An Assessment of the Effectiveness of CALL in Teaching English Language Writing Skills in Saudi Arabia

Hailah Alhujaylan

Department of English Language & Translation

Qassim University

Buraydah, Saudi Arabia

Abstract

Computer-Assisted Language Learning (CALL) is playing a vital role in teaching English language to English as a Foreign Language (EFL) students. However, to best of my knowledge a little has been done in this regard to keep the students in line with the most recent advancements in this paradigm in Saudi Arabia. This paper evaluates the efficacy of CALL in improving students' writing skills and provides innovative techniques and robust strategies for long-lasting learning. The research seeks to fill in the knowledge gap regarding prospects of using CALL in the Kingdom with these main research questions; 1) how is the technology presently used for teaching the writing skills?; 2) what is the true impact of using CALL on students' writing skills?; 3) which area of the language (organization, structure, content, grammar) sees the most improvements by CALL to make them better writers? A quantitative research design was used for this study. The sample was sixty female students of a Saudi University divided equally into control and experimental groups. The elicited data analysis indicates that the performance scores of two groups differ significantly when taught through CALL. The research contends that using CALL can enhance students' writing skills over a short period of time when compared to the traditional ways of improving the writing skills. The current study also recommends that language classrooms should be equipped with all the latest technological facilities to encourage the use of CALL.

Keywords: Computer-Assisted Language Learning (CALL), technology, writing skills, efficacy, EFL in Saudi Arabia

Cite as: Alhujaylan, H. (2019). An Assessment of the Effectiveness of CALL in Teaching English Language Writing Skills in Saudi Arabia. *Arab World English Journal (AWEJ) Special Issue on CALL* (5). 18 -27 DOI: <https://dx.doi.org/10.24093/awej/call5.2>

Introduction

Use of computer technology has significantly influenced the learning process of students in all disciplines across the globe. Technological advancements have imparted fundamental changes to the field of linguistic education, especially in English Language teaching. Computer technology has opened seemingly unconstrained boundaries of knowledge that for most part have remained unexplored before. The use of suitable technological materials can be highly useful for learners (Clements & Sarama, 2003 as cited in Ahmadi, 2018). Basically, the technology facilitates language learning processes by providing teachers and students digital spaces and locales in an adaptable environment. In another study, Pinner (2012) found that because of intrinsic motivation or pedagogic value most teachers use CALL. “Another source of teachers’ intrinsic motivation to use CALL could be the relevance they ascribe it to their students and the modern world” (p. 190), Pinner (2012) further concluded. However, as with any technology that has human interaction, learning capacity and preference and as well as demographic characteristics of students are likely to influence the efficacy of the technology towards a desired objective.

Reliance on conventional teaching approaches in teaching the writing skills that make use of the outdated methods involving textbooks style teaching has a limiting effect of the learning gradient of students. Javid, Farooq, & Umer (2013) state: The difficulty of teaching/learning of this skill is due to the fact that it involves a comprehensive knowledge of grammar, suitable vocabulary, writing mechanics (e.g., punctuation & capitalization), organizational skills, style, imagination etc. (p. 163)

Subjecting students to a few prescribed textbooks over the length of the course is prone to making the learning experience burdensome and troublesome for students and void of any meaningful interaction with their teachers. Moreover, students are usually offered limited practice on a few specific exercises that is typically restricted to academic essay writing only. This in turn makes the writing task a strenuous and monotonous experience for the students. Resultantly, students may be able to tentatively set down a descriptive paragraph, a short or a lengthy essay on the given topic by utilizing the techniques their teacher taught them through textbooks; however, they are barely able to articulate creativity in their ideas beyond a certain point.

The unexplored world of CALL offers tremendous learning opportunities to EFL students in ways that are informal but yet very effective. Academic researchers and teachers alike agree that effective use of CALL can transform a traditional classroom into a simulating environment that engages students’ interest in learning and make them feel sufficiently motivated to express themselves (Stockwell, 2018; Beatty, 2010; Levy, 1997). In that regard, various CALL devices such as interactive smartboards, digital projectors, tablets, and other hand-held electronic media can be used to accelerate learning process and make students confident about their learning potential. Well-designed graphics and visual images with sound impact offer students a chance to be more imaginative about writing their ideas. CALL creates a meaningful context to the environment they can learn in. When information is presented through multimedia, students can better understand the objects and events that are being described to them by the instructor.

