

## THE IMPACT OF CMC ON IRANIAN ABSOLUTE-BEGINNERS' PROPER USE OF DEFINITE AND INDEFINITE ARTICLES

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### ABSTRACT

The present study demonstrates that technology can be adopted and integrated into the language classes and it should be considered as an effective and useful teaching tool for English language teachers. The purpose of this article is to investigate the effectiveness of a TAMA software, an educational content development, in Iranian absolute-beginners' proper use of definite and indefinite article. computer assisted instruction on students' grammatical knowledge . Forty participants were homogeneously assigned to two experimental and control groups; each group consisting of twenty participants. The experimental group were taught with the materials created through computer software material designer in the class with Interactive White Board (IWB). The control group was taught through their regular course books. During the treatment, for the experimental group, the materials were presented through both their regular coursebooks and TAMA software. However, the control group was taught, the materials only through their coursebooks. The results of the two independent samples t-tests showed that the experimental group significantly outperformed the control one.

**Key Words:** Computer Assisted Language Learning, Computer Mediated Communication, TAMA Software, Interactive Whiteboard.

### INTRODUCTION

In recent years, computer assisted language learning (CALL) has come to the forefront of language learning and teaching. Computer-Assisted Language Learning (CALL) can be defined as "any process in which a learner uses a computer, and as a result, improves his or her language" (Beatty, 2013:7). Computer assisted grammatical knowledge has been considered to be one of the most common applications of CALL. Teaching students is one of the highest priorities in every country of the world. Most of those studies shared a common finding that is related to the effectiveness of technology in education and how it assists teachers in developing teaching methods and students' knowledge (Hartmann, 2015; Sasaki & Takeuchi, 2010; Liaw & Master, 2010; Chao & Lo, 2011). Computers like any other forms of technology have been integrated into people's lives, jobs, hopes, and dreams As researchers repeatedly argue, CALL practitioners' computer literacy knowledge and skills for creating and maintaining successful CALL environments contribute greatly to the efficacy of CALL (Egbert & Hanson-Smith 2007; Guichon & Hauch, 2011; Stockwell, 2009) . Computer-mediated communication (CMC) is defined by Walther (1992) as "synchronous or asynchronous electronic mail and computer conferencing, by which senders encode in text messages that are relayed from senders' computers to receivers". In other words, communication between people in different places via the instrumentality of computers could take place

synchronously (at the same time) and asynchronously (at delayed time). Musa, Mohamed, Mufti, Abdul Latiff, Mohamad Amin (2015) CMC has assisted students in expanding their ideas, in utilizing time more efficiently, in working collaboratively via online, in accelerating work progress, and without the boundaries of time and space. CMC applications, when appropriately designed for pedagogical goals, instructional context, content, and learners, can closely approximate authentic communications “equivalent to real-life learner-to-learner or teacher-to-learner communication” (Hoven, 2006:241; Sims, 2000)

AbuSeileek (2004) studied the advantage of a computer program on Jordanian writing ability in English language. The study showed that there were statistical differences between mean scores of the writing task of the control group who received instruction via the traditional approach and the experimental group who received writing instruction via computer which was in favor of experimental group. Moradi (2015) Computer can be utilized as a useful tool by language teachers to help English language learners to improve their language abilities. He also said Computers can improve reading and writing skills and as well they can function as a supplemented tool in teaching to develop vocabulary and verbal language. Computers can affect in English language classes to teach vocabularies. Language learners need to learn the vocabulary with suitable illustrations and visual clues in context; this will help them to understand the words. Computers can easily provide effective contextual environment for learning vocabulary. Grammatical rules as one of the skills seems to play an important role in learners’ language achievement. TAMA computer software is an educational program which develops language learning contents based on textbooks. The present study explores the nature and effectiveness of learning with TAMA computer software on Iranian EFL learners. CALL has been gaining immense popularity in foreign language teaching and more educators and learners are embracing it in learning environments (Nicholas, 2010). The present brief survey of the related literature reveals that few researchers, to the best of our knowledge, have so far embarked on investigating the effects of computer softwares on Iranian absolute-beginners’ grammatical knowledge. Thus, the aim of the present study was to investigate the extent to which the TAMA computer software might be effective in increasing the correct use of the simple present tense for Iranian absolute-beginners and the following question was proposed.

Q1. Does TAMA computer software affect on Iranian absolute-beginners’ proper use of definite and indefinite articles?

