

How Gaming Applications of CALL influence inputs of English Grammar

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Abstract: The present study aims to research the influences of games through Computer-Assisted Language Learning (CALL) compared to Teacher-Centered Instruction (TCI) on teenagers' achievement in English language education in Saudi Arabia. Two groups of students tested, before and after instruction, so to determine success of the application of pedagogies. The full sample consisted of 22 teenagers, divided randomly, into two equal groups. The first group was the control (TDI) group, which used a school textbook. The second group was the experimental group (CALL), which given a CALL application, based on the game 'Kahoot.' Two types of tests were conducted, a pre-test and a post-test, at each of two periods for each group. The pre-test administered before instruction, and the post-test taken after the instructional period. Findings indicate that both groups increased their proficiencies with English object pronouns. However, performance on the post-test by the experimental (CALL) group significantly exceeded that of the control (TCI) group.

Keywords: Computer assisted language Learning (CALL), Teacher-Center Instruction (TCI), Games.

كيف تؤثر تطبيقات ألعاب الكمبيوتر المساعدة في تعليم اللغة على مدخلات قواعد اللغة الإنجليزية

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الملخص: هدفت هذه الدراسة إلى بحث تأثير الألعاب من خلال التعلم بواسطة الكمبيوتر ومقارنتها بالتعليم القائم على المعلم على تحصيل الطلاب في فترة المراهقة في اللغة الإنجليزية في السعودية. مجموعتين من الطلاب اختبروا قبل وبعد العملية التعليمية لتحديد مدى نجاح التدريس المطبق. تكونت العينة من 22 طالباً، قسموا بشكل عشوائي إلى مجموعتين متساويتين. المجموعة الأولى مثلت المجموعة الضابطة التي استخدمت الكتاب المدرسي. المجموعة الثانية تمثلت في المجموعة التجريبية التي أعطيت التطبيق القائم على التعلم من خلال الكمبيوتر، بالاعتماد على لعبة Kahoot. أجري نوعان من الاختبارات، اختبار قبلي واختبار بعدي في الفترتين لكل مجموعة. الاختبار القبلي أجري قبل عملية التعليم والاختبار البعدي بعدها. تشير النتائج أن كلا المجموعتين رفعت كفاءتها في ضمائر اللغة الإنجليزية. ولكن الأداء في الاختبار البعدي في المجموعة التجريبية أظهر تفوقاً مهماً عما هي عليه المجموعة الضابطة في ذات الاختبار.

الكلمات المفتاحية: تعلم اللغة بمساعدة الحاسوب (CALL)، الألعاب، قواعد اللغة الإنجليزية.

Introduction

The use of CALL (computer assisted language learning) recently became wide spread. CALL applications constitute an important source for languages learning, globally, and through which, learners can improve language proficiency in any language. Consequently, institutions can enhance learning

through CALL applications, and teachers can utilize CALL applications to facilitate language teaching. CALL applications support all language skills, as the variety of CALL applications will benefit all learners, and designed respective to learner age and language level. An enormous range of CALL applications evidence themselves on platforms such as Youtube, Twitter, Wikkis, Blackboard, Virtual classrooms, WhatsApp, Blogs, Instagram, Edmodo, Kahoot, and so forth.

The advantages of CALL include the following: CALL improves learner cognition and pedagogical style. CALL provides autonomous learning. CALL provides choices for learning pathways. Learners can control learning process and progress through CALL. CALL motivates learning more greatly than do previous methods, strategies, and media. The features of CALL render learning more motivating for many learners. Learners can communicate broadly through CALL technologies, which encourages increased language practice. CALL can accelerate responsiveness and feedback. CALL increases accuracy of learner performance and progress records. CALL increases learner activity, while assisting teachers to mediate learning and to assume roles, which differ to those of previous pedagogies. Learners can work cooperatively in unique ways, so to solve problems. CALL opportunities increased communication with competent speakers, and with cultures and information in geographical locations not otherwise accessible. Teachers of languages can utilize CALL applications to support any language skill and field, for example, speaking, listening, writing, reading, grammar, culture, and so forth. Yet, and through CALL, Brown & Warschauer (2006) claim that learners could learn better with the emergence of multimedia applications and language games.

