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The Effect of Integrating Computer-Assisted Language Learning Materials In L2 Reading Comprehension Classroom

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ABSTRACT

With the turn of the century, Computer-Assisted Language Learning (CALL) has got the center of attention in second and foreign language learning (ESL/EFL). Triggered with the technology of the day, Computer-Assisted Language Learning was integrated with language skills, speaking, listening, writing, and reading to serve as the medium of teaching and learning in L2 classrooms. This paper is an investigation of the effect of integrating CALL materials in L2 reading comprehension classrooms. The study was conducted in two classes each included 30 students attending a course on English reading comprehension at the Azad University in Qazvin, Iran. The comparison between the experimental and the control group pinpoint that CALL materials improve reading comprehension skill among EFL low advanced students. It was also revealed that most students have positive attitude toward CALL. The results suggests that using CALL materials both in teaching and learning reading comprehension of L2 is beneficial in allowing learners to make improvements in reading comprehension.

Keywords: CALL; reading comprehension skill; English reading; EFL Students Reading

1. INTRODUCTION

When asked about the possible roles of computer tools, instructors were cynical about computers replacing human interaction in teaching second and foreign language. They pointed out that activities that involve discussion, role play, sharing opinions, and seeing language fulfill a communicative purpose in general presented ideal scenarios for students to interact with another human being (Luiz A. Amaral and Detmar Meurers, 2011). They argued that learning to communicate in a foreign language implies learning to negotiate meaning, understanding social behavior, and observing different body language strategies (Andrews, R., Burn, A., Leach, J., Locke, T., Low, & G., Torgerson, C. 2002).

The instructors interviewed were skeptical about the possibility of computers replacing humans in this respect. However, they were very receptive to the idea of automatic support tools to practice receptive skills, reinforce the acquisition of language forms, propose remedial work, and raise linguistic awareness in general (Chapelle, 2005). This situation can be seen as an excellent motivation and opportunity for developing CALL tools that provide personalized feedback on learner errors and foster linguistic awareness of relevant language forms and categories. But traditional CALL systems provide only limited

exercise types, such as multiple choices, matching, point-and-click, or simple form filling. Moreover, their ability to provide feed-back is restricted to letter-by-letter feedback or specific hand-specified feedback messages based on matching the learner response with a pre-stored target answer, either directly or by using regular expressions (Hansol, 2000). There is thus a clear need for linguistic modeling to improve the ability of CALL systems to handle more complex exercise types, and to provide detailed individualized feedback (Luiz A. Amaral and Detmar Meurers, 2011).

CALL is a relatively new and rapidly evolving academic field that explores the role of information and communication technologies in language learning and teaching. It includes a wide range of activities and initiatives in materials development, pedagogical practice, and research. As Chambers & Davies (2001) state, however, CALL includes highly interactive and communicative support for listening, speaking, reading, and writing, including extensive use of the Internet. Materials development, pedagogy, and research in this field have developed in intellectual sophistication to the point where CALL should be considered as an independent academic field of study as stated by Chapelle (2002).

CALL, is sometimes regarded simply as a sub-section of computer assisted instruction (CAI), but because CALL deals specifically with language learning, it is both inherently multidisciplinary and academically substantive (Egbert, J. and Hanson-Smith, 2003).CALL can be said to belong to the field of applied language studies and, within this, is most closely related to second language acquisition (SLA), which is itself a rapidly evolving discipline (Luiz A. Amaral and Detmar Meurers, 2011). As Eurocall states, CALL and SLA are related to sociolinguistics, pragmatics, discourse analysis, and psycholinguistics. Computer assisted language learning is a new field in both the computer and linguistics sciences. Linking both fields, it offers good promises to teachers, linguists, and computer researchers. With the growing sense of unity between linguists and computer scientists, some of the mysteries of language acquisition will be unraveled, which can help provide more effective and principled language teaching (Kenning & Kenning, 1990).

The linguist can provide the theoretical assumptions of language learning, the efficient approaches, and methods required in the language learning and the acquisition process, while the computer scientist can help provide sophisticated means to meet the requirements generated by those approaches and methods (Hasnsol, 2000).There are many peripheral applications for computers in the education domain. Language testing, language research, and school management, for instance, all offer scopes for computer applications. From the point of view of TEFL, CALL programs help improve learning speed, individualized instruction, authenticity, efficiency, and administration. Linguists view CALL as a new device for testing current hypothesis and developing new ones accurately (Hasnsol, 2000).

