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## **A TWO-STREAM THEORY OF TEACHER CAPACITATION AND ICT RESOURCE MANAGEMENT ONA TEACHING OF KISWAHILI LANGUAGE SKILLS**

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### **Abstract**

The Ministry of Education introduced the infusion of computer assisted- instruction in teaching of school curriculum in order to improve quality of teaching and learning among secondary school students in Kenya. Poor learning achievements in Kiswahili language skills has been witnessed for some time, among majority students in sub-county secondary schools in Nakuru County, Kenya. The infusion of CAI in the instruction of Languages, helps to transform ordinary classroom instruction strategies in order to enhance students' learning achievements. The purpose of this study was to determine the difference in performance in Kiswahili language skills between students, taught Kiswahili subject using CAI and those students taught the same content using TTM. The main objective was to develop a theory explaining the use of CAI on performance in Kiswahili language skills. This study was guided by Constructivist Learning Theory and employed a causal-comparative design. This study was conducted in public sub-county secondary schools in Nakuru County,

### **Introduction**

In this study, the study sought to establish the effect of computer-aided instruction on performance in Kiswahili language skills. The findings have provided a good background for the development of a theory that can be used as a guiding framework for promoting instruction in Kiswahili language skills and other related African indigenous languages. For instance, computer-aided instruction offers a variety of new alternatives for activities such as learning strategies, learner-centered approach, and advancement of critical thinking. Additionally, constructivist theories can be employed to infuse CAI more effectively in classrooms for the purposes of teaching and learning of secondary school curriculum. CAI can provide the students with abilities to control over their own learning process. Also, allowing students to decide what, when, how and in what sequence to learn to improve their learning achievements. Finally, there is a significant link between computer-aided instruction and students' learning achievements in Kiswahili language skills such as grammar aspects, reading comprehension and writing.



First, it is important to explain why there is a need for this theory; Constructivist Learning Theory by Duffy and Jonassen (1992), which was used as a guiding framework in this study, is not only quite old for the current application, but also lacks sensitivity to the uniqueness of Kiswahili Language. Kiswahili, being an East African to the uniqueness of Kiswahili Language. Kiswahili, being an East African language, need a locally developed theory that is based on African culture and local evidence. In addition, integrating computer-aided instruction for the purposes of teaching and learning in classrooms is not adequate. Second, teachers also are required to develop their own theory explaining their teaching and learning in the classrooms using computer-aided instruction. More so, teachers are very resourceful for students to learn successfully in classrooms. Furthermore, they involve learners in learning concepts that challenge their earlier experiences of the existing limited knowledge; additionally, allow learners to participate fully to make the lesson student driven and more collaborative. Nevertheless, the use of computer-aided instruction in the teaching and learning of school subjects in classrooms is not adequate without establishing a theory that models teachers' competence in integrating computer-aided instruction for the purposes of classroom instruction. Findings by Al-Shamayleh (2014) in English language just like in this study, Moghaden and Falafian (2015) and Naba'h (2012) point that CAI improves performance in the English language. Having said that, the question of how this happens remains a headache? Moreover, different subjects have different instructional methods and tend to pose unique challenges.

Fifth, all other major subjects in the Kenyan curriculum for secondary schools are instructed using the English language. As such, is possible that theories developed based on findings of international global studies can still be applicable in local perspectives. However, Kiswahili language tends to be quite different since the composition of its syntax, semantic, dialect and language structures are all different to a great extent (Milima, 2014)). It is also important to note that CAI contents have been developed in East Africa contrary to other subjects whose much of the contents have been borrowed from the curriculum of western countries.

Lastly, most constructivist learning theories put more stress on individual student learning and external factors that promote students' learning performance in diverse skills leaving out the role of ICT management in the use of computer components in the instruction of classroom subjects at both local and national level. Additionally, it degrades the role of a teacher in the instruction process into a mere facilitator in the classroom; and this view may affect the quality of teaching negatively. Moreover, it ignores, the importance of IT management completely, notwithstanding that IT management brings in, the effectiveness and efficiency of curriculum delivery in classrooms, since it ensures the provision of ICTs infrastructures, instruction strategies, teaching content, supervision of the curriculum implementation, evaluation of the curriculum and teachers capacitation in all learning institutions. It is also important to note that, "Computer-aided instruction strategies cannot replace teachers in classrooms, but its only teachers with CAI competencies who can the



replace the ones who don't have CAI integration skills". And for effective implementation of any CAI curriculum, depends entirely on both teachers and IT curriculum management".