To this end, teachers can design a variety of writing activities thereby transforming the learning environment into one that would motivate students to develop a more rigorous interest in

composing their drafts. Pinner (2012) declares, "a CALL classroom" to be "more motivating for students than a traditional classroom." (p. 191) In a way, CALL acts as a portal between the instructor and the students by establishing a clear picture of the said words. Further, it allows students to better comprehend the interaction of various aspects of the learning processes. Using grammar and spelling checkers applications puts them on an ease to compose error free drafts because these are standardized tools of word processor (Beatty,2010). CALL can also minimize the burden and fatigue of extended teacher-talk giving a way to non-verbal presentation. In terms of performance evaluation, CALL provides a quick correction feedback loop between teachers and students. Al-Mansour and Al-Shorman (2012) have also noted this interesting feature of CALL that computer 'provides immediate feedback'. Teachers can perform error analysis in classroom for the commonly made mistakes and show the corrections to students in real-time on the interactive board. This saves a significant amount of time that would be wasted otherwise in a conventional style teaching where teacher's feedback is lagged by a day, at least.

A wide range of computer technology devices with distinctive features are available these days. The appropriation of these devices in teaching and learning language has been a focus of interest for researchers and teachers. CALL can help researchers understand complexity of the English language learning processes, though the diversity and variety in CALL methods could be over whelming and confusing at times. Also, as with any technology that has a human interaction component, learning capacity, prior exposure to the technology and demographic characteristics of subjects are likely to influence the desired outcomes. In that regard, this research is aimed at investigating the promise of CALL in teaching the English language writing skill to undergraduate students at a university in Saudi Arabia. The remainder of this paper is organized as follows. The next section provides a synthesis of the relevant literature on the subject matter. Following that, data collection and research methods are discussed. Results section summarize the key findings of the research, and the last section covers the research conclusion and recommendations for future research.

Literature Review

What is Computer-Assisted Language Learning (CALL)?

A review of the relevant literature on the subject matters entail various definitions of CALL. For instance, Beatty (2010) defines CALL as "any process in which a learner uses a computer and, as a result, improves his or her language". (p. 7) On another instance, Beatty(2010) defines CALL as "an amorphous or unstructured discipline, constantly evolving in terms of pedagogy and technological advances in computer literacy and related literacies among both teachers and learners."(p. 9) CALL is considered as an effective tool in facilitating teaching and learning of English language as a second (ESL) or foreign language (EFL).The inherent functionality of CALL has motivated teachers to discover innovative techniques in teaching general language skills such as reading, writing, speaking and listening, as well as challenging concepts in shorter duration with better outcomes.

Using CALL in a language classroom is useful for both teachers and students. Pinner (2012) observes, "Using CALL is more motivating for students than simply employing books and whiteboards."(p. 191) He gives three main benefits of using CALL that are relevancy, authenticity and engagement, also mentioned by Al-Mansour and Al-Shorman (2012, p. 52).

In today's digital age, it is rare to find any linguistic program, especially a foreign or a second language (L2) program, that does not employ CALL in some form or not (Stockwell, 2012). However, as stated in the earlier, the use of CALL may differ from learner to learner, teacher to teacher and even more so, from community to community. Within this realm, CALL fosters autonomy in learners in many ways including independent learning (Beatty, 2010). More specifically, self-directed learning procedures such as 'review and revisit' can guide learners to set their dimensions in learning a specific language skill outside the classroom. This unique feature is observed by Li and Cumming (2001) in a case study in investigating the effect of word processing on ESL students' writing and evaluation of their writing. The learners may need to master some parts of the skill taught in class once, repeated twice and reviewed thrice. Specifically, in writing skills, self-directed procedures create awareness in learners and help them focus on their strengths. "Writing is learned, not taught, so writing instruction is nondirective and personal" (Hyland, 2003, p. 9).

The Writing Skills: Importance and Learning with CALL

Writing is precisely defined as a thinking process that involves cognitive skills and requires ample training and exposure to the materials as stated by Fadda (2012), "Academic writing is a mental and cognitive activity, since it is a product of the mind." (p. 124) Compared to all other forms of language skills, it requires more elevated level of intellectual sophistication. Being invariably the most refined skill of language, writing demands perfect exquisiteness of literal and metaphorical expression. EFL students struggle hard to achieve this level of perfection.