## **METHOD**

### **Participants**

The participants of this study were chosen homogenies from the pool of absolute beginners students at a language school in Tehran. According to Jones (2007) absolute beginners are students with no knowledge of written or spoken English. There is no knowledge to elicit from the students. The most basic knowledge must be taught first, before the students can be asked simple questions to complete simple requests. The children were aged between 7 and 9. The reason for selecting the participants as zero beginners is that they have no English background. The participants were assigned to the experimental and control groups. The assignment of the participants of the groups was random as well. Each group consisted of 20 participants (N=20). The experimental group (N=20), in addition to their regular course books, were taught with the materials created through TAMA computer software in the class with Interactive White Board (IWB). The control group (N=20) were taught through their regular course books.

### **Instruments**

1. The participants of this study were presented with their regular coursebooks developed by Wernham and Lloyd (2010), i.e., The Phonics Series1, 2, 3. The other utilized book was Phonics Workbook by Pejmanfar and Ranjbar (2012) which had a lot of sentences related to Phonics coursebooks. Phonics coursebooks at Enekas Language Institute comprise of 19 units and each unit is further divided into two parts, and every part is covered in one session lasting for an hour and 30 minutes. In the first session, one sound, e.g., *g*, from Jolly phonics book is taught. Session two covers practicing some sentences including various items such as true/false, multiple choice, multiple answer, short answer, matching, ordering, and game developed by TAMA software. These sentences were fed into the software from Phonics Workbook by Pejmanfar and Ranjbar

(2012) for Jolly Phonics coursebooks. The classes were held twice a week. The total of twenty-two sessions covered the whole of the three terms lasting for four and a half month dedicated to this study. The participants were required to do Phonics Workbook for Jolly Phonics from the second session on as home assignment every week. At the end of the treatment, the participants' grammar improvement on definite/indefinite articles, and prepositions were assessed using the following instruments as their posttest:

2. TAMA software to develop educational content: practicing some sentences including various items such as true/false, multiple choice, multiple answer, short answer, matching, ordering, and game developed by TAMA software. These sentences were fed into the software from Jolly Workbook for Jolly Phonics coursebooks.

### Procedure

Data collection was carried out in the following order.

1) Prior to the treatment, educational contents were developed from the absolute beginners books with TAMA software, and relevant CDs were given to each student. There are two groups of students: one experimental group and one control group. The two groups received 18 weeks of instruction at Enekas language Institute as the treatment. The participants in the experimental group received materials using computer-assisted program of TAMA.

2) Later on in the first session, one sound such as upper case c, i.e., C, and lower case c, i.e., c, was taught then, then the participants practiced some sentences which were related to this sound like It is a cat.

3) From the second session on, The participants of the experimental group were given enough time to practice those sentences on the Interactive whiteboard (IWB) with the computer program. In addition, they required to provide immediate feedback, letting students know whether their answers were correct or not. If an answer were incorrect, the program showed the students how to answer the question correctly, and this helped them strengthen their procedural knowledge of English grammar, then they were given Jolly Work Book for Jolly Phonics provided by the teacher as the assignments. The book had the same sentences and vocabularies as the computer software which were made using the TAMA program.

The current researcher used inductive grammar to teach the students which was created with TAMA educational software shown on the Interactive Whiteboard in the class. To teach the grammar inductively, the teacher does not provide the grammar rules directly; instead, the structures are taught indirectly in the context.

4) Finally, after the treatment, the participants received the post-test. The post-test items were selected from the phonics handbook by Sue Lloyd (1998).

### Pilot Study

Before embarking on collecting the required data for the present study, a three-week pilot study was carried out prior to the actual experimentation. The aim of the pilot study was to test the applicability of TAMA software and also identify and correct any unforeseen problems as well as testing the amount of time allocated for answering the post-test items and procedures during the actual data collection phase. The pilot study was conducted with 15 zero-beginner children with similar characteristics to the actual participants of the study. The exact situation favorable for the future study was tried to be implemented by the current researcher. During the three weeks of piloting, the participants were presented with their regular materials taught through the required coursebooks and the TAMA software. For the administration of the post-test, the time allocated to answer the items was set to 40 minutes and all the participants were able to successfully complete the task. To be on the safe side, the researcher decided on 45 minutes as the required time for the actual study.

In conclusion, by conducting the pilot study, some technical and timing problems for the future experimentation were done away; additionally, it gave the researcher an invaluable insight into the required

procedures and effective ways to conduct the data collection most convenient to both the researcher herself and the participants.