1. 1. Computer Assisted Language Learning Through Time

CALL can be divided into three main periods as follow (as cited in A. Marzban, 2011):

1. 1. 1 Behaviorist CALL

In the 1960's and 1970's, the first form of computer-assisted Language Learning featured repetitive language drills, the so-called drill-and-practice method. It was based on the behaviorist learning model and as such the computer was viewed as little more than a mechanical tutor that never grew tired. Behaviorist CALL was first designed and implemented in the era of the mainframe and the best-known tutorial system, PLATO, ran on its own special

hardware. It was mainly used for extensive drills, explicit grammar instruction, and translation tests (Ahmad K., Corbett G., Rogers M. and Sussex R. 1998).

1. 1. 2. Communicative CALL

Communicative CALL emerged in the 1970's and 1980's as a reaction to the behaviorist approach to language learning. Proponents of communicative CALL rejected behaviorist approaches at both the theoretical and pedagogical level. They stressed that CALL should focus more on using forms rather than on the forms themselves. Grammar should be taught implicitly and students should be encouraged to generate original utterances instead of manipulating prefabricated forms (Jones, C. & Fortescue, S. 1987). This form of computer-based instruction corresponded to cognitive theories which recognized that learning was a creative process of discovery, expression, and development. The mainframe was replaced by personal computers that allowed greater possibilities for individual work. The communicative CALL programs provide skill practice in a non-drill format through language games, simulation, reading and text reconstruction, word processors, desk-top publishing, spelling and grammar checks programs, as used for instance in process writing.

1. 1. 3. Integrative CALL

Communicative CALL was criticized for using the computer in an ad hoc and disconnected fashion and critics charged that this use of the computer made "a greater contribution to marginal rather than central elements" of language learning (Kenning & Kenning, 1990). Teachers have moved away from a cognitive view of communicative language teaching to a socio-cognitive view that emphasizes real language use in a meaningful, authentic context. Integrative CALL seeks both to integrate the various skills of language learning (listening, speaking, writing, and reading) and to integrate technology more fully into language teaching (Warschauer, M., & Healey, D., 1998). To this end the multimedia-networked computer provides a range of informational, communicative, and publishing tools that are potentially available to every student. The current approach is integrative CALL, which is based on multimedia computers and the Internet. These technological developments have brought text, graphics, sound, animation and video to be accessed on a single inexpensive computer. These resources are all linked and called 'hypermedia', enabling learners to navigate through CD-ROMS and the Internet at their own pace and path, using a variety of media.

1. 2. CALL in Teaching Language Skills

During the past decades, theory and practice in language learning and language teaching have changed in some fundamental ways. Kelly (2006) with the development of new technologies, there has been an attendant interest in applying these new technologies in the educational arena, and in making predictions of how they would affect the educational future of our classrooms and students. In forecasting the technological future, it is important to consider what the capabilities of educational computing are, and what can be done in the language classroom that will remain current, even if the technology does not. There is nothing certain about the future of technology, except that it will no doubt become more ubiquitous and powerful (cited in Celce-Murcia, 2001).

G. Wiebe and K. Kabata (2010) did a survey on how is the effect of CALL on reading comprehension on a group of students. The findings of their research revealed the fact that CALL materials if be used in constant way could be significant in improving students reading comprehension.

Brinton and Holten (1997) state that media help us to motivate students by bringing a slice of real life into the classroom and by presenting language in its more complete communicative context. Media can also provide a density of information and richness of cultural input not otherwise possible in the classroom, they can help students to process information and free the teacher from excessive explanation, and they can provide contextualization and a solid point of departure for classroom activities.

2. METHODOLOGY

2. 1. Research Hypothesis

For the purpose of this research a Null hypothesis was employed: Integrating computer-assisted language learning material has no effect on improving Reading Comprehension of Iranian low advanced EFL learners.

2. 2. Participant

Sixty Iranian low advanced students of Azad University of Qazvin, Iran, all male and with age range 19 to 22 participated in this study. During each year, Azad University of Qazvin provided its students with some free yet qualified language learning program such as: Listening Comprehension Program, Reading Comprehension Program, Essay Writing Program, and so on. One of that provided program as it was said was Reading Comprehension Program (RCP) in which students attended classes that focused on teaching and learning RC. In April 2013, 177 students registered in the RCP. A proficiency test on reading comprehension was held that raveled students' current level of proficiency. Based on the obtained results, sixty students were in low advanced level, fifty five students were in upper intermediate, thirty nine were in intermediate level, and twenty three students were in pre intermediate level of proficiency. For the purpose of this study sixty Iranian low advanced students were chosen and they were divided into an experimental group (N = 30) and a control group (N = 30). The experimental group (from now on EG) was attending in a class that was under the medium of CALL materials, while the control group (from now on CG) was attending in a traditional class of reading comprehension. This RCP took two months, sixteen sessions. Two experienced teachers were called to give their instruction to the students in both groups. The teacher of EG was experienced in using CALL in reading comprehension classroom, while the other teacher was experienced in reading comprehension methodology in L2 teaching and learning.

