ICTs in Teacher Education: Enhancing Quality Language Teaching and Learning in Zimbabwe

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ABSTRACT

Rapid advances in the development of ICT have been seen to offer new opportunities for enhancing the quality and effectiveness of language teaching and learning. The computer offers educators immense possibilities, and has been widely used, in computer assisted language learning (CALL). CALL has made significant advances towards finding a solution to and changing the way that language courses are conceived and taught. Although CALL developments tended to follow behaviouristic pedagogies that produced electronic imitations of drill and practice, for example, CALL now provides endless opportunities for interaction with a rich set of media types, characters and cultural information. However, educational institutions have lagged behind in fully recognising such opportunities. This prompts a call for re-orientation of education and training of language teachers. The paper therefore intends to guide teachers' colleges on integrating ICT into their language learning and teaching activities. The guide is specifically aimed at language lecturers, lecturers-in-charge (LICs), heads of departments (HODs) and administrators in Zimbabwean teachers' colleges while exploring the challenges of introducing ICT driven language education in traditionally face-to-face tertiary institutions in developing African countries.

Key terms: Information Communication Technology, enhancing quality, teacher educators, teacher trainees

1.   INTRODUCTION AND BACKGROUND

The introduction of Information Communication Technology (ICT) enhanced learning in traditionally face-to-face tertiary institutions has been met with mixed feelings and some form of resistance by both educators and students, especially in the developing world. This has been found to be very common in most colleges and universities, like University of Botswana, Harare Polytechnic and University of Zimbabwe, which have been working towards the introduction of ICTs in their teaching and learning (Chikasha, Tarugarira & Van Petegem, 2006). The same has also been observed in other

Zimbabwean institutions like the three secondary teachers' colleges that were selected for the College Information Technology Enhancement Programme (CITEP) that ran between January 2003 and December 2008 (Musarurwa, 2011). Similarly, the Better Schools Programme (BSP) and Science Education In-service Teacher Training (SEITT) Project also brought computers into many schools but the computers are not being used (Hungwe, 2002).

Ainley, Enger & Searle (2008) argue that it seems there is little understanding of the way in which ICTs can be implemented in education systems around the world, hence the resistance or hesitation to use them. Studies have shown that majority of teachers and lecturers use ICT as a tool only in the margins of the educational process (Chikasha et al: ibid). Similarly, from the evaluation of CITEP, Musarurwa (2011) observes that cascading of ICTs to teacher-trainees suffered because of the natural fear of ICTs and computers in general, resistance to change by some of the lecturing personnel and lack of appreciation of the importance of ICTs in teaching and learning, among other factors. Of importance in this paper is the finding that very few lecturers in CITEP were prepared to integrate ICTs into their own teaching subjects. The general thinking was ICT should be a separate subject taught by IT specialists, thus displaying what Coutts, Drinkwater and Sampson (2001), in Musarurwa (2011), refer to as lack of knowledge on how to integrate ICT into classroom learning.

Many educational institutions in Zimbabwe benefited from the President of Zimbabwe's computer donation programme in the early 2000s such that fourteen years later that effort and expense should be seen to be matching the teaching and learning going on in the classroom. However, a very wide gap exists as reflected in a study by Tatira, Sithole, Manyarara and Gora (2009) at a high school in Harare, in which findings indicate that computers were rarely used in the teaching of English composition despite the school being adequately equipped with computers. In concurrence, Zezekwa and Mudavanhu (2008) lament that ICT integration in Zimbabwean educational institutions is not happening fast enough due to lack of expertise and support. Such barriers need to be overcome or minimized so that Zimbabwean education is not left behind the rest of the world in terms of what ICTs promise.

Making decisions on whether to integrate ICTs in the teaching and learning of languages and how this can be done could be viewed as technically complex and financially demanding. We therefore proffer ways in which ICTs can enhance the quality of language learning and teaching in teachers' colleges by examining factors that influence ICT integration in language teacher education programmes. The factors explored herein include professional development, vision and leadership of heads of institutions, support mechanisms, lecturers' expertise and attitudes, student teacher awareness and pedagogical application of ICTs.

2.   CONCEPTUAL FRAMEWORK

Globally, humankind is at the height of an exciting and revolutionary period in terms of ICTs, thus education must be part of the process and language teaching and learning must not lag behind. For the intended educational reform to be a success, both the learner and instructor must be meaningfully involved.

In most developed countries integration of ICTs into language teaching and learning has already begun while in others it is still at the implementation stage. In this regard, there has been a growth in language blended class-/lecture rooms in schools, colleges and universities. While that is true of developed countries, developing countries are spending time debating on whether to implement ICTs in language learning and teaching or not. In view of globalisation and the rate of technological advancement, there is no way a teacher education institution can stay afloat if it does not consider effective integration of ICTs in teaching and learning in general and that of languages specifically. The brilliant debates and dreams and/or visions should be turned into something tangible so that the best can be drawn out of ICTs in language teaching and learning.

