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Subject:

The effect of CALL/web-based instruction on improving EFL learners' personal traits

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Chapter I: Introduction

1.1. Overview

One of the most expanded areas in educational technologies in the second half of the 20th century was computers. In the late 1950s, computers entered the developed countries. At the present time, computers and web-based instructions have become more powerful, faster, easier to use, more convenient and cheaper. They can process and keep more information, as well. Recently, the demand for using computers and internet has increased.

The conventional learning environment is all about teachers, desks, books, papers, and chalks. Nowadays, the advent of new technologies such as computer and the internet has supplemented this conventional environment with new ways of learning. Technology might be one of the factors which may affect the teaching of foreign languages. It provides opportunities for learning through media, from pictures, internet, and computer. The use of the internet and computer is widespread; nowadays, people from different places contact each other more easily than ever before. In the era of booming information and technology, the role and effects of computer and internet in teaching English language learning is undeniable. It can be used to help teachers and students to cooperate with each other and access information.

According to Ahmad, Corbett, Rogers and Sussex (1985), using computers suggests certain advantages for language teachers as they permit teachers to process and present real-life situations with flexibility. Hence, computer and web-based instruction or internet connections make better preparation for education (Jones, 2002; Cabadaetal, 2009; Yazdanpanah, Sahragard & Rahimi , 2010). The most important role that computer plays in teaching English and learning is in computer-assisted language learning (CALL). Computer-assisted Learning means the use of computer programs to facilitate learning. According to Huizhong (1985), computer-assisted learning is when computer is used as a tool; to improve students' learning and to help them understand the content more efficiently.

Web-based instruction can be considered as a “virtual teacher” for students because the students can get the instructional materials anytime and anyplace. In other words, it permits

them to get the instructional materials everywhere even away from school. With the expansion of computer-assisted language learning and web-based instruction, more questions have been raised about learner autonomy, motivation, self-efficacy, critical thinking, and some other traits. The present study seeks to examine the effects of computer-assisted language learning and web-based instruction on EFL Iranian learners', autonomy, motivation, self-efficacy, and critical thinking.

Computers and Internet are important tools for developing autonomy through activities which help learners to study without assistance from teachers (Joshi, 2011). In language learning, the role of autonomy has been discussed in the fields of EFL and ESL, and there has been an agreement among researchers about the need for a shift from teacher-centered instruction to learner-centered instruction (Benson, 2007; Godwin - Jones, 2011; Gremon & Rilley, 1995 ; Holec , 1981; Lam & Reinders , 2007; Little,1991). According to Thanasolus (2000, p. 117), learner autonomy is “ *the learner’s willingness and capacity to control or oversee her own learning*”. Little (1981, p.3) defines autonomy as the “*capacity for detachment, critical reflection, decision-making and independent action*”. Similarly, Holec (1981, p.3) defines autonomy “*ability to take charge of one’s own learning*”. Regarding both “goal” and “content”, Nunan (1995, p.138) suggests different stages, “intervention”, “creation”, and “transcendence” for students to develop autonomy. In computer-assisted language learning, autonomy can help learners modify input and gauge learning, monitor their progress, and reflect on and prioritize learning (Darasawang & Reinders, 2010; Gick, 2002; Reinders, 2006, 2007; Toogood & Pemberton, 2002).

Another related factor in web-based and computer-based instruction is motivation. Motivation is a vital element that everyone brings to every activity. Increasing motivation among students is the main concern of instructional programmes. Teachers employ different techniques to motivate their students because they know that without motivation learning cannot happen. Dornier (1994) tried to combine the various constituents of motivation and insisted on constituents that would be applicable to foreign language learning in contrast to second language learning. Dickinson (1995, p.6) states that “autonomous learner

become more highly motivated and work more efficiently''. Keller and Litchfield (2002) define motivation as a person's willingness to follow an aim or accomplish a task. According to Becker (2000), students are more willing to use computers than other tasks, and they show more positive feelings.