Teachers, students, and principals hold a strong opinion that computer-aided instruction improves students' learning achievements in Kiswahili grammar aspects, reading composition and writing. Teachers believe that when students are exposed to computerized contents, their work is made easier and results are significantly higher. Since computer components are shaping the way we teach and learn, this study finds it important that Kiswahili language instruction in secondary schools is made computerized. This study also argues that examinations should also be made computerized; to encourage learners and teachers to pay more attention to computer-aided instruction.

This study observed that one of the major impediments to adoption of CAI in Kenyan secondary schools is inadequate computer infrastructure resources. Some of the secondary schools had inadequate computer components such as captions, simulations, graphs, and animations. Network availability was also a major problem. It is, therefore, the study's submission that funding ICT infrastructure programs in Kenyan secondary schools would go a long way in improving the integration CAI in these secondary schools. In addition, the IT managers should ensure adequate Investment in the provision of IT infrastructure resources and the network is crucial in ensuring effective integration of CAI in the instruction of Kiswahili language skills is adequate in all secondary schools.

Assuming that there are adequate computers and proper network is provided. The study also assumes that there is an effective and updated Kiswahili CAI curriculum; can there still be good performance? In some of the secondary schools the study visited, there were adequate computer components and internet was not a challenge, however, Kiswahili teachers in these schools were not still using CAI in tutoring of Kiswahili language skills, an indication that there were other missing links. After various conversations with these Kiswahili teachers, the study established that they did not have confidence in using computer components in the instruction of Kiswahili language because they did not have necessary computer knowledge and skills themselves on how to use CAI for classroom instruction purposes. Though most of the teachers admitted having attended seminars and workshops, the computer knowledge and skill gained could not be adequate to use CAI in classrooms. It is, therefore, the study's contention that Kiswahili teachers should be trained on advanced computer literacy while in their training at universities and colleges. In so doing, they will be confident enough to use CAI in their teaching activities.

It is also the study's contention that without proper management of ICT resources from the national level to individual local sub-county secondary schools, it is still a challenge to ensure efficient and sustainable implementation of CAI in some secondary schools. As the study was talking to some teachers, students, and principals, the study realized that school management has been determining to a great extent on how the CAI curriculum should be implemented in the instruction of Kiswahili language skills. While some secondary schools had all the



resources required, they could not still implement CAI because the management was not committed to the programme. Evidence from teachers further proved that the supervision at the Ministry of Education was also not committed to ensuring head teachers implemented CAI in the teaching and learning of specific subjects such as Kiswahili language.

