long to be a burden to the teacher, CALL allows for repetitive use of information and skills' practice. Lastly, use of CALL does not only teach learners reading, writing, speaking, and listening, the culture and literature but other much demanded learning and innovation skills for the 21st century classroom. CALL is indeed a compatible teaching and learning style to be used to teach language. It is recommended that stakeholders responsible for teaching, learning, and promotion of siSwati design online instructional material for use in CALL.

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