Another factor of concern to this study is learner self-efficacy. Self-efficacy is focusing on one's abilities and confidence. Bandura (1997) states that self-efficacy is a multidimensional structure that is used largely inside different domains such as psychological, social, and academic domains. "People's beliefs in their efficacy affect almost everything they do: how they think, motivate themselves, and behave" (Bandura, 1977, p. 53). A low sense of self-efficacy is associated with depression, anxiety, and helplessness. According to Bandura (1986), self-efficacy refers to the belief that people have about themselves in completing a task. Similarly, Aligero (2006) believes that self-efficacy is one's abilities in performing a task that influences their success and, in turn, contributes to enhanced effort and persistence. As it can be seen from the definition of self-efficacy, self-efficacy has been found to influence learner belief, engaging them in learning and how strategic they may be when dealing with a task (Pajares & Johnson, 1996; Pajares & Miller, 1994, 1995). For reasons of manageability the focus of the present study is on, motivation, self-efficacy, and learner autonomy.

Definition of the key terms

In this study, the key terms are defined as follows:

Autonomy: According to Little (1991), autonomy is *"the learner's psychological relation to the process and content of learning- a capacity for detachment, critical reflection, decision-making, and independent action"* (p. 45)

Computer- assisted language learning: (CALL) is used as a tool to enhance and improve learning. Januszewski and Molenda (2008) define computer- assisted language learning as techniques for using technology in the field of language learning.

Learner autonomy: according to Breeze (2000), learner autonomy is an investigation of thinking and experience. Little (1990, p.7) holds that learner autonomy is fundamentally a matter of the learners' psychological relation to the process and content of learning.

Motivation: according to Ryan and Deci (2000), *motivation "concerns energy, direction, persistence and equifinality—all aspects of activation and intention"* (p.69)..

Self- efficacy: refers to beliefs in one's ability to organize and execute the courses of action required to produce given attainments (Bandura, 1997, P3).In other words, self-efficacy refers to one's capabilities to execute a specific behavior in a specific situation. For the purpose of the present study, all the above-mentioned attributes will be measured as the participants' performance on specially designed questionnaires.

Web-based instruction: includes a variety of on line instructional activities which improve the quality of interaction and learning. It provides the opportunity for learners to examine the task from different perspectives.

Statement of the Problem

Many studies have been conducted on the impact of web-based instruction and computer-assisted language learning on learner motivation, self-efficacy, and autonomy (Ahmed, Corbett, Rogers & Sussex; 1985; Dhaif, 1989; and Larson, 1999). The wide access to the internet might help learners to improve their motivation, self- efficacy, and autonomy. The present study intends to investigate the effect of CALL/web-based instruction on improving the above-mentioned personal traits of EFL learners.

Significance of the study

Integrating computers and web-based instruction into language learning process, which can offer a more powerful and authentic language learning environment, might be one of the ways to help EFL learners to satisfy their needs for learning. According to Ahmad,

et.al. (1985), using computers offers certain benefits to teachers, as they permit teachers to present flexible and authentic materials. Although many researcher have studied the effect CALL/web –based instruction on EFL learners, there are few studies investigating the effect of CALL/web –based instruction on EFL learners’ motivation, self- efficacy, and autonomy. Therefore, the purpose of the present study is two-fold:

First, it will explain computer-assisted language learning (CALL) , and web-based instruction; and then, the differences among motivation, self –efficacy and autonomy will be reviewed.

Second, it will investigate the effect of CALL/web –based instruction on improving EFL learners’ motivation, self –efficacy and autonomy.

Research Questions

The present study aims at answering the following research questions:

RQ1. Is there a significant difference between the effects of CALL/web–based instruction and conventional teaching methods on Iranian EFL learners’ motivation?

RQ2. Is there a significant difference between the effects of CALL/web-based Instruction and conventional teaching methods on Iranian EFL learners’ self- efficacy?

RQ3. Is there a significant difference between the effects of CALL/web–based instruction and conventional teaching methods on Iranian EFL learners’ autonomy?

Hypotheses

Based on the above questions, the following null hypotheses are formulated:

1. There is no significant difference between the effects of CALL/web–based instruction and conventional methods on Iranian EFL learners’ motivation.

2. There is no significant difference between the effects of CALL/ web–based Instruction and conventional methods on Iranian EFL learners’ self- efficacy.

3. There is no significant difference between the effects of CALL/ web-based instruction and conventional methods on Iranian EFL learners' autonomy.

Limitations and Delimitations

There are some limitations in this research study. One of the main challenges will be finding 90 homogenous students with characteristics suitable for the purpose of this study. Furthermore, the participants will be selected from among the students of English language institutes and will be roughly at intermediate level of proficiency. This implies that there might be limitations in the generalizability of the findings. In addition, the most important limitation will be finding an institute which is equipped with computers and the internet. In this study, the sex of the students will not be taken into account. Meanwhile, the result of this study may be affected by many other variables such as culture, native language, social factors and so on. This means that care must be exercised not to generalize the results beyond their proper limit.

