The Effects of Teacher’s Employment of Language Learning Software on Iranian Pre-Intermediate EFL Learners’ Autonomy

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Abstract

There are arguments by practitioners for and against applying Computer Assisted Language Learning (CALL) to improve learner autonomy. This study aimed to investigate the effectiveness of teacher’s employment of language learning software on Iranian pre-intermediate EFL learners’ autonomy. To carry out the study, 60 participants were selected from among pre-intermediate students studying English at a boarding school in Khooshab, Sabzevar, Iran. After homogenizing the participants, they were randomly assigned to two groups as the experimental and the control groups. Prior to the treatments, an autonomy pre-test was administered to all the participants. Then, the experimental group received instruction using language learning software and the control group received traditional instruction using printed text materials. Each group received 16 sessions of 90 minutes of instruction and the participants took an autonomy post-test at the end of sessions. The data were collected for the research and then subjected to the appropriate statistical procedures. The results showed that teacher’s employment of language learning software had a
significant impact on improving learners’ autonomy in the experimental group. Also, the participants of the experimental group significantly outperformed the control group in autonomy.

**Keywords:** Language learning software, Autonomy, EFL learner(s).

### Introduction

Nowadays, there is no doubt about the impact of modern technologies in education. Computers have been applied in multiple settings and forms in order to help language learners (Farivar & Rahimi, 2015). A common reason for the employment of computers in language teaching and learning is that it is assumed to develop learner autonomy, which researchers and interpreters alike now set as a very significant goal (Jones, 2001). Beatty (2013) maintains that CALL is a field related tightly to other areas of study within applied linguistics such as autonomy in language learning, as well as to the teaching of particular language skills. It is entirely credible that some CALL programs “can promote the development of learner autonomy to the extent that they can stimulate, mediate, and extend the range and scope of the social and psychological interaction on which all learning depends” (Little, 1996, p. 203).

Smith (2004) maintains that computer technology may provide the learner with the means to monitor his or her own learning, to construct meaning and to evaluate his or her own performance (as cited in Farivar & Rahimi, 2015). According to Bruce (1993), the computer will improve the nature of learning by shifting the control of learning more in the hands of the learner.

Unfortunately, in Iran, textbook writers and curriculum developers have paid less attention to the role played by CALL in the classroom. In other words, teaching is not accompanied with modern technologies, particularly CALL in teaching English (Rahimzadeh, Gorjian, & Pazhakh, 2013). Iranian students are forced to follow the teacher and also the classes are teacher-centered. Likewise, educators do not want to give their students autonomy and independence to decline their autonomy. Consequently, they use traditional ways (Guilani, Yasin,
& Hua, 2011). In Iran, some of teachers and students use teaching aids such as different kinds of books and software while unfortunately; it seems that most of them have more commercial goals than instructional goals. Therefore, considering all the problems stated above, the need for a study to deal with these problems and provide some suggestions and implications to solve them is necessary.

The research is significant since it will help policy makers on the role of computers in language learning; it will also contribute knowledge for study and reference and will help by making school managers and instructors to appreciate its role in the learning and training.

The current study was designed to examine the effectiveness of language learning software on Iranian pre-intermediate EFL learners’ autonomy in comparison to the traditional instruction. Thus, this study sought to answer the following questions:

Q1: Does the teacher’s employment of language learning software have any significant effects on Iranian pre-intermediate EFL learners’ autonomy?

Q2: Is there any significant difference between the impact of teacher’s employment of language learning software and traditional method on Iranian pre-intermediate EFL learners’ autonomy?

**Literature Review**

**Computer Assisted Language Learning (CALL)**

With the progress of information technology, high attention has been paid to computer assisted language learning (He, Puakpong, & Lian, 2015). CALL has greatly changed the teaching of language, with its broad application in a lot of aspects of language teaching (Jian-ying, 2014). Computer assisted language learning is broadly used to refer to the area of technology and second language teaching and learning despite the fact that modifications for the term are suggested regularly (Chappell, 2001; as cited in Kazemi & Narafshan, 2014). Levy (1997) defines CALL as the search for an examination of applications of the computer in language teaching and learning (as cited in Kazemi & Narafshan, 2014). Under the umbrella term of Technology-Enhanced Language Learning (TELL), computer assisted language learning can
be considered as an approach which aims at applying computer technology in learning or teaching foreign languages (Maftoon & Shahini, 2012).