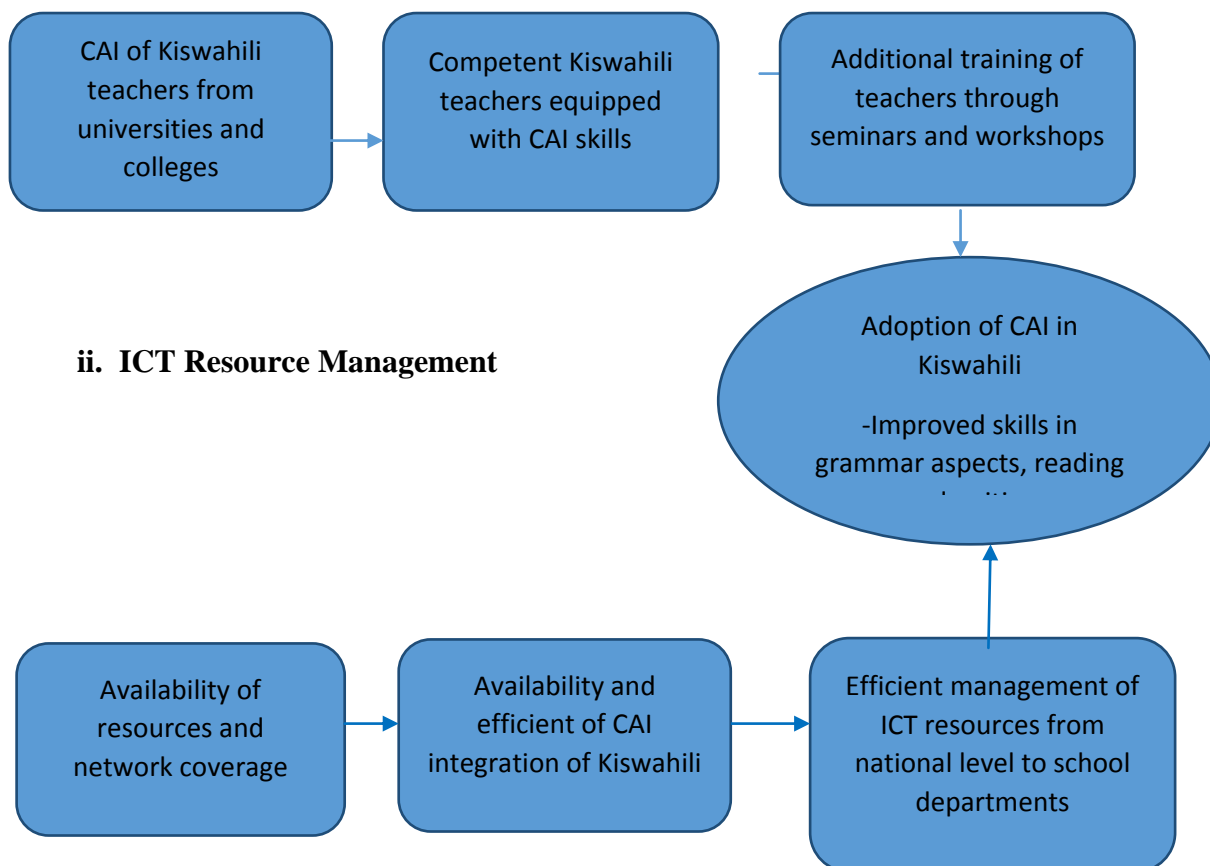
Based on the study findings, the study proposes two theoretical frameworks that explain that two streams of factors influence the adoption of CAI namely: teacher training and ICT resource management. Regarding these proposed current theoretical frameworks on teacher training emphasis on teachers who are adequately trained in computer-aided instruction integration skills from universities and teachers training colleges to enhance the learning outcomes in Kiswahili language skills. Additionally, the frameworks appeal to the ministry of education officers at the national level, counties and sub-counties, curriculum specialists, policymakers and teachers' service commission to ensure that teachers instructing Kiswahili language in secondary schools are computer literate and are regularly equipped with necessary CAI integration competencies so as to integrate fully CAI in the instruction of Kiswahili language skills. In addition, the frameworks contend additional capacitation of Kiswahili language teachers through seminars and workshops to heighten the level of CAI integration in classrooms for the purposes of teaching and learning of Kiswahili language skills. Moreover, this current theoretical framework concludes that the adoption of CAI in the teaching and learning of Kiswahili language would enhance learning achievements in grammar aspects, reading comprehension and writing.

On ICT resource management, the present theoretical frameworks emphasis that both the ministry of education, county government and individual secondary school's administration to avail secondary schools with adequate CAI facilities, network coverage so as to make teachers increase the level of CAI integration and ensure adequate capacitation of teachers so as to enable them effective employ CAI in the instruction of Kiswahili language skills in classrooms. In addition, the frameworks argue that the availability of ICT resource management would enhance the effectiveness of CAI integration in the instruction Kiswahili language to improve the performance of students in Kiswahili: grammar, reading comprehension and writing. Furthermore, the frameworks conclude that efficient management of ICT resources from the ministry of education at the national level to individual local sub-county secondary schools level would motivate teachers to integrate CAI in the instruction of Kiswahili language skills so as enhance learning achievements in grammar aspects, reading comprehension and writing.

The present two stream theoretical frameworks depicted here below show the linkage between the two streams whereby the state of the two streams favor proper implementation of CAI in the instruction of Kiswahili language skills, the study expects better outcomes in terms of performance in grammar aspects, reading comprehension and writing skills.

The Theoretical Frameworks is shown in Figure 4.8

**i. Teacher training**



**Figure 4.8: Depicts Present Study’s Two-Stream Theory of CAI in teaching and Learning of Kiswahili Language Skills.**

**References**

Al-Shamayleh, T., S. (2014). Improving the quality of teaching English stress and intonation to university students who are learning English as a foreign language using multimedia. *European Scientific Journal September 2014, edition. 10(25), 1857-786.*

Duffy, T. M., & Jonassen, D. H. (Eds.). (1992). *Constructivism and the technology of instruction: A conversation.* Hillsdale, NJ: Lawrence Erlbaum.

Milima, F., A. (2014). *Integration of Information Communication Technologies in Teaching and Learning of Kiswahili Language in Public Secondary Schools in Kakamega County, Kenya.* Unpublished Doctor of Philosophy Thesis at Kenyatta University.



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Moghadan, A., R &Falafian, H. (2015). Power-Point presentation and Iranian High School EFL Learners' Grammatical knowledge and Interest: *International Journal of Education and Research*. 1(3).

Naba'h, A., M., A. (2012). The Impact of Computer Assisted Grammar Teaching EFL Pupils' Performance in Jordan. *International Journal of Education and Development using Information and Communication Technology, IJEDICT* 2012, 8, 71-90.