Chapter II: Review of the related literature

2.1. Introduction

This chapter is an effort to review and to explain some of the studies that have been carried out by other researchers.

2.2. Computer – assisted language learning (CALL) / web-based instruction

Computer-assisted language learning has to do with using technology (Januszewski & Molenda, 2008). It provides new opportunities for people to learn at their own convenience and pace. According to Warschauer and Healey (1998), the history of CALL can be divided into three stages: behavioristic CALL, integrative CALL, and communicative CALL. Many studies have been conducted on CALL, most of which have shown the positive effect of CALL on language learning (Almekhlafi, 2006; Benson & Mokolichick, 2007; Ertmer, Ottenbreit- lefwich & York, 2006; Teo, 2009). Kang (1999) holds that computer and technology can positively affect EFL classrooms by allowing learners to discover authentic situations and communication. Greany (2000) declares that because of the interactive features of the classrooms which are equipped with technology, students' motivation is enhanced. Similarly, Moyora (2006) believes that by using multimedia in EFL classrooms, students' interest will be enhanced.

In a study conducted by Fletcher and Atkinson (1972), the participants of the experimental group received computer-assisted language instruction 8-10 minutes a day for five months; the rest of the day was the same for all students. The findings of the study showed that the students who received computer-assisted instruction performed better than who did not.

Web-based learning continues to attract the attention of researchers (e.g. Dlaska, 2002; Lin & Hsu, 2001; Liou, 2001; Liou & Yang, 2002; Sun, 2003). Theoretically, web-based instruction is a suitable environment for learning language. Using web-based instruction permits teachers to practice with their students individually and in small groups. Many studies have been conducted to investigate the effect of web-based instruction on language learning.

As an example Greany (2002) examined the students' perceptions of using multimedia for language instruction in Spanish classes. She found that most of the students agreed that instruction was facilitated in the multimedia environment.

In another study, Al-Jarf (2004) investigated the effects of Web-based learning and conventional learning on EFL learners' writing. He found that using web-based instruction as a supplement in conventional classes has significant effects on writing structure. The study also examined the effects of instructional technology and distance learning. Based on the results, a positive correlation was found between students' learning and on-line instruction. It was reported that the experimental group performed better than the control group.

Although computers and the internet have a significant role in language learning, the fun factor, multimodal practice with feedback, real life situation, variety in the resources available and learning styles used, pair or small group work, exploratory learning with large amounts of language data, there have been a number of disadvantages. It is time consuming, computers are not suitable for all the activities in the classroom, it cannot cope with ambiguity, the time and effort required to develop CALL programs could be considerable, and thus their cost-effectiveness becomes questionable. It also requires competence in the target subject area, pedagogical skills and computer experience.

2.3. Motivation

Applying technology to improve learners' motivation has been the concern of several researchers (Chung, 1991; Guthrie & Richardson, 1995; Lieu, 1997; Scardamalia & Bereuter, 1991; Van Aachen, 1999). Motivation has an important role in the process of language learning. However, in designing a web-based or computer-based course, teachers must consider that each learner has different interests and expectations.

Gardner (1985) defines motivation as "the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity(p.10)".

According to Dornie (1994 a), “*the exact nature of the social and pragmatic dimensions of second language motivation is always dependent on who learns what languages where*” (p.275). Motivation is an indispensable concern of teacher. (Linnenbrink & Pintrich, 2003).

Keller and Litchfield (2002) state that true motivation occurs at three levels: “*motivation to learn, motivation to work, and self-motivation*”. Each level has a particular function for the learner.

Becker (2000) states that when students work with computers, they exhibit positive feelings and a more active pattern of participation. Motivation can be divided into two types: intrinsic (internal) and extrinsic (external) .

2.4. Learner autonomy

According to Dickinson (1995), “*autonomy can be seen as an attitude towards learning in which the learner is prepared to take, or does take, responsibility for his own learning*” (p.167). Learner autonomy is different from autonomy. Cottrel (2000) believes that learner autonomy must be the aim of all learning.

Little (1991) defines autonomy as “*the learner’s psychological relation to the process and content of learning- a capacity for detachment, critical reflection, decision-making, and independent action*” (p. 45).

