

USE OF COMPUTER ASSISTED LANGUAGE LEARNING FOR IMPROVING ESL LEARNERS' ACADEMIC WRITING SKILLS

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Abstract - Poor performance in academic writing skills, lack of innovative strategies and technology for language teaching and learning (Embogama, 2010, Maharoof, 2014, Ratwawatte, 2012) are some of the major areas which should be focused when teaching English as a Second Language (ESL) learners. Therefore, the main focus of the current study was to find out the effectiveness of developing academic writing skills among ESL learners in a Computer Assisted Language Learning (CALL) environment. For the study setting, the researcher chose one of the state universities in Sri Lanka where the language lecturers do not use CALL to maximize the language learning opportunities for undergraduates off campus. To achieve the purpose of the study, an experimental study was designed, and it was conducted for eleven weeks which had randomly selected 54 second year undergraduates in the sample. Then the participants were randomly assigned for experimental and control groups. Those who were in the experimental group worked in CALL while the control group worked in class. The data were analyzed using mix method approach. The findings indicate that both learning modes have advantages for improving academic writing skills. Thus the introduction of blended learning is recommended while successfully addressing issues in both learning modes. It is believed that the knowledge obtained in this study can make contributions to the field of CALL and applied linguistics.

Keywords- academic writing, CALL, ESL, in-class.

I. INTRODUCTION

According to Lombana (2002) writing is the most difficult skill to master both in one's first language (L1) and second language (L2). Therefore mastering writing in L2 must be strategic and realistic. Making the transition from general writing to formal/academic writing is important for university students as they are expected to be competent in academic writing skills at tertiary level (Giridharan, 2012). Further, most universities give recognition to undergraduates/ post graduates who have achieved higher scores from international examinations which test their competency in academic writing skills (Luna & Ortiz, 2013). Poor academic writing skills have also often been identified as a factor that contributes to students' failure in meeting institutional literacy expectations. As further substantiated by Kelley (2008), successful performance at tertiary level depends on the individual's competency in academic writing skills. According to Williams (2003) CALL would be the best method for teaching academic writing because it can cater for different levels, and learners have the facility of access during convenient time slots. The facility to communicate with each other through chat, e-mails and forums makes learners take part in discussions regardless of confidence and communicative ability. In addition, Sun and Chang (2012) and Zhytska (2012) point out that although computers will not be a substitute for teachers, it would provide a richer and better learning experience for language learners.

II. STATEMENT OF PROBLEM

Research indicates that non-native speakers of English face more difficulties in academic writing than native speakers do (Al Fadda, 2012; Pecorari, 2006; Rababah, 2003). The majority of the non-native speakers of English have been exposed to General English for a long period and when they start using academic writing, most of them fail in mastering it. Studies which have been conducted to find out difficulties/issues in the academic writing competencies of ESL students have found out the major problems are in the areas of cohesion, coherence, synthesizing information, reviewing, critiquing, grammar, syntax and vocabulary. Further, limited knowledge in that specific area of study, anxiety in writing, L1 interference, structural errors and difficulties in lack of practice and experience in academic writing skills are also hindered the writing skills of ESL learners (Al Badi, 2015; Ashraf & Bilal, 2016; Cai, 2013; Chou, 2011; Evans & Greens, 2007; Fareed, Giridharan & Robson, 2011; Lee & Tagino, 2008; Ntereke & Ramoroka, 2015).

As many researchers conclude, it is the responsibility of ESL practitioners to introduce better teaching materials and strategies to motivate learners to ensure positive learning outcomes by finding effective solutions for the existing problems in language learning and teaching in academic writing (Embogama 2010; Felea & Stanca 2014; Javid, 2015).

Since the growing presence of computer mediated instruction is being highly demanded by the learners, the experience in working in CALL can make a significant impact in language learning (Grgurovic, 2010). According to Embogama (2016) "in order to facilitate this process, we, as educators, need to change existing conventions and take our students beyond the boundaries of the classroom space and guide them to the world of education through technology" (p.77). Since the use of computers and internet can render more time and opportunities for off campus activities, it can be a better solution for the issue of inadequacy of time to focus equally on academic writing lessons/activities during the time period which has been allocated per week for language teaching and learning. Further in a language learning classroom there are students in different levels, thus focus on each individual within a limited time period is also a very difficult task. In addition, academic reading and writing require more time and ESL students need to spend an additional period of time specially on academic writing because editing, proof reading, referring other sources take more time than simply answering question/s.