Writing has often been described as a demanding and sometimes troublesome dimension of academic life (Murray & Moore, 2006). However, one should take writing as a rudimentary adult pursuit that is linked to particular activities that a person performs in a society, as mentioned by Tribble, Candlin, & Widdowson (2009). They further list a variety of social activities which stretch from inviting people to a formal dinner to making a law. Tribble et al., (2009) is of the view that if a person is deprived from learning how to write then, resultantly, s/he could be excluded from a wide range of social roles. This view is also supported by Harmer (1998) that writing is a basic language skill. Harmer (1998) also points out four main reasons of teaching writing to EFL students, "reinforcement, language development, earning style and more importantly, writing as a skill in its own." (p. 79) According to Harmer (1998), "Students need to know how to write letters, how to put written reports together, how to reply to advertisements – and increasingly, how to write using electronic media." (p. 79-80), and all the basic functions mentioned by other writers. An element of these social roles is also reflected in the work of McWhorter (2010). McWhorter (2010) discusses her unique, highly visual, student-centered approach where she focuses on not only the purpose of writing but also responding to the needs of different audience and responding appropriately to different kinds of rhetorical situations.

For the EFL students, learning writing skills can be exciting and frustrating at times. Writing tends to be more specific and uses special devices to keep it going (Harmer, 1998) EFL Students typically face problems in being more precise and dealing with different text functions. As a writer, they need to think hard to create cohesion and unity in the text they compose. A common hurdle is to present imaginative ideas in the form of words. In other words, they lack practice in mind mapping that is sometimes given secondary importance in traditional teaching

style, whereas mind-mapping software in a CALL classroom benefits the students to export and save their ideas in final mode (Walker & White, 2013). Development of a good combination of sentences forming paragraphs is required to create a complete piece of writing. Students need a lot of practice to organize their thoughts. If key concepts are uninterpreted and indeterminate, the students will be unable to produce the desired results. Their performance is reported to be below due to weak command over content, text organization, grammar, vocabulary, punctuation, and mechanics. This problem is also pointed out by Khan (2011), Javid et al., (2013) and Mudawy (2019). Therefore, the productivity of the writing skill depends on priming the consciousness of the novice writers in and outside the class. This outcome can be masterfully achieved by using CALL software programs in teaching the writing skills.

Evolution of technology over time played a key role in the development of CALL as a concept and a tool for linguistics. A variety of programs developed in early 80's and 90's provided innovative and creative ways to the novice writers to polish their writing skills such as *Storyboard*, developed in 1980, which pioneered text reconstruction program for small computers. The purpose of this program was rewriting the text using contextual clues in the preliminary material (Levy, 1997). The availability of mainstream personal computers also paved the way for a stream of language learning software programs. These include but not limited to WIDA, Advanced Learner's Dictionary on CD-ROM, English Grammar Guide, Learn to Speak English, Encyclopedia etc. These programs became popular very quickly as unlike traditional teaching and learning resources, the learners could learn on their own pace.

With the dawn of high-speed internet in early 2000's, many online CALL programs with instant feedback feature became available to the learners. These programs, to date, offer language practice and encourage and motivate learners to remain actively engaged in the learning process.

Also, OWLs (Online Writing Labs), a key functionality of CALL, in that regard provide useful resources for learners to improve their writing skills. This includes vocabulary and grammar advice, text structure guide, reference styling, avoiding writer's paralysis, to name a few. In teaching the writing skills while discussing the current approaches, Walker and White (2013) mention the "product approach". For applying this approach, they suggest OWLs because these are popular among computer users and 'Prude University Owl', founded in 1995, is a fine example. They further suggest, "OWLs provide a wide range of resources for writers including grammar advice, guidance on referencing, tips on getting started, avoiding writer's block and so on." (p.63) As discussed earlier, students face problems in generating the ideas on a specific genre. Teachers can help to sort out these problems by using different online resources and applications, as suggested by Walker and White (2013) talking about processes approaches:

If we think of writing as involving cyclical processes of idea generation, planning, drafting, composing editing (White & Arndt 1991), there are many technological tools which are currently available for second language (L2) to do these things, and there are likely to be more in the future. (p.64)

The availability of word-processing packages and various CALL features such as hypertext, hypermedia and multimedia (Beatty, 2010) has changed the way students communicate their ideas

in writing. Nonetheless, the use of CALL technology in learning writing skills motivates the students, encourages them to write more and enhance their critical thinking abilities Al-Mansour and Al-Shorman (2012).

Data Collection and Research Methodology

The following hypotheses were developed to find the answers to the research questions mentioned in abstract of the paper:

- i. *The present use of technology for teaching and learning the English language is limited and inadequate.*
- ii. *CALL will produce improved content, structure and grammar dimensions of the English language.*
- iii. *CALL will have strong positive effect on students' writing skill and they will be able to write better.*

By validating the above hypotheses, the research was able to evaluate the efficacy of using CALL in teaching English language writing skills to the undergraduate female students at a Saudi University. A random sample of 60 Saudi female undergraduate students was selected to participate in this research. The sample ages varied from 18 to 23 years, and average age was about 19 years. By the time of selection, the students had already been studying English as their 'major' for almost two and half years and had gained sufficient knowledge to write short or long essays with reasonable command and clarity.