Fischer (2007) argues that CALL researchers can study learner autonomy in one of two ways: (1) *collecting data on students’ learning strategies and degree of reflection while using CALL materials (e.g., self-reports); or (2) identifying (e.g., for future CALL developers) design principles that will promote learner autonomy.* (Fischer, 2007, p. 418). Schwienhorst (2003) maintains that learner autonomy in CALL means critical self – assessment so that they can control themselves.

In order to promote autonomy in CALL, Schwienhorst (2003) sketches three approaches; the social-interactive approach, the individual-cognitive approach, and the experimental-participatory approach.

Spratt, Humphreys and Chan (2002), investigated the relationship between motivation and autonomy in literature. They found a significant relationship between motivation and autonomy..

2.5. Self –efficacy

Self-efficacy, grounded in the theoretical framework of Bandura's social cognitive theory, is defined as *“people's judgments of their capability to organize and execute courses of action required to attain designated types of performances”* (Bandura, 1986, p. 391). Hanna and Land (1997) discovered that *“learners' computer self-efficacy had a positive effect on the ability to search for information”*. Levine and Donitz-Schmidt (1998) conclude that *“as participants expressed stronger computer confidence, they also demonstrated more positive attitudes toward computers and also reported more knowledge about computers”*. In a similar study, Osborn (2001) reported that *“students who had strong confidence in their computer skills and less computer anxiety were more likely to persist in an online course”*.

In other study, Joe, Bong, and Choi (2000) investigated the relationship between academic self-efficacy, self-efficacy for self-regulated learning, and Internet self-efficacy on learners' performance in Web-based instruction. Based on the results, a positive correlation was found between computer self-efficacy and students' success.

Chapter III: Methodology

3.1. Introduction

This section specifies the participants, instruments, data collection, and data analysis procedures.

3.2. Participants

In the present study, a sample of 90 male and female Iranian EFL learners with an age range of 16 to 20 studying English at different language institutes will be selected. Moreover, the participants will be selected from among intermediate level learners.

3.3. Instrumentations

To answer the research questions the following instruments will be used:

1. The Michigan test of English language proficiency
2. An autonomy questionnaire
3. A motivation questionnaire
4. A general, and an academic self –efficacy questionnaire

First, to homogenize the participants and to make sure that they are all at the same level of proficiency in English, the Michigan test will be administered. The Michigan test consists of three sections, and each section measures learners', grammar, vocabulary, and reading comprehension. This reliable test consists of 40 items on grammar, 40 items on vocabulary, and 40 items on reading comprehension in multiple-choice format.

Second, an autonomy questionnaire with 21 items on a five-point Likert scale and coded as (A. Never, B. Rarely, C. Sometimes, D. Often, E. Always) will be given to the participants to obtain their beliefs about autonomy.

Next, a modified version of Gardner's Attitude/Motivation Test Battery (AMTB) questionnaire on a 5-point Likert scale from 'strongly disagree' to 'strongly agree' including 25 items will be given to the participants.

Finally, the General self-efficacy scale will be used to measure the participants' self-efficacy. The version of the self-efficacy scale to be used in the present study has 12 items on a 5-point Likert scale. The descriptions are 1 disagree strongly, 2, disagree moderately, 3, neither agree, nor disagree, 4, agree moderately, and 5, agree strongly. The participants' academic self-efficacy will be measured using Chemers, et.al's. (2001) questionnaire. It includes 8 items. The participants will be asked to report on a scale from Disagree Strongly to Agree Strongly.

3.4. Procedure

The following procedure will be followed in order to achieve the purpose of the present study.

First, to homogenize the participants, a general proficiency test (The Michigan English Language Proficiency Test) will be administered at the beginning of the study. The participants will be informed of the purpose of the study to remove any possible source of anxiety. In the second stage, the autonomy, motivation, and self-efficacy, questionnaires will be given to all the participants. The participants will have 50 minutes to complete these questionnaires. Then, the participants will receive their treatment, during which half of the participants will be instructed through web-based / CALL-based activities and the other half will receive conventional classroom instruction. At the end of the experimental period, all the participants will be asked to respond to the same questionnaires again. The obtained data will then be submitted to statistical analysis.

3.5. Data analysis

To analyze the obtained data and to answer the research questions, three separate ANCOVA procedures will be used.

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