**Computer Assisted Language Learning Software**

Computer assisted language learning software has supplied a teaching tool for second language education and the application of computers in English language classroom is useful for both teachers and students (Nomass, 2013). Chun (2001) asserts that computer assisted language learning includes applying computer hardware and software to a teaching and learning environment (as cited in Bhatti, 2013). It has been observed from experience that applying CALL software minimizes the time frame importantly when compared with a context in where manual traditional learning is applied (Okonkwo, 2011).

**Autonomy in Language Learning and its Working Definitions**

Holec (1981) defines autonomy as the ability of learners to take charge of their own learning and this is possibly the most famous definition of autonomy. By taking charge of one’s own learning, learners hold the responsibility for all the decisions concerning all facets of the learning, they specify the objectives, contents and developments and select methods and techniques to be used and they check the procedure of acquisition appropriately and assess what has been acquired (Holec, 1981; as cited in Nguyen, 2014). Benson (2005) maintains that autonomy would be widely defined as the capacity to take control over one’s own learning (as cited in Ma & Ma, 2012). Nowadays, autonomy is broadly accepted as a desirable aim in education, and “few teachers will disagree with the importance of helping learners become more autonomous as learners” (Wenden, 1991, p. 11; as cited in Liu, 2012).

Dickinson (1987, p. 11) states that autonomy is “the situation in which the learner is totally responsible for all of the decisions concerned with his learning and the implementation of those decisions”. Afterwards, he defines autonomy as “an attitude to language learning which may not necessarily have any external, observable features” (Dickinson, 1993, p. 330; as cited in Ardi, 2013). It is clear that the definition shifts the focus, from learning situation to learner attribute (Ardi, 2013). Generally, many researchers take autonomy as an attribute of the learners.
For example, Little (1991, p. 4) states that “autonomy is a capacity for detachment, critical reflection, decision making and independent action” (as cited in Younesi, 2012). Nevertheless, some other takes autonomy as a situation. For example, Dickinson (1987) asserts that “autonomous learners are responsible for all decisions on their own learning and the implementation of those decisions” (as cited in Lamb & Reinders, 2008).

**Studies concerning the Role of CALL in Promoting Learner Autonomy**

CALL is a program where the students can learn independently using computers and it has made autonomous learning easier (Joshi, 2011). Computer technologies, software and its language learning programs could provide second language learners more independence from classrooms thereby permitting learners have the chance to work on their learning material at any time and any place (Maftoon et al., 2012). While there are various ways to promote autonomous learning, CALL is increasingly recognized as an influential means for developing learner autonomy (Murphy, 2006; as cited in Lee, 2011). Applying CALL-based programs, the learner is not anymore dependent on other learners of the class but can select the pace at which he or she develops and controls the degree of difficulty of the task at hand (Ghorbani & Marzban, 2013). Schemenk (2005, p. 107) declares that “the popularity of learner autonomy may be at least partially related to the rise of computer technology and the growing importance of computers in language learning environments worldwide” (as cited in Hayta & Yaprak, 2013).

**Methodology**

**Participants**

To collect the required data, 60 learners whose YLE (Young Learners English) test scores dwelled in a continuum of one standard deviation below and above the mean were selected from 80 Iranian EFL learners. Then, 30 learners were placed in the experimental group and 30 other learners were placed in the control group. All the participants were selected from the pre-intermediate level and male students. The participants’ native language was Persian. In other words, they were all non-native speakers of English who were studying English as a foreign
language. All the learners had studied English for about two years and they were studying in grade two of secondary school. The age range of them was between 13 to 14 years old.

**Instrumentation**

**YLE (Movers) test.** In order to ensure that the participants of this study enjoyed the same language proficiency level, the researcher applied the YLE series produced by Cambridge University. Because pre-intermediate EFL learners were under investigation in the present study; therefore, this standardized placement test was used as the right level to study. This test was at three different levels: “Beginners”, “Movers”, and “Flyers”. To secure the homogeneity of the participants, considering the level of the participants, the researcher used the “Movers”. This test included three sections: listening, reading and writing, and speaking. Because of the time and cost, listening and speaking sections were excluded and reading and writing items were utilized by the researcher. This section contained six parts which focused more on grammar, vocabulary, and reading comprehension questions.

This test composed of 40 multiple-choice, fill in the blanks, and Yes/No questions in order to determine EFL learners’ proficiency level. The time allocated to this test was 30 minutes. One point was assigned for each correct response. The students did not get negative points for false answers. This test was administered to 80 students. Based on their performance on the proficiency test, 60 students which were homogenous were selected for the treatment. Because this test was a standard one, it was assumed that enjoyed high level of validity and reliability, but the researcher explored the reliability again. The reliability of the test was computed by Kuder-Richardson (KR-21) formula following the test performance. It was 0.73 which indicates the internal consistency of the test.