Following above mentioned recommendations and proposals for future research, the current study sought to find out the effectiveness of CALL for improving ESL learners' academic writing skills.

III. LITERATURE REVIEW

Pecorari (2006) in his study points out that most of the academic writing skills are unaddressed and students are graduated without having learnt the skills of academic writing. So he suggests that it is necessary "to address the full range of students learning, and not merely the visible tip of the iceberg" (p.27).

In the study of "ESL Learners' Writing Skills: Problems, Factors and Suggestions", Fareed, Ashraf and Bilal (2016) discuss the problems the ESL undergraduates face in writing skills in Pakistan. According to the findings the major problems in writing are in the areas of grammar, syntax and vocabulary. Further anxiety in writing, L1 interference and structural errors also hinder the writing skills of the ESL undergraduates. Inexperienced teachers, unsatisfactory teaching strategies, lack of practice in writing and poor motivation are some of the causes which influence on poor writing performance of ESL undergraduates. The findings highlight that the need for experienced teachers, learner motivation, improve vocabulary teaching and writing skills for ESL learners in improving academic writing skills.

Ntereke and Ramoroka's (2015) study focused on the effectiveness of writing activities and instructions in an academic writing course where English is taught as a L2 at the University of Botswana. Participants were challenged more in academic writing when they were synthesizing information. In addition the use of proper academic writing style and expressing ideas more clearly were also some other challenges that they faced in writing. Al Badi's (2015) study on "Academic writing difficulties of ESL Learners" also focused on the difficulties faced by the ESL learners in academic writing. The subjects were twenty ESL postgraduates from Korea, China, Taiwan and Oman who were studying Masters in TESOL at an Australian University. The results indicate that the ESL learners have more issues in coherence and cohesion in writing. In conclusion it was stated that the major reason for these difficulties is lack of practice and experience in academic writing skills.

As Zhytska (2012) states, the use of computers can motivate the ESL learners to improve academic literacy in an innovative and effective manner. The instructions which are provided through CALL should be more appropriate and individualized than in natural classroom settings. The materials should support the learners' "linguistic knowledge, content interests, learning style, and metalinguistic awareness" (Chapelle, 2006, p. 78), but this mainly depends on how CALL materials fit with the needs of the learners. As Al Fadda (2012) and Williams (2003) emphasize CALL can cater for different levels and learners have the facility of access during convenient time slots. However, Warschauer (1996) mentions that the CALL should be applied and used in the proper manner because the effectiveness depends on the message than on the medium.

Ramachandran (2004) in her study focused on the effectiveness of integrating technology in improving ESL learners' EAP literacy skills at University of Toronto. The findings indicate that the use of technology supported in improving the participants' critical thinking and logical conclusions. Further, Ramachandran (ibid) suggests that the language teachers need hands-on training on different literacy based technologies and to be aware of how to integrate the technology to successfully improve the academic literacy skills of the learners. Moreover, the language teachers should be aware that the use of technology should not interfere negatively on the teaching and learning process. In addition teachers should also know the strengths and weaknesses of technology based teaching. Hegelheimer's (2006) study investigated the effectiveness of using iWRITE, an online resource in improving ESL learners' grammar competency in academic writing and he concludes that the effectiveness of integrating electronic resources into language learning should be further researched.

Following the mentioned proposals and recommendations, the current study was designed to investigate the effectiveness of CALL for improving academic writing skills of ESL learners. Further, student-centered learning for academic writing skills through CALL was also promoted.

IV. METHODOLOGY

The current study was set out to answer the following research question:

1. *How far is CALL effective in improving the academic writing skills of ESL learners?*

The study was conducted in an on-going second year ESL programme which is offered as a non-credit bearing course, at one of the state universities in Sri Lanka. There were randomly chosen 54 participants in the sample whose L1 is Sinhala and learning English as their L2. The participants were then randomly assigned into experimental (n=27) and control (n=27) groups. Those who were in the experimental group worked in CALL environment and those who were in the control group worked in class. The participants worked collaboratively in both experimental and control groups which consisted of three members in one group.