Despite its advantages, CALL can be limited in ways such as the following: purchase and maintenance costs; technical issues for teachers; training can become arduous; CALL requires technical support; software can be expensive. English language teachers regard CALL negatively, in that they see CALL as a replacement for teachers. Limited expertise in teachers can render these teachers anxious in interacting during CALL pedagogies; Some CALL applications do not support face-to-face communication in environments without online access.

Studies of language education on both CALL and traditional methods have revealed the positive effects of CALL on improving any language skills. Moreover, CALL supports interaction and competitiveness among students. Generally, games motivate learners to achieve comprehensible input. Juzeleine, Mikelioniene, Escudeiro, and Carvalho (2014) state that in a controlled environment, games assist to train learners, through enjoyment and error, thus facilitating this comprehensive input, and more significantly, contributing to mastering grammatical structures of language. Mart (2013) notes that mastering grammar is significant for learning a language, as do Richards and Reppen (2014).

Literature review

Computers are increasingly being employed for effective teaching and learning, where their effect on comprehensive inputs in learning increasingly became realized. In the field of English language education, research studies indicate that utilizing technology in teaching and learning can improve academic performance, encourage learning, and enhance motivation (Al-Mansour & Al-Shorman, 2012; Blake, 2000; Brown & Warschauer, 2006; Ma Qing, 2007; Ghorbani & Marzban, 2013; AbuSeileek, Ali 2004; Ellis, 2003; Kenning, 2007).

Kenning (2007) found that students have more dominance on their learning by using CALL, which allows teachers to expose learner differences. Because of the low grade of students, this study made. However, Kenning (2007) claims that the fast development of technology could place pressure users and designers of instructional material and software, where teachers imposed upon to employ applications rapidly without their evaluation.

Recently, the development of CALL applications makes it satiable to provide comprehensive inputs in the form of inserted multimedia programs. Ragan, Savenye, Boyce, Redwine & McMichael, (1993) state that utilizing multimedia in CALL encourage the achievement of students and decrease time by 30% if compared with teacher-center instruction. To investigate the influence of CALL on improving learners' learning of grammar, Ghorbani and Marzban (2013) conducted a study. Findings indicate that student achievement in grammar learning through CALL outweighed achievement through traditional approaches. In addition, researchers pointed out that blending technology into curriculum can assist grammar learning both inside and outside classrooms.

Ghafoori, Dastgoshadeh & Aminpanah, Ziaei (2016) examined the efficiency of CALL in improving learner grammar during writing, pointing out that learners improve writing through CALL. Naba'h, Al-Omari, Hussain & Shdefat (2009) achieved similar findings in Jordanian high school contexts. Here, they found that passive voice structures developed more effectively through CALL than through traditional methods. Torlakovic and Deugo (2004) examined the efficacy of CALL programs and teacher-driven approached to improve the capacity of learners on correct adverbs in English, finding that the achievement through CALL surpassed traditional methods.

Olibie (2010) also investigated the impact of CALL versus the traditional English language learning to improve English grammar of Nigerian secondary students. Findings of scores' analysis showed that achievement of the CALL group was better than conventional group. A study conducted in Saudi context by Al-Jarf (2005) investigating the influence of inserting online learning to improve the performance and attitude towards grammar learning from home of Saudi first-year College students. The study's finding represented remarkable differences between the students who had the online learning materials from home and the students without the online material.

This literature has motivated this investigation of developing in students English grammar through CALL gaming application.

Questions of the study

To be specific in this study, particular questions need to answer. These questions should be complete related to the aim of research. Therefore, questions are important to be clear and subjective as following:

- 1- Are there any important differences between the mean score of the groups on the grammar achievement test for English object pronouns of Saudi teenage students due to methods of instructions (TCI vs. CALL)?
- 2- If yes, which method of instruction (TCI vs. CALL) makes remarkable better outputs as measured by the post- test of object pronouns?