**Learner autonomy questionnaire.** A learner autonomy questionnaire developed by Spratt, Humphreys, and Chan (2002), was administered to see how autonomous the participants were in learning English as a foreign language. According to Spratt et al. (2002), Holec (1981) argues that ability and responsibility are functioning in five principal areas that are: “determining objectives; defining contents and progressions; selecting methods and techniques to be used; monitoring the procedure of acquisition; and evaluating what has happened” (p. 249). All these
concepts of ability and responsibility were incorporated in this questionnaire. It had four sections including 52 questions. The first section (13 items) focused on examining the students’ views of their responsibilities. The second section (11 items) checked the students’ confidence in their ability to operate autonomously. The third section (one item) aimed to measure the levels of student motivation to learn English. The fourth section (27 items) investigated the students’ practice of autonomous learning in the form of both inside and outside class activities.

Respondents were asked to give their answers in 20 minutes in a Likert scale, sequentially assigning values of 1, 2, 3, 4, and 5 to options of “not at all”, “a little”, “some”, “mainly”, and “completely” in section one; counting 1 for “very poor” to 5 for “very good” in section two; setting 5 to 1 beside the first to the last choices in section three; and attributing values of 1, 2, 3, and 4 to options of “never”, “rarely”, “sometimes”, and “often” in section four. In this regard, the result could vary from 52 to 233. It is self-evident that the higher the mark, the more autonomous the participant is.

In this study the Persian version of this questionnaire that has been translated and validated by Fahim and Sheikhy (2011) was applied to ensure the full comprehension of the questions by the participants. According to Fahim and Sheikhy (2011), the validation process of the translated version has occurred through the collaboration of some professors at Islamic Azad University. The reliability of this questionnaire was estimated to be 0.84 using the Cronbach’s alpha coefficient which demonstrated a good degree of reliability.

Procedure

First of all, the researcher gave 80 students the YLE (movers) placement test to homogenize them. Before this test, the students were provided with enough information about the test. They were informed that there were six parts in the test and they were required to finish it according to the time limit. The students whose scores were one standard deviation above and below the mean were considered as the eligible participants for the study. The rest of participants, whose scores were not at this range, were dropped from the study. As a result, 60 students were selected among all 80 participants for both control and experimental groups.
according to their performances in the test. Randomly, one class was selected as the control group and the other class as the experimental group.

Then, the researcher gave the students his autonomy pre-test in both groups to make sure that they were homogeneous with respect to the variable of this investigation. The researcher was present at the time of administration to give the required instructions to them and clarify the probable ambiguities. After following these steps, the researcher began his employment of language learning software in the experimental group. The interactive multimedia CD-ROM applied in this study was Gaj software. This software included animations, audio, images, music, photographs, and videos. Each lesson of this software contained some practices, activities, conversation, spelling and pronunciation, and new words to reinforce comprehension, vocabulary, grammar, writing, and listening skills. The researcher used his traditional method without employment of Gaj software in the control group. The researcher implemented his treatment in 16 sessions. After 16 sessions, the same autonomy pre-test was given to students of both groups again as post-test for final measurement and evaluation.

Results

Administration and Manipulation of the YLE Test

Table 1 shows the descriptive statistics of the YLE test. According to the mean score of 11.3125 and the standard deviation of 5.3641, 60 subjects were selected to participate in the main study from among 80 participants. That is to say, the students whose scores on the YLE test fell between 5.94 and 16.67 were selected to participate and those higher or lower than them were discarded. The K-R21 reliability index for the test was also 0.73; an acceptable index.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YLE</strong></td>
<td>80</td>
<td>1.00</td>
<td>23.00</td>
<td>11.3125</td>
<td>5.36419</td>
</tr>
</tbody>
</table>

Valid N (listwise) 80
Normality Test for Autonomy

Before choosing the statistical method for comparison of data from two groups, a test of normality was conducted to show the normality or lack of normality of the data. Table 2 shows the result.

The results of the normality test indicated that p values of control group (.952 and .834) and experimental group (.633 and .368) in pre-test and post-test under the heading of Shapiro-Wilk were more than the significance level (.05). Therefore, the assumption of normality could be confirmed and the researcher could apply a parametric test such as t-test for comparing the results of the pre-test and post-test in the control and the experimental groups.