The consent of the university was granted before conducting the study. The data were collected for eleven weeks and the study was conducted within an extra one hour without making any disturbance for the ongoing two hour language learning programme of the participants. In the first week, a pre-test was given to the participants and the same test was also given after the intervention in week eleven, to comparatively measure the competency level in academic writing skills between control and experimental groups. In addition each week an assignment was given from each lesson. A learner analysis and a needs analysis (NA) were also conducted before the intervention. The NA was given to select the topics which learners prefer most and to know about their present situation in academic writing. When selecting the sub skills in academic writing, Jordan (1997) and Baily (2003 & 2011) were majorly referred. A presentation was also given to the participants in the experimental group to show how they should work in Moodle. From week two to week ten, the participants worked on the academic writing materials in the assigned learning environment. In the final week, the post questionnaire was distributed.

Moodle, the non-commercialized Learning Management System was the virtual platform which was used in the current study. The materials were uploaded by the researcher for the experimental group and for the control group the materials were e-mailed. Six days were given for the learners to study the uploaded/e-mailed materials and on the seventh day they had to work on the given activity/es. To complete the activity/es, one hour was given for both

groups. Both groups had to submit only one answer sheet after discussing and finalizing the answers in groups. While they were working, the researcher closely monitored the performance of the participants both online and in-class. Those who worked in class had to submit their answer sheets to the researcher and the experimental group uploaded their answer sheets into Moodle.

A rubric was developed to measure the performance of the learners. The ESL Composition Profile (Jacobs, Zingraf, Wormuth, Hartifel, Hunghey, 1981) was used for this purpose by changing the original version in relevance to the current study. This was applied for both experimental and control groups and depending on the participants' marks, the learner performance in academic writing skills was measured. Finally the data were analyzed using mix method approach.

V. DATA COLLECTION

The following instruments were used to collect data:

A. Learner Analysis

This was used to collect demographic information, first year language learning experience and computer experience of the participants. The data were collected through open and close - ended questionnaires and Lickert type questions.

B. Needs Analysis

NA was consisted of Lickert type questions, open and close ended questionnaires and it was subdivided into two sections as: Present Situation Analysis and Target Situation Analysis.

C. Post questionnaire

The post open and close ended questionnaire survey was formed under three main categories: Language learners' preferred learning strategy/s, Activity engagement and Course satisfaction.

VI. FINDINGS

The findings of the current study were explained under performance, preference, benefits and difficulties.

A. Performance

After comparing the marks of the pre-test through an independent t-test before the intervention, it was found that the mean value of the experimental group was 33.11 and 32.26 of the control group. The difference between the mean value of the two groups was thus 0.85. After the intervention, in the post test the mean value in the experimental group was 50.37 and 46.67 in the control group. The difference between the two groups in mean value was 3.7. The mean value of pre and post-tests scores on academic writing skills between experimental and control groups are shown below in Table 01 and Table 02.

Table 01. mean values of the pre-test on academic writing between experimental and control groups

	N	SD	Mean	Mean Difference	T	P
Experimental Group	27	9.02	33.11	0.85	0.34404	.366103
Control Group	27		32.26			

Table 02. mean values of the post-test on academic writing between experimental and control groups

	N	SD	Mean	Mean Difference	T	P
Experimental Group	27	7.48	50.37	3.7	1.86039	.034245
Control Group	27		46.67			

Selected lessons, average marks for each assignment and the average total of assignments of both experimental and control groups are shown below in Table 3.

Table 3. Average total of assignments

Lessons	In-class	CALL
Academic vocabulary	18.25	20.00
Abbreviations	18.00	17.50
Punctuations	7.49	15.25
Referencing skills-part 01	12.63	14.06
Referencing skills-part 02	12.81	14.69
Paragraph Writing	10.63	12.25
Short Essay Writing	9.81	9.13
Summary Writing	8.56	7.69
Paraphrasing	12.44	14.19
Average total	10.90	13.86

The average total for the assignments and the mean values in the post test indicate that the performance of

the experimental group was better compared to the control group, which highlights the effectiveness of the intervention. Yet it is difficult to completely reject the in-class learning for developing academic writing skills, because there is not much disparity in the performance in academic writing between experimental and control groups.

B. Open and Close ended questionnaire

The post questionnaire was analyzed under thematic analysis. The collected data were coded and evaluated under two main themes: preference and benefits & difficulties.