2. 3. Instruments

2. 3. 1. Tell Me More Software

In order to providing the necessary CALL materials for students of experimental group *Tell Me More Software* was used. This software had the needed qualification for both teaching and learning English Reading Comprehension. The following are some of this software features:

2. 3. 1. 1. Different category of reading texts

This program provides learners with different reading texts such as: Cultural Workshop, Political Workshop, Technology Workshop, Social Workshop, and so on. Using this software, teacher is free to choose texts for his classroom.

2. 3. 1. 2. Different reading text within different category

Within each category there are lots of texts in relation with that category so the teacher is able to select several texts which have nearly the same gist. Fig 1 illustrating this feature:

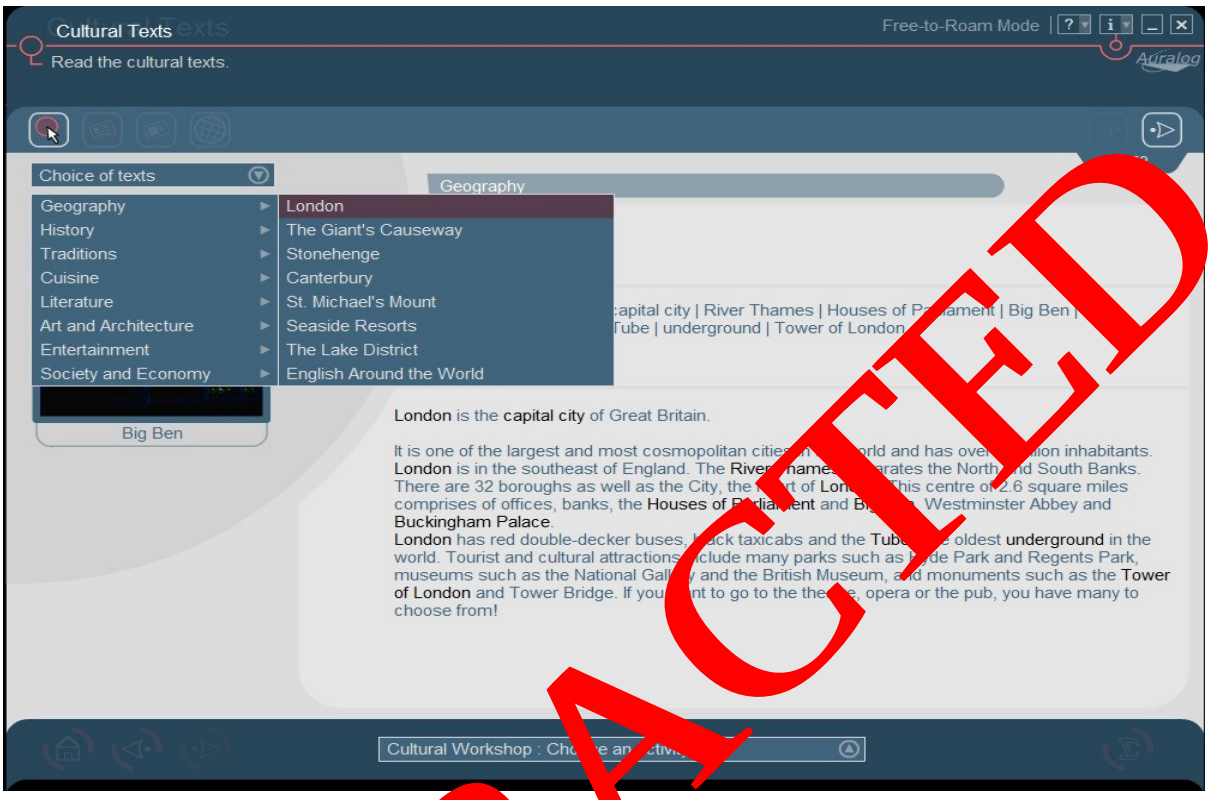

Figure 1. Different Reading Text within Different Category.

2. 3. 1. 3. Pre Reading Tasks

In this section the software developer has provided some pre reading tasks like text gist and the summarization of the text for students to work on it and to trigger their background knowledge. These pre reading tasks help students to start their reading with more considerate eyes.