Issues of access to technology, rather than questions on content and pedagogy have dominated the Zimbabwean debate on computers in education and the tendency is to assume that institutions know what to do with the numerous computers lying therein (Hungwe, 2002). The issue is no longer whether teachers should integrate technology in their existing practices, but how to use technology to transform their teaching with technology so as to create new opportunities for learning (Engida, 2011). It is the teacher education institutions that have the potential to transform and determine where and how learning takes place. Institutions and their programmes must provide and model new pedagogies and tools for learning. Teacher professional development has to parallel ICTs integration in education for transformation to manifest in educational institutions. As Tatira et al (2009:90) note, "The effectiveness of computer assisted language learning resides in how the computer is put to use …" and this has to begin in teachers' colleges. From teacher education institutions the skills and new pedagogies have a greater chance of cascading into the whole education system.

ICTs offer a number of advantages in (language) learning and teaching for they facilitate active rather than passive learning through interaction, adaptation, simulation and integration (Chikasha et al, 2006) However, it should be appreciated that there are possible challenges to instructors and students in fully exploiting the potential of computer assisted language learning (CALL). Thus there is much to be dealt with when moving towards effective use of ICTs in education but that should not deter users from implementing CALL strategies.

Language educators are faced with various students' learning needs in teacher

education institutions therefore, there is need to find ways of coping with such diversity and this can be done through the incorporation of ICTs into language education; thus e-learning integrated with multimedia becomes one of the solutions. The focus is on how teacher education institutions can stay afloat by implementing ICTs in the traditionally face-to-face language learning and teaching environments.

To accomplish that, the paper is guided by two very important questions:
- How best can ICTs and multimedia be applied in the teaching and learning of languages?
- What are the implications for teacher education?

2.1 Assumptions

It is assumed that student teachers', lecturers' and administrators' perception of the integration of ICTs influences the effectiveness of language teaching and learning in both colleges and schools. In that regard, teachers' colleges in Zimbabwe need self-introspection to build a positive perception in their communities as they move towards integration of effective ICTs and multimedia in language learning and teaching. As alluded to earlier, that is expected to cascade down to schools until the whole education system becomes compatible with ICT.

2.2 Objectives

The paper seeks to:
- briefly trace developments in CALL;
- identify benefits of ICT- enhanced language learning and teaching;
- outline considerations for ICT implementation in language teaching and learning;
- discuss the evolving roles of lecturers and students in the 'new' language learning and teaching environment;
- propose a way forward as teachers' colleges in Zimbabwe (introduce and) implement ICT and multimedia-enhanced language learning and teaching.

3. DEVELOPMENT IN COMPUTER ASSISTED LANGUAGE LEARNING

Computer Assisted Language Learning (CALL) is not a new development as the developed world has had it for many decades now. Warschauer (1996) in Tatira et al (2009) describes developments in CALL in stages which corresponded to learning theories of the times: the behaviouristic, communicative and constructivist/integrative. The characteristics of each of these stages are briefly outlined below.

3.1   Stage 1: Behaviouristic

This stage was conceived in the 1950s and was informed by the behaviourist-learning model. The stage was characterized by repetitive language skills (the drill and practice principle which is denounced as 'drilling and killing the learner'). At this stage, the computer was viewed as a mechanical tutor who never tired or was judgmental. However, students were afforded the opportunity to work at individual paces. Behaviouristic CALL was chiefly used from the 1960s into the 1970s when the corresponding learning theories were also rejected.

3.2   Stage 2: Communicative

Communicative CALL emerged in the late 70s and thrived until the early 80s. The stage corresponded to cognitive theories which regarded learning as a process of discovery, expression and development. CALL then allowed and encouraged learners to generate original utterances and that led to the development of text reconstruction programmes and simulations. Focus was not on **what** students did but **how** they interacted with each other on the machine.

3.3   Stage 3: Constructivist/Integrative

Communicative CALL came under fire in the late 80s that it contributed marginal rather than central elements of the language learning process. Communicative CALL was discarded for it was seen as a mere move from a cognitive view to a more social (socio-cognitive) view. With constructivism, greater emphasis was placed on **language use in authentic social contexts**, real life experiences. The teaching-learning approaches are mostly task-based, project-based and content-based; these integrate learners in different authentic environments. At this stage of CALL, there was also integration of various skills in language learning and use (listening, speaking, reading and writing).