### Reliability and Validity

In this study, in order to make sure of the reliability of post-test instruments, test-retest reliability method was applied. Prior to the actual data collection and following the pilot study, another class of zero-beginners including 15 participants was selected in order to check the post-testing instruments' reliability. In the tenth session of the semester, the first administration took place. The second administration was exactly two weeks later with the same learners under the same circumstances as the first administration. It is worth mentioning that in the meantime, no treatment on the correct use of the grammar instruments and the TAMA software was provided whatsoever. This procedure generated two sets of scores for each participant (see Appendix for the participants' scores on test-retest) and the correlation coefficient between these two sets of scores was the degree of test-retest reliability for the post-test items prior to the experiment. Pearson correlation coefficient was found to be:  $r = .898$ ,  $-1 < r < 1$ . The result showed that the post-test was totally reliable as it yielded high correlation at the significance level of  $p = .001$  between the two administrations of the same testing instruments to the same learners.

After the actual treatment and collecting the required data, in order to make sure of the reliability of the post-test results', inter-rater and intra-rater methods of reliability were carried out. Inter-rater reliability determines the extent to which two or more raters obtain the same result when using the same instruments. Intra-rater reliability assesses rating the same instrument on two or more occasions by the same rater. Regarding the inter-rater reliability, the scores of the 40 participants in the post-test were calculated by the current researcher and one of her colleagues at Enekas language school. The results of the Pearson correlations for the inter-rater reliability were found to be very high for the experimental and control groups:  $r = .994$  and  $.988$ , respectively;  $-1 < r < 1$ .

Regarding the intra-rater reliability, the scores of the 40 participants in the post-test were calculated by the current researcher twice with one week interval. The result of the Pearson correlation for the experimental and control groups proved very high:  $r = 1.000$  and  $.996$ , respectively;  $-1 < r < 1$ . See Appendix for inter-rater and intra-rater scores.

### FINDINGS

The table.1. provides the results of the descriptive statistics for the experimental and control groups in terms of the correct use of articles.

Table 1: Descriptive Statistics for the Groups' Use of articles

	groups	N	Mean	Std. Deviation	Std. Error Mean
Article scores	Control	20	87.45	3.364	.752
	Experimental	20	93.00	3.509	.785

In order to carry out the inferential statistics and gain insight into the relationship between the experimental and control groups in terms of the correct use of definite and indefinite articles, an independent samples t-test at the alpha level of  $p = .05$  was performed. The table.2. shows the results of the analysis.

Table.2: Independent samples t-test for the groups' use of articles

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
scores	Equal variances assumed	.211	.649	-5.106	38	.000	-5.550	1.087	-7.750	-3.350
	Equal variances not assumed			-5.106	37.932	.000	-5.550	1.087	-7.751	-3.349

As is shown in this table, the significance level for Levene's Test for Equality of Variances is .649. This is larger than the primary significance level of .05. According to Pallant (2007: 235), "This means that the assumption of equal variances has not been violated; therefore, when you report your t-value, you will use the one provided in the first line of the table."

In order to find whether there is a significant difference between the two groups, the section named t-test for Equality of Means should be referred to. According to the Levene's test, the values for equal variances assumed should be considered. The Sig. value in the first line of the table is .000 which is smaller than .05; therefore, it can be concluded that there is significant difference between the scores of the independent group ( $M=93.00$ ,  $SD=3.509$ ) and the control group ( $M=87.45$ ,  $SD=3.364$ ) in terms of the correct use of articles;  $t(38) = -5.106$ ,  $p=.000$ .

## DISCUSSION

Computer can facilitate language learning in various effective ways. The results of the analyses in this study have shown that the use of computer-mediated applications alongside traditional materials can help learners significantly outperform those who are just presented with their regular books. The findings of the present study lend further support to a well-established body of research substantiating the effectiveness of computer-mediated instructions. According to Moradi (2015), Computer can be utilized as a useful tool by language teachers to help English language learners to promote their language abilities in English. CALL has been gaining immense popularity in foreign language teaching and more educators and learners are embracing it in learning environments (Nicholas, 2010).

## CONCLUSION

The main objective of this study was to investigate the effectiveness of software-assisted grammar teaching on learners' grammatical accuracy via IWB in the classroom. The present study explores the nature and effectiveness of learning with TAMA computer software on Iranian EFL learners. The findings of this study also intended to use a computer program, i.e., TAMA software, which provides opportunities for both teachers and students to use different learning strategies and feedback on their performance. It also contains some features that would be quite appealing specifically to young children such as colorful pictures, animation, and game-like activities; all of which play a vital role in increasing young students' motivation. The results of the study showed that using computer-designed materials to teach grammar has a great impact on the learners' grammar learning and improvement.

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