2. 3. 1. 4. Post Reading Tasks

For each reading texts there are some post reading tasks that help students to render their new obtained information and to foster their ability in communication about the topic of the reading.

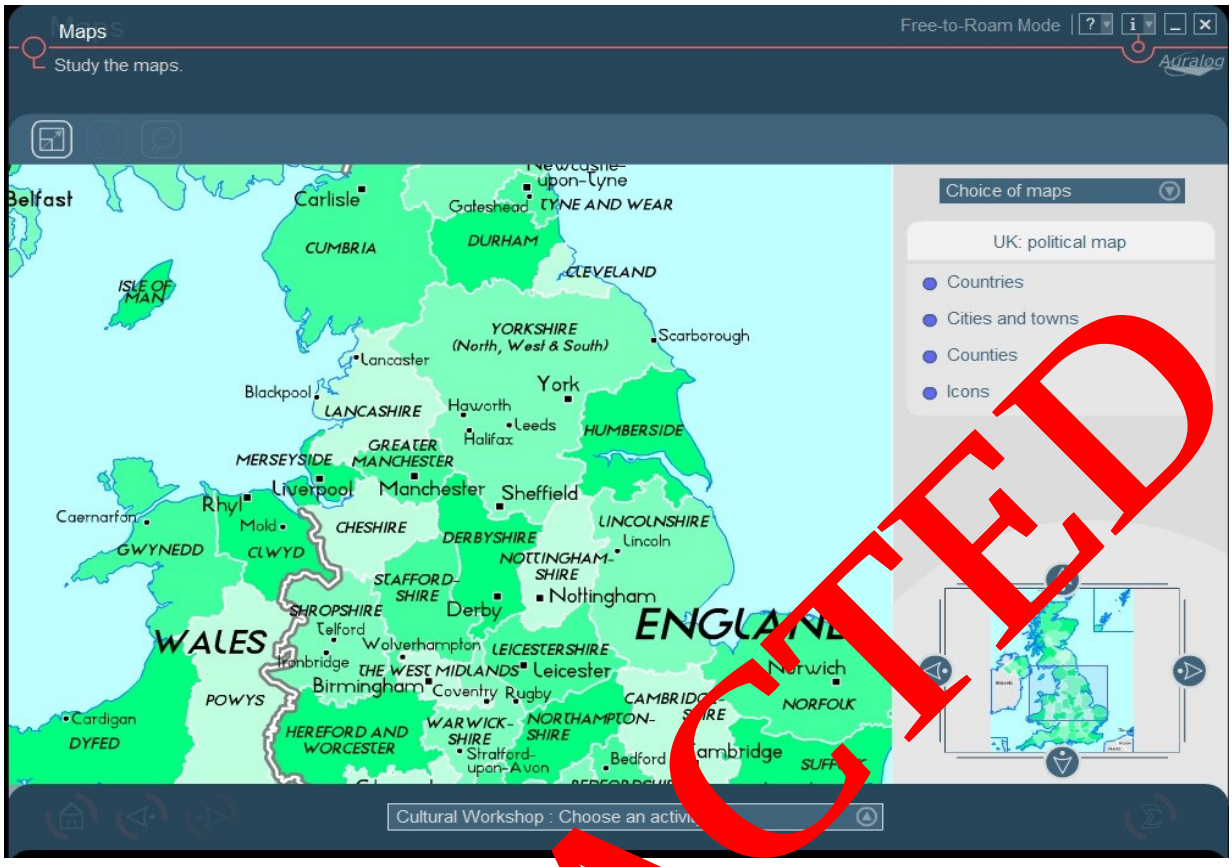

Figure 2. Po Re sks.

2. 3. 2. Proficiency Test

Prior to the start of the progr a proficiency test was conducted to divided students to different proficiency le

2. 3. 3. Pretest P ttest Desig

For test g the ull hypothesis of this research a pretest posttest design was employed.

2. 3. 4. SPSS 17

In or r to imp ve the accuracy of analyzing date SPSS 17 was used.