Socio-cognitivism allows for technology to be integrated into the language learning process more fully as learners use a variety of technological tools as an ongoing process of language learning and use. In addition, instead of educators pouring out information, learners actively interpret and organise the information to construct new knowledge based on prior knowledge and experience and the educator becomes a facilitator. Nonetheless, integrative multimedia in language teaching will not be that effective too because if educators lack training in using appropriate software for language teaching. This again reiterates the fact that for CALL to be effective, educators must be "… computer literate and compatible with the use of a computer in his/her subject of specialization …" (Tatira et al, 2009:90), which comes back to teacher development either during or after training. Herein we maintain that it is the teacher education institutions that must stir the realisation of benefits of ICTs-enhanced language teaching and learning.

4.   BENEFITS OF ICT-ENHANCED LANGUAGE TEACHING AND LEARNING

Kumar and Tammelin (2008) define technology-enhanced learning as meaningful, active, authentic and cooperative for many reasons. Firstly, ICTs and internet provide language learners with the opportunity to use the language that they learn in meaningful ways and in authentic contexts. Internet provides easy and fast access to current and authentic materials in the language being studied. Authentic materials include online newspapers, newsroom video clips, YouTube, webcasts and podcasts, chat rooms and virtual environments where the learner can practice speaking and pronunciation without fear of making mistakes. Such materials motivate the learner mainly because learning becomes current and real-time. Besides, the teacher no longer needs to carry heavy teaching/learning media.

Secondly, ICTs afford learners opportunities for cooperation and collaboration with one's peers. Language educators the world over are introducing myriads of ICT-enhanced learning projects like simulations, between their students and between groups of students in other institutions or countries. With ICTs, we move from, say, letter and e-mail writing to 'Skype' or chat online. Learners can write to each other in real-time, see each other online, speak to each other online and react to conversation as part of language learning. That widens the language learning perspective into that of learning about the cultural context of language being used. Students are thus motivated to communicate and collaborate with peers. The educator's role is therefore to organise and monitor students hence relinquishing the traditional authoritative role becoming a facilitator.

Lastly, ICT-based tools give opportunity to language instructors to tutor learners more effectively. ICTs afford individual and personalised guidance to learners. ICT tools like videos, authentic contexts and real world experiences help language learners with different learning styles to assimilate content according to their needs. Using ICT-based tools, it is easy for the language instructor to use different approaches with learners and accommodate different learning styles to fast, slow or handicapped language learners.

Basing on benefits articulated above, the paper adopts and adapts Kumar and Tammelin's (2008) conceptualisation of ICTs as tools for enhancing quality in language learning and teaching in Zimbabwe for their clarity.

5. CONSIDERATIONS FOR ICT IMPLEMENTATION IN LANGUAGE TEACHING AND LEARNING

Despite the numerous advantages offered by ICT-enhanced language learning discussed above, some institutions still have not embraced the development wholly or in part for varying reasons. Piotrowski & Vodanovich (2000) classify factors influencing effective ICTs integration in education in general as: institutional, instructional, technical and personal.Using a slightly different lens, Tammelin (2004) in Kumar & Tammelin (2008) identifies the following issues: administrative, institutional, technical and pedagogical while Chikasha et al (2006:12) focus on the human factors (perception and attitude of students, lecturers and administrators) to explain the general resistance in implementing ICTs in education. The factors shall be merged, where possible, and elaborated below.

5.1 Administrative considerations

Administrators have a very influential role to play in establishing, implementing and sustaining of e-enabled teacher education. Heads of institutions need to understand and believe in the benefits of ICTs for them to have a buy in of the whole process. Administrators' will power is of importance in determining the effective integration of ICTs into teaching and learning in a college. It is the mandate of principals of teacher training institutions to see through the enactment of an ICTs policy that would determine ways in which the institutions plan to use and implement ICTs in language teaching and learning in their respective institutions. Issues that can be addressed by policy include use of websites, online interactions, combining or not combining classroom teaching with online modules and other activities that might lead to misuse of Internet and computers.

5.2 Technical considerations

Lack of computer experience was found to be associated with non-science faculties, like languages area, in studies alluded to earlier. That calls for language teacher education programmes to become adaptive and provide conducive environment for computer experience. Colleges' administration structures have to preside over putting up of requisite technical infrastructure like Internet connectivity, software and hardware. In partnership with the Ministry of Higher Education, Science and Technology Development, colleges should be in a position to recruit technically skilled human resources to stir ICTs implementation. It is the technical force that sees the establishment of platforms of learning management system (LMS) which is necessary to support e-learning in an institution of training. LMS should be efficient and cost effective for implementation to be sustainable and that can only be determined by those with the knowhow. Technical knowhow is also required in selecting suitable

multimedia and digital facilities like interactive white boards depending on different institutional infrastructure. The technical personnel is crucial in identifying training offerings for facilitators, educators and student teachers to enhance their readiness and acceptance as users of such an innovation.