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>pre-test of control</td>
<td>.064</td>
<td>30</td>
</tr>
<tr>
<td>post-test of control</td>
<td>.063</td>
<td>30</td>
</tr>
<tr>
<td>pre-test of experimental</td>
<td>.077</td>
<td>30</td>
</tr>
<tr>
<td>post-test of experimental</td>
<td>.121</td>
<td>30</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Investigation of the First Research Question

In order to determine whether there was any significant difference between the control and the experimental groups of Iranian pre-intermediate EFL learners’ autonomy before applying language learning software, an independent samples t-test was run to compare the participants’ scores of the control and the experimental groups before applying CALL software.
Because Sig. was more than .05 (Sig. = \( p \)-value = .793 > .05), the first row of data was used to check the result of \( t \)-test. The results, as Table 3 shows, indicated that there was no statistically significant difference between the experimental and the control groups in their performances on the pre-test \( [t (58) = - .053, p = .958 \text{ (two-tailed)} > .05] \). This indicated that the participants in both groups had similar autonomy in their language learning.

To answer the first research question, a paired samples \( t \)-test between the scores of the experimental group on the pre-test and the post-test of autonomy was performed. The results are shown in Table 4. The results indicated that the difference between autonomy pre-test and post-test of the experimental group was statistically significant \( [t (29) = -11.188, p< .05] \).

### Table 3

<table>
<thead>
<tr>
<th>Independent Samples T-Test of Autonomy Pre-Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene's Test for Equality of Variances</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>Equal variances assumed</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

### Table 4

<table>
<thead>
<tr>
<th>Paired Samples T-Test of the Experimental Group on the Pre-Test and the Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paired Differences</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Pre-test</td>
</tr>
</tbody>
</table>

### Investigation of the Second Research Question

An independent samples \( t \)-test was applied to check whether or not the teacher’s employment of language learning software was more effective than traditional method in
improving of learners’ autonomy. The results of post-tests were analyzed to compare the experimental and the control groups’ autonomy of the participants.

Table 5

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>T-Test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T (df)</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>-11.20 (58)</td>
<td>.003</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-11.20 (39.71)</td>
<td>.000</td>
</tr>
</tbody>
</table>

Because Sig. was less than .05 (Sig. = p-value = .003 < .05), the second row of data was used to evaluate the result of t-test. As Table 5 displays, because Sig. (two-tailed) = .000 and it was less than .05 (α = .05), there was statistically significant difference between the experimental and the control groups on the post-test \( t (39.71) = -11.20, p = .000 \) (two-tailed) < .05]. Therefore, the results indicated that after treatment, learners in the experimental group changed significantly in their autonomy. Consequently, the results showed that teacher’s employment of language learning software was more effective than traditional method in developing of learners’ autonomy.

Discussions and Conclusions

The findings of the study are compatible with Farivar and Rahimi (2015). They carried out a project to investigate the impact of CALL on Iranian intermediate EFL learners’ autonomy. They believed that application of CALL had a significant impact on the improvement of learners’ autonomy. Also, the results of this study are in line with Fatemi, Alishahi, Seifi, and Esmaelzadeh (2015). They explored the effect of CALL on Iranian lower-intermediate EFL
learners’ speaking and listening skills and autonomy. The findings of their study supported the effectiveness of smart board in improving EFL learners’ autonomy. Rahman (2013) arrived at the same findings concerned with the aims of this study. He investigated the relationship between CALL and EFL learner autonomy at the tertiary level in Bangladesh. The results of his study revealed that learner autonomy is improved when learners can choose their own learning materials and the way of learning through independent CALL activities.

The findings of this study are approved by Meri (2012) who explored the relationship between CALL and learner autonomy in the Turkish context. Her findings showed that there is a significant relation between learner autonomy and CALL. In other words, CALL learning promoted students’ autonomous language learning. The results of the study also support Arıkan and Bakla’s (2011) findings who conducted a study on a group of Turkish university students and found that experience with blogging contributed to improving of their autonomy. The results obtained in this study are in agreement with the results obtained by Jarvis (2013) who discovered that the employment of technology affected considerably the learners’ autonomous learning in self-study centers.

The results of comparing the mean scores of the experimental group indicated that students’ performance on the autonomy post-test ameliorated in comparison with the autonomy pre-test. So, the results of paired samples t-tests showed that the method utilized in the experimental group had a significant impact on learners’ autonomy. Also, the result of independent samples t-test demonstrated that using language learning software was more effective than using printed text materials in improving learners’ autonomy. Thus, the findings revealed that teacher’s employment of language learning software positively affected Iranian pre-intermediate EFL learners’ autonomy.
References


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