The aim of study

The aim of this study is to investigate the efficacy of CALL Kahoot in teaching and learning the English language object pronouns for Saudi teenage students. The influence of CALL compare to the tradition approach. The study suggests that using Kahoot as instructional material with the use the numerous of its features would help students to achieve more opportunities to practice the target grammar according to their interests and needs. Furthermore, it would make students become more accurate of real-life grammar situations. Thus, the study aims to find out which one of experimental group or conventional group could improve teenage Saudi students' learning achievements.

Research Importance

The importance of this research is to reach practical method of teaching English grammar and to improve grammar comprehension of Saudi intermediate students.

Research Methodology

The study included 22 teenage students in the first intermediate level of a Saudi Arabian intermediate school, all of a similar age. The criterion for selection of these participants included their susceptibility to learning English. The students randomly divided, where 11 students were in the experimental group and 11 students were in the traditional group. One group taught through the Kahoot application and the other received the traditional methods (which one was which?). The two groups compared regarding their grammar using an achievement test pre- and post-instruction.

The material used in the study was from the Supper Goal 2 English book for first intermediate students. The Saudi Arabian ministry of education, with the cooperation of Mc Graw Hill education, designed this book. The unit used for instruction comprised four lessons, all on the same aspects of

grammar. Both groups studied during the same period, and taught by the same teacher. The aim of the experimental group study was to enhance grammar. The pre-test used for both groups prior to the survey. Treatment was provided for students (one group received traditional method while the other received experiment study). Then, and when the treatment finish, post-test used to see the influence of the two methods.

In the first part, the CALL application group received a brief explanation about the aim of the study by the researcher. Then, students provided with computers during English class. Then, the researcher created and designed the Content of the unit of Supper Goal 2 book through using Kahoot application. The researcher utilized this application during all the classes. The students were given instruction how to use Kahoot application. Then, the researcher will explain the grammar lesson through Kahoot application. At the end of class, students will use computers to compete each other through applying the grammar lesson. Students provided with feedback after each question.

Students in traditional method will receive instruction on the same item through the context of their books (Super Goal 2). Researcher will explain the grammar using traditional method. Students asked to answer their books regarding their understanding of the unit's grammar. Teacher is the control of learning and students considered passive in this approach.

CALL Application (Kahoot)

Kahoot is an application for using technology to manage quizzes, discussions, or surveys. It is a game-based classroom response system played by the all class in real time. It provides multilabel choice questions on the screen. Then, students answer the questions from their smartphone, computer, or tablet. Kahoot is used as following creating the quiz, survey or discussion item. After an account created, a screen with three icons for a quiz, discussion item or survey will appear. Make your selection and build your game. Questions have a 95-character limit and have up to four answer options. Select the correct answer by pressing the red "Incorrect" button. It will turn green and say "Correct". Choose a time limit between five and 120seconds. An image or a YouTube video can being embedded. Continue to add and edit questions using the toolbar on the bottom of the screen. To complete the quiz, select "Next" and follow the instructions. A cover image can being added and you select whether you want to make your game public or private. Kahoot is now ready to launch the game. Teacher's Kahoot games saved in My Kahoots. Teacher then select the game he wants to launch and press the Play button. Students login to the game using their smart phone or computer. Kahoot! Displays a game pin to join the quiz. Students enter the game pin on their device and create a username that will display as the game progresses.

Kahoot is used in classroom instruction as following:

Create a quiz to reinforce learning outcomes. You can create a game to introduce a topic. It can help you discover what the students already know and where you should focus your instruction. It works

best with short, quick response questions. It is a great tool for learning terminology. The frequently asked questions section does address using the game in online instruction. Online students would need to load Kahoot on their machines and use a different device to play the game. Survey the students about something you are discussing in your unit of study. For example, I could display choices a controller is facing that may or may not be ethical. The students would select whether or not they believe the controller made an ethical business decision. We would then discuss the results. Create a quiz to use as a study session for an upcoming exam. You can play the game a second time using a "ghost". The game plays the same as previously but now the students are playing against their first responses and hoping to improve their score.