5.3 Instructional/Pedagogical and personal considerations

It is possible that some lecturers and students might not be aware of their new roles in the new learning environment and that fuels resistance in ICTs application. In light of that, Chikasha et al (2006) point out the need to equip (language) lecturers and teacher trainees with relevant skills and competences for them to meet the new demands and new roles that are embedded in ICTs integration. Perception and belief about ICTs for language learning are equally influential. People will only use technology if they perceive it to enhance instruction. In that regard, it is equally important to involve intended users for them to totally embrace the change.

Teacher education programmes have to clarify the tutor-learner roles in ICT dispensation. The role of the learner has to be underscored; such as how to study online and cite sources properly in written assignments to avoid plagiarism. Similarly, teacher educators also require conscientisation on their roles as instructors. In ICT-enhanced teaching, the tutor has the following roles: facilitator/guide, mediator, designer of learning scenarios, researcher, evaluator and collaborator with other educators. Lecturers also should be able to deal with individual learning problems of student teachers, choose use of media carefully, check truth of information, and use standard software confidently and competently. Clarification of who does what might enhance the effective use of ICT in language learning and teaching.

6.   IMPLICATIONS FOR TEACHER TRAINING: WAY FORWARD

Kershaw (1996:14) laments that ICT-enhanced language learning and teaching has witnessed very little impact in educational institutions because "… emphasis has been placed on technology itself and not on people …", yet the reverse is equally important. It is easy to fall back into old ways of teaching and learning since the change process is long and might take between 5 to 10 years. Oblinger & Oblinger (2005) opine that although technologies have been greeted with a great deal of enthusiasm, their real value as educational tools remains unexplored. Ainley et al (2008) encourage both educator and student to move towards **'new literacy'**which is **scientific, digital, linguistic and cultural**. In light of all that the paper therefore suggests the following strategies for enhancing quality language learning and teaching in Zimbabwe:
- Educational administrators and teacher educators should be on the lookout for future trends in language teaching, learning and studying so as to remain abreast of developments.
- Educational institutions should be prepared for educating a new generation of

learners called 'net generation' by Oblinger & Oblinger (2005). The 'net generation' is digitally literate, connected, experiential (learn better by discovery than being told), immediate, social, has visual-spatial skills and ability to concentrate on many simultaneous activities. Prensky (2006) also refers to that generation as 'digital natives' for they are 'native speakers' of technology (fluent in digital language of computers, video games and internet). In light of that, educators should not be 'digital immigrants' – who have one foot in the past and want to do things the old way.

- Teacher educators should be familiar with new technologies so as to be able to empathise with student teachers. Teacher education institutions are springboards for any change in the education system; they are strategically endowed to influence.

- ICT-enhanced programmes call for huge financing (Davies, 2007) therefore the ministries of education have to consider that in their budgets. Awareness raising workshops have to be mounted before the introduction of new technology. Seminars to review progress and to collaborate should be held occasionally. It might also be necessary to reward tutors for developing and teaching ICT-enhanced courses, review and update of course materials; that worked in Finland and Belgium (Chikasha et al, 2006).

- To assure the quality of ICT application in language teaching/learning, teacher education institutions should continually check on learning effectiveness, cost effectiveness, access of internet, satisfaction by educators and students. College heads have to ensure monitoring and evaluation of ICT policy and practice in their respective institutions.

- Since non science faculties are rather lag behind in ICT implementation, principals of institutions should make efforts to support their language teaching staff and student teachers. Taalas (2004) advises that without institutional support structures, technology integration can remain administrative with no pedagogical innovations.

- Teachers-in-training should be made aware that language learning now should be student-centred, interdisciplinary, and related to real life events and processes, adaptive to individual learning styles, encourage information - reasoning skills, socially constructed and therefore, collaborative. As such they have to realise the need to familiarise and befriend technology.

Like Hungwe (2002:129) observes, "The advent of computer technologies does not make traditional language skills like reading and writing redundant …" but are integrated within the new technologies; to create synergy between traditional skills and the newer ICT skills. Teacher education programmes must therefore prepare teacher trainees for both continuity and change in language teaching and learning.

7.   CONCLUSION

ICTs are not replacements for current sound models of teaching because they are not comprehensive on its own but it must be integrated into successful practice with other teaching and learning models. ICTs should complement the sound models as we evolve into a **'new culture of learning'.** For a start we can use what Kumar & Tammelin (2008:5) call Blended Language Learning (BLL) which uses "… multiple teaching and guiding methods by combining face-to-face sessions with online activities and utilising a mix of technology-based materials". ICTs are not here to displace the educator but rather to enhance teaching and learning. In some countries, BLL has changed the face of language teaching and learning in a beneficial way and will continue to do so along with future technological innovations. Teacher education institutions in Zimbabwe might also improve the quality of language learning and teaching this way.

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