The sample was randomly split into *Experimental Group* and *Control Group* as sub-groups, with thirty students in each group. A series of multimedia lectures were delivered to the *Experimental Group* while conventional teaching methodology was adopted for *Control Group*. Any kind of CALL practice, activity or exercise was not undertaken by the students in the *Control Group*. Rather, they were instructed to do all the assigned written work manually. Both groups learnt the basic concepts of writing skills during the six weeks of the research. The timeline of the different research activities is presented in Table 1.

Table 1. *Research plan*

Week 1	Lecture - basic writing concepts
Week 2	Writing task 1 (organization and content of the text)
Week 3	Lecture - coherence and unity in essay writing
Week 4	Writing task 2 (unity and coherence in the text)
Week 5	Lecture - grammatical aspects in essay writing
Week 6	Writing task 3 (grammar: tenses, active and passive sentences)

Results

Table 2 shows the results of the three tasks undertaken by each of the *Experimental and Control Groups*. For consistency, student's attendance was ensured such that equal number of students wrote the three tasks in both groups. The *Experimental Group* performed better with an overall average of 74.47% for the three tasks compared to 70.82% for the *Control Group*. In contrast, the

overall standard deviation of scores for the three tasks undertaken by the two groups was not very different, 17.53% and 17.12%, for the *Experimental and Control Groups*, receptively. Almost identical values of standard deviation for the two groups points to the non-existence of outliers and a uniform response to the methods of teaching (i.e. CALL vs traditional method), the two groups of students were subjected to in this research.

Table 2. Results of the writing tasks by the two research groups

Group	Writing task	Total no. of students	Mean (%)	Standard deviation (%)
Experimental group	# 1	30	68.40	18.44
	# 2	30	76.80	16.40
	# 3	30	78.20	17.76
Control group	# 1	30	66.80	18.97
	# 2	30	71.97	15.60
	# 3	30	72.13	16.27

Sample Calculations

Sum of Percentage Marks of Task 1 (Control Group) = x

Total No. of Students in Control Group = n

Mean Percentage Marks of Task 1 (Control Group) = $\bar{x}$

$$\bar{x} = \frac{\sum x}{n} = \frac{20.04}{30} = 66.8\%$$

Standard Deviation of Task 1 (Control Group) = s

$$s = \frac{\sqrt{(\sum x^2 - \frac{(\sum x)^2}{n})}}{n-1} = \frac{\sqrt{(14.4302 - \frac{(20.04)^2}{30})}}{30-1} = 18.97\%$$

Figure 1. A comparison chart of the two groups

Figure 1 represents the graphic comparison of the results of the *Control group* and the *Experimental group*.

Figure 2. A task-wise performance of the two groups

Figure 2 shows the task wise comparison of the performance of the two groups. For Task# 1, both groups nearly perform equally well. This could be attributed to the *Experimental Group's* warming-up to the CALL technology. However, results pertaining to Task# 2, the show that the students in the *Experimental Group*, performed well when compared to the students in the *Control group* who were not exposed to any kind of computer-assisted CALL activities. The result of task 2 differentiated both groups by 4.83% with a higher mean percentage marks for experimental group of 76.80%, compared to 71.97% of control group. This result proves that the experimental group had started to show an increase in their performance due to computer-assisted activities.

Likewise, *Experimental Group* did well in Task# 3 compared to the *Control group*. Here, the largest difference of 6.07% between the two groups was observed. The *Experimental group* scored much higher (78.20%) than the control group (72.13%) which provides further evidence that the computer-assisted program helped students improve their writing skills.

To conclude, the *Experimental group's performance* in the three tasks improved by 9.80 percentage points. This is more than 2.5 times that of the *Control group* which improved by only 3.76% over the course of the three tasks. These results suggest that the students in *Experimental group* not only performed better, but they could have continued to stay way ahead of their counterparts if additional tasks had been conducted.