Findings

The main variable of the study was the impact of the different instructional approaches in the research (Teacher Centered Instruction TCI VS Computer Assisted Language Learning CALL). At the beginning of the study in order to make sure that, the control and experimental groups were at the same level regarding their English object pronouns; an independent sample t-test conducted on their scores of the pre-test of subject pronouns. Pre-test's finding revealed that both groups had no significant differences and poor knowledge of English object pronouns (see Table 1 below).

Table (1) Independent Sample t-test on the pretest of the object pronouns of the Control and Experimental Groups.

Group	Mean rank	Sum of ranks	Mann-whitney (U)	Z	Sig.
Traditional	11.64	128	59	-0.126	0.949
Experimental	11.36	125			

To show that the gaming CALL had a positive effect on learning English object pronouns, a paired Sample t-test was made. Findings of the pre-test and post-test of English object pronouns of experimental group showed that game reached a remarkable effect on learning English object pronouns as appear in Table 2 below.

Table (2) Paired Sample t-test no the pre- and post- test of the performance of Experimental Group.

test	Mean rank	Sum of ranks	Z	Sig.
Negative ranks	0	0	-2.940	0.003**
Positive ranks	6	66		

Likewise, the experimental group, control group had to show a positive effect on learning English object pronouns. To show the positive effect of traditional method on students' achievement of English pronouns paired sample t-test made of on pre- and post- test of control group. The results revealed that control group had also positive effect on learning English pronouns (see Table 3 below).

Table (3) Paired Sample t-test no the pre- and post- test of the performance of Control Group.

test	Mean rank	Sum of ranks	Z	Sig.
Negative ranks	0	0	-2.940	0.003**
Positive ranks	6	66		

In order to show which group received more comprehensible inputs of object pronouns regarding used method, an independent sample t-test on pre- and post- test was made. The findings represented that experimental group (who received CALL application instruction) had significant effect on learning English object pronouns as compared to control group (who received traditional instruction) as it appears in Table 4 below.

Table (4) An independent sample t-test on post-test of learning English subject pronouns of Experimental and Control groups.

Group	N	Mean	Std. dev.	t	Sig.
Traditional	11	5.09	2.844	-3.930	0.001**
Experimental	11	9.45	2.339		

As seen, there are statistical differences on post-test between the score of experimental and traditional groups. These differences indicate that experimental group had more effect than control. As it appears, the mean of traditional group is 5.09 while the mean of experimental group is 9.45. The distinction between the both groups of mean is 4.34 for experimental group. That means that CALL instruction had a significant impact on learning English object pronouns.

Discussion

The present study answers two questions: (1) Are there any important differences between the mean score of the groups on the grammar achievement test for English object pronouns of Saudi teenage students due to methods of instructions (TCI vs. CALL)? (2) If yes, which method of instruction (TCI vs. CALL) makes remarkable better outputs as measured by the post- test of object pronouns?

For the first question, findings refer that using games of CALL facilitate and make rapid learning. Furthermore, CALL methods proved that it has more influence on learning English object pronouns than traditional method. Consequently, CALL applications made marked findings in achievement of young Saudi learners. Thus, this kind of teaching can be helpful for English teacher in Saudi context.

Harmer (1983), Uberman (1998), Prensky (2003), Mcfarlane et al. (2005), Juzeleine, S, Mikelioniene, J., Escudeiro, P., Van de Carvalho, C. (2014), and Escudeiro & Carvalho (2014) refer to that games are significant instruments in teaching and education and that through games students learn more rapidly and enjoy learning even difficult material. This study revealed a similar impact on learning English object pronouns via CALL games. In addition, the study indicated that students enjoy learning English through CALL games.

Moreover, the present study illustrated that both of CALL and TCI had a positive effect on learning English object pronouns. However, students taught through CALL games showed significant differences compared to those learning through traditional methods. Furthermore, students of CALL group were more motivated than the control group to attend English class, influenced by that they were competing with their peers in using CALL games.

Conclusion

This study aimed to investigate the impact of games of CALL in education to make facilitate comprehensible input and output in language learning. The findings revealed that using CALL games had a positive influence on learning English object pronouns. However, the study had several limitations that require clarification. One of these limitations is the small sample set. In addition, administering CALL games requires skill, that is, in the use and design of games. Furthermore, applying CALL applications requires substantial time, resource effort, and complex networks. I call for extensive research with larger sample domains and through blended instruction, combining CALL and traditional methods.