2. 4. Pr dure

A Re ding Comprehension Program was announced in Azad University of Qazvin, Iran, in April 2013. Sixty Iranian low advanced students all male and with age range of 20 to 23 participated in this research. Their proficiency level was confirmed by the proficiency test conducted in the beginning of the program. They were divided equally into an experimental group (N = 30) and a control group (N = 30). The experimental group was attended in a reading comprehension whose materials were taught through the medium of computer-assisted language learning. When they attended in their class for the first time, a pretest test was conducted. From the second session of the class to one the last, they were under the training of reading comprehension through CALL. *Tell Me More Software* was the selected CALL

material for this purpose. The experimental group was attending in a computer libratory included 30 computers. The *Tell Me More Software* was installed on all of computers. Each session and after students run the *Tell Me More Software* the teacher in a quite conversing manner with his students selected a text for working on it during the session. The class first went through the pre reading tasks that *Tell Me More Software* provided. By so doing, first the student brought their background knowledge to their mind and then shared it with their fellows. When they talked about the topic, the teacher read the text for them for once and then student were given 20 minutes to work on the text. For example the *Tell Me More Software* provided a Text to Speech section that made students able to listen and check pronunciation and meaning.

After these activities, the teacher started to work on post reading tasks. These kind of tasks helped students to foster what they have already learnt in the reading session. *Tell Me More Software* also provided some reading comprehension questions in relation with the text. After students answer them, they had the facilities to check their answer, to see their problematic part, and to see their scores. In the final session, sixteen's session, the post test was conducted.

In the control group the procedure was a little bit different. There were the same texts but paper based, the same pretest posttest reading comprehension and the same time of the class. On the other hand, the way reading texts were taught was different from the experimental group. There was no pre reading section for the students of CG, so they forwarded directly to the text itself. The teacher was the only source for the pronunciation, meaning, and knowledge about the text. When students finished reading they had very little conversation on it and then they obliged to answer the text questions. There were no feedbacks on the responses. At the final session the posttest was conducted.

3. RESULT

After the collection of required data the following results obtained. Table 1 is indicating the descriptive statistics of the both groups.

Table 1. Descriptive Statistics.

Group	N	Pre-test		Post-test	
		M	SD	M	SD
EG	30	60.26	20.38	71	15.55
CG	30	59.80	17.46	63.83	18.08

The results show that in the pretest time the means score of the two groups, EG = 60.26, CG = 59.80, were nearly the same. The empirical reason for this sameness in the pretest of the both groups can be related to the effectiveness of the proficiency test in placing students into their suitable proficiency levels. Nevertheless, the means score of posttest of the both classes aren't the same as they were in the pretest. The mean score of EG whose students were under the training of reading comprehension through computer-assisted language learning materials

was 71in the posttest time, on the other hand, the mean score of CG whose students attended in a traditional class of teaching reading comprehension was 63.83 in the posttest time.

The mean score of EG is 7.17 scores higher than the CG in the posttest time. These results show that students reading comprehension improved more in the EG in which the CALL materials used. For addressing the research hypothesis in a more accurate way *Tests of Between-Subjects Effects* was conducted and its results is illustrated in Table 2.

Table 2. Tests of Between-Subjects Effects.

Source	Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Test	EG	1728.067	1	1728.067	5.254	.026	.0
	CG	244.017	1	244.017	.77	.	013

a. R Squared = .083 (Adjusted R Squared = .067)

b. R Squared = .013 (Adjusted R Squared = -.004)

The p = .026 for the EG is a good confirmation for the null hypothesis rejection. With the rejection of the null hypothesis one can consider this fact that using CALL materials has a significant effect on teaching and learning English Reading Comprehension of Iranian EFL low advanced learner. Although the means score have already informed us about this fact, the Tests of *Between-Subjects Effects* is a good confirmation for this fact.

4. CONCLUSION

The aim of this study was to investigate the effect of integrating CALL materials in English Reading Comprehension of Iranian low advanced students. The results of the study showed the implementation of CALL materials in the reading comprehension classes had a significant effect on improving this skill in EFL situation.

The study is confirmed the previous done researches in relation with CALL in different second language learning skills. For mentioning some, G. Wiebe and K. Kabata (2010) CALL materials could be significant in improving reading comprehension of students. Kelly (2006) found out that CALL materials could be effective in language learning skills and especially reading comprehension.

In the result section the differences between the means score of the groups indicated the fact that by using CALL materials in reading comprehension classes the students could make benefits of that and improve their reading comprehension and it is maybe because of this reason that in this CALL materials there were introduced lots of pre/ post reading tasks that could help students in grabbing the final comprehension of the texts.

On the other hand, when the teacher be the only source of the knowledge in the class, he is probably able to answer to few of student's questions, so the interaction among the students in relation with the reading comprehension was decreasing and they weren't able to improve their reading comprehension as EG students did. Being cleared the promises of CALL materials in reading comprehension, CALL material should be one of the first consideration for language planer and teachers to use it much more than before in their reading comprehension classes.

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