However, three independent-samples t-tests were conducted to compare students' performance in the *Experimental* and the *Control* conditions for all the three writing tasks, and the differences were not significant. There was not a significant

difference in the scores of the first task for the *Experimental* ($M= 68.40$, $SD=18.44$) and the *Control* conditions ($M=66.80$, $SD=18.97$); $t(58)=0.33$, $p = 0.741$. Similarly, there was no significant difference in the scores of the second task for the *Experimental* ($M= 76.80$, $SD=16.40$) and the *Control* conditions ($M=71.97$, $SD=15.60$); $t(58)=1.1688$, $p = 0.247$. Finally, there was not a significant difference in the scores of the third task for the *Experimental* ($M= 78.20$, $SD=17.76$) and the *Control* conditions ($M=72.13$, $SD=16.27$); $t(58)=1.3803$, $p = 0.172$.

Conclusion

This research evaluated the efficacy of using CALL in teaching the writing skills. The sample consisted of 60 Saudi female undergraduate students randomly divided into two sub-groups. Participants were given lectures on the basic concepts of writing. The Experimental group was taught using CALL whereas the Controlled group was subjected to traditional ways of teaching. Both groups received three tests: 1)- Organization and content of the text, 2)- unity and coherence in the text, and 3)- grammar: tenses, active and passive sentences.

The first research hypothesis was about the limited use of technology in the English language teaching. The introductory lectures, difficulties in the arrangement of CALL material by the researchers and the results of the first test for both groups verified that this hypothesis was true. The results for the remaining two tests conclusively prove that students' writing skills can be enhanced and improved through CALL thereby validating the second and third hypothesis of this research. Moreover, the results indicate that if students are provided with the opportunity to go beyond the prescribed syllabi, their writing power can improve significantly compared to when they are taught using traditional text book methods. Finally, fostering CALL in teaching English language writing skill can improve students' rate of learning the complex art of writing.

For future research, more rigorous test regimes and experimental tools could be developed to extend the research frame work to additional English language learning skills, and to evaluate the efficiency of CALL tools over an extended time period.

About the author:

Dr. Hailah Alhujaylan is an Assistant Professor in the Department of English Language and Translation at Qassim University, Saudi Arabia. She obtained her MA and PhD in Applied Linguistics from the University of Essex at the United Kingdom. Her research interests include psycholinguistics, second language acquisition, vocabulary learning, and formulaic language. <https://orcid.org/0000-0002-9565-3738>

References

- Ahmadi, D. M. (2018). The Use of Technology in English Language Learning: A Literature Review. *International Journal of Research in English Education*, 3(2), 115-125. doi:10.29252/ijree.3.2.115
- Al-Mansour, N. S., & Al-Shorman, R. 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.2009.10.001

- Beatty, K. (2010). *Teaching and researching computer-assisted language learning*. Harlow: Longman Pearson.
- Fadda, H. A. (2012). Difficulties in Academic Writing: From the Perspective of King Saud University Postgraduate Students. *English Language Teaching*, 5(3), 120-123. doi:10.5539/elt.v5n3p123
- Harmer, J. (1998). *How to teach English*. Harlow: Pearson Longman.
- Hyland, K. (2003). *Second language writing*. Cambridge: Cambridge University Press.
- Javid, C.Z., Farooq, U., & Umer, M. (2013). An Investigation of Saudi EFL learners' Writing Problems: A Case Study along Gender-lines. *Kashmir Journal of Language Research, AJK University*, 16(1), 179-203.
- Khan, I. A. (2011). Diagnosis of Learning Difficulties in English: The Arabic Bilingual Context. *Elixir Psychology* 36(2011), 3448-3454.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford: Clarendon.
- Li, J., & Cumming, A. (2001). Word processing and ESL writing: A longitudinal case study, *International Journal of English Studies*, 1(2), 127-152.
- McWhorter, K. T. (2010). *Successful college writing: Skills, strategies, learning styles*. Boston: Bedford/St. Martins Macmillan Learning.
- Mudawy, A. M. A. (2019). An Attempt at Promoting Undergraduate Sudanese EFL Students' Performance in Academic Writing Skills. *Arab World English Journal*, 10(1) 218-230. doi:10.24093/awej/vol10no1.19
- Murray, R., & Moore, S. (2006). *The handbook of academic writing: A fresh approach*. New York: Open University Press.
- Pinner, R. S. (2012). Teachers' attitudes to and motivations for using CALL in and around the language classroom. *Procedia - Social and Behavioral Sciences*, 34, 188-192. doi:10.1016/j.sbspro.2012.02.037
- Stockwell, G. (2018). *Computer-assisted language learning: Diversity in research and practice*. Cambridge: Cambridge University Press.
- Tribble, C., Candlin, C., & Widdowson, H. G. (2009). *Writing*. Oxford: Oxford University Press.
- Walker, A., & White, G. (2013). *Technology enhanced language learning: Connecting theory and practice*. Oxford: Oxford University Press.