- 1) Preference: 56% of the participants in the experimental group stated that they like to work in CALL environment for academic writing and 44% do not like to work in CALL. Flexibility, improvement in other skills, support of the lecturer

and new technology were stated as the reasons for their preference for CALL. Since most of the foreign countries use online education, the experimental group is satisfied with the novel exposure that they experienced for academic writing skills. Besides as Kirschner and Erkens (2013) bring up, the experimental group agreed that they have ample of time for discussions and to share knowledge when they work off campus. For barriers in CALL technical (Moodle was down sometimes, logging issues), financial (have to spend money on data cards) and communication issues (poor writing and vocabulary skills) were mentioned.

78% of them in the control group, stated that they prefer in-class learning for academic writing because its synchronous, can use printed materials, face-to-face learning and convenience for communication. 22% do not like to work in-class due to distractions (noise from other classes, personal discussions of the group members) lack of interest and monotonousness with the traditional teaching and learning.

- 2) Benefits & Difficulties: as for the benefits in CALL, the participants were happy to get the exposure to a virtual learning environment for academic writing skills. Further, the easy access to materials rather than relying on printed materials and access to audios and videos are also seen as benefits of modern technology which supported learners in enhancing language competency. CALL also supported them in language development in improving writing skills and vocabulary.

Technical issues, issues in communication were some of the difficulties the experimental group experienced while engaged in academic writing activities in CALL. In contrast, the control group did not have technical issues, instead they had the facility to deliver the message without much delay. Further the participants consider the in-class learning communication as convenient mainly due to positive attributes of face-to-face discussions and the face-to-face discussions were also considered to be livelier than discussions in CALL. For the difficulties of in-class, though most of them attended for discussions regularly during the allocated nine weeks some of them considered staying after lecture hours was very boring. Moreover sometimes personal discussions of some group members made other group members to lose interest in work.

VII. DISCUSSION & CONCLUSION

According to Ordena and Burgess (2015), provision of a suitable environment helps in improving students' academic writing skills. Hence according to the findings in the current study, the provision of CALL could be considered to be an effective learning mode in improving students' academic writing skills. Moreover, allocating time for students to engage in academic writing activities in class and evaluating their writing by pointing out and explaining mistakes sometimes take more time than the allocated duration for regular lectures for language learning. Therefore in addition to improve academic writing skills, the introduction of CALL off campus, successfully answers for the issues in duration and monitoring individual performance. This agrees with Martinez-Lage & Herren's (1998 cited in Chen, 2011) suggestion which is, the use of technology supports learners to work on more or additional materials off campus in a learner-centered environment which would undoubtedly make learners work at their own pace.

The preference for traditional language learning environment by the experimental group for discussions of essay type answers agrees with Fisher, Phelps and Ellis's (2000) statement which is though some contents are successful in virtual environment, some may not work in that same environment. The main reason for this is the participants' incompetency in writing and poor vocabulary skills to conduct discussions in English. According to Evans and Greens (2007) in academic writing the learners face many difficulties in language itself compared to the structure of the text and content. When learning in CALL environment, the participants found that it was difficult to express ideas accurately, smoothly and appropriately. Grammar, style and cohesion were also major areas which they found difficult to grapple with. Very often this does not happen in the in-class learning because at some occasions the participants discussed some facts using their L1 (Moallem, 2003; Okonkwo, 2011; Sarita & Sonia, 2014).

To learn academic writing skills with interest in CALL, the learners must be convinced that working on extra writing materials in CALL would support them in improving their writing skills. To facilitate learners' engagement in CALL, initially learners must be given gradual exposure to Moodle. The learners should also be encouraged to adopt a more learner-centered approach

and learner autonomy in constructing knowledge on academic writing skills in CALL. In addition, the content in academic writing lessons must be chosen in a very careful manner. Uploading lesson materials and videos should also be chosen with care to arouse interest and to meet the needs of the learners. Moreover by encouraging the learners to explore new concepts in lessons with the support of new technology would provide a variation to the presence of the teacher than in regular language learning classrooms. At the same time, it would be better if the language lecturers could also be trained to work in Moodle to get familiar with the new teaching learning environment.

Finally, it can be concluded that, by implementing the proposed suggestions, the competency of ESL learners in academic writing skills can be improved productively in CALL. At the same time, the blended learning environment is also recommended as the participants see benefits in both in-class and CALL to improve academic writing skills.

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