References

- AbuSeileek, Ali, (2007). Cooperative vs. individual learning of oral skills in a CALL environment. *Computer Assisted Language Learning*, 20(5), 493-514. Retrieved from <https://doi.org/10.1080/09588220701746054>
- Al-Jarf, R. S. (2005). The effects of online grammar instruction on low proficiency EFL college students' achievement. *Asian EFL Journal*, 7(4), 166-190.
- Al-Mansour, N. S., & Al-Shorman, R. E. A. (2012). The effect of computer-assisted instruction on Saudi University students' learning of English. *Journal of King Saud University-Languages and Translation*, 24(1), 51-56. Doi: 10.1016/j.jksult.2009.10.00
- Blake, R. (2000). Computer-mediated communication: A window on L2 Spanish interlanguage. *Language Learning & Technology*, 4(1), 120-136.
- Brown, D., & Warschauer, M. (2006). From the university to the elementary classroom: Students' experiences in learning to integrate technology in instruction. *Journal of Technology and Teacher Education*, 14(3), 599-621.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.
- Escudeiro, P. & Van De Carvalho, C. (2014). Game-based learning. *European Journal of e-Learning*, 12(3), 227-228.
- Ghafoori, B., Dastgoshadeh, A., Aminpanah, A., & Ziaei, S. (2016). The Effects of Computer Assisted Language Learning on the Development of EFL Learners' Writing Skills. *International Journal of Language Learning and Applied Linguistics World (IJLLALW)*, 12(3), 14-23.
- Ghorbani, S., & Marzban, A. (2013). The Effect of CALL on Iranian Beginner EFL Learners' Grammar of Writing. *Journal of Academic and Applied Studies*, 3(7), 15-25.
- Harmer, J. (1983). *The practice of English language teaching*. (4th ed.). London: Longman.
- Juzeleniene, S., Mikelioniene, J., Escudeiro, P., Van de Carvalho, C. (2014). GABALL
- Kenning, M. M. (2007). ICT and language learning. In *ICT and Language Learning* (pp. 135-170). Palgrave Macmillan UK.

- Ma Qing, 2007. From monitoring users to controlling user actions: A new perspective on the user-centred approach to CALL. *Computer Assisted Language Learning*, 20(4), 297-321. Retrieved from <https://doi.org/10.1080/09588220701745783>
- Mart, C. T. (2013). Teaching grammar in context: Why and how?. *Theory and Practice in Language Studies*, 3(1), 124-29.
- McFarlane, A., Sparrowhawk, A. & Heald, Y. (2005). Report on the educational use of games: An exploration by TEEM of the contribution which games can make to the education process. University of Bristol. [Online]. Retrieved From: <<http://www.teem.org/publications/teem-gamesined-full.pdf>>.
- Naba'h, A. A., Hussain, J., Al-Omari, A., & Shdeifat, S. (2009). The effect of computer-assisted language learning in teaching English grammar on the achievement of secondary students in Jordan. *Int. Arab J. Inf. Technol.*, 6(4), 431-439
- Olibie, E. I. (2010). Using computer-assisted language learning to improve students' English language achievement in universal basic education. *International Journal of Educational Research and Technology*, 1(1), 66-71.
- Prensky, M. (2003). The digital game-based learning revolution. *ACM Computers in Entertainment*, 1, 1-20.
- project: Serious games-based language learning. *Procedia- Social and Behavioral Sciences*, 136, 350-354.
- Richards, J. C., & Reppen, R. (2014). Towards a pedagogy of grammar instruction. *RELC Journal*, 45(1), 5-25.
- Torlakovic, E., & Deugo, D. (2004). Application of a CALL system in the acquisition of adverbs in English. *Computer Assisted Language Learning*, 17(2), 203-235.
- Uberman, A. (1998). The use of games for vocabulary presentation and review. Poland: University of Rzeszow. [Online]. Retrieved From: <http://www.academia.edu>