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Enhancing Performance Knowledge of Grammar: Modern-based Instruction Methods Vs. Conventional Methods

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Abstract

Foreign language education and technology use is one of the research field that is continuously growing. The present study was designed to explore whether there is any significant difference between CALL-based instruction and conventional methods in teaching ESP learners in Iran. The sample of this study consisted from 98 students from Department of Foreign Language Education at Tonekabon Payam Noor University (PNU) who were distributed randomly on an *experimental group and* a *control groups. These classes incorporated with electronic pen pals, interactive whiteboard (IWB) and threaded discussions in an undergraduate-level elective CALL course (grammar 1 &2) offered during the academic year of 2014-2015. This study also attempts to bridge the gap between the theoretical and practical sides of using CALL in teaching grammar and linguistics. There upon, the findings of this study may be functional for different categories of people; it may help ESP curricula designers and ESP methodologists develop teaching materials which suit various ways of teaching and match students' level of achievement in grammatical structures. It is anticipated that this study shed light on the benefits of using computers in language learning in general, and in learning English grammar in particular.*

Keywords: *ESP, instructional language teaching, CALL-based instruction, technology*

Introduction

Recently, the demand for using computers and Internet has been increased. Computer-assisted Learning means the use of computer programs to facilitate learning. With the expansion of computer-assisted language learning and web-based instruction, many questions come to mind about learners' grammar learning. The influence of these over powerful technological tools supports all aspects of the educational, business, and economic sectors of our world. It's undeniable that just as the computer has established itself firmly in the world of business and communication technology, it has also succeeded in acquiring a fundamental role in the educational process. This role is becoming more powerful as computers become cheaper, smaller in size, more adaptable and easier to handle. The idea of using computers by the purpose of teaching in subjects like modern languages arouses mixed feelings and meets with a variety of reactions. The fact that computers are used in the teaching of other subjects and are put to a great many applications in society makes one suspect that no field lays completely outside their scope and that they might indeed be of some use.

Literature Review

According to what Hubbard (2009) mentioned, as computers have come more a part of our everyday lives- and permeated other areas of education- the question is no longer whether to use computers, but how. Researchers in CALL field of study, practitioners and developers have a critical role in helping the overall field of second language acquisition come to grips with this domain. Given that students access to the Internet easily and use it for several purposes, teachers also must be open to join their students to benefit from their being comfortable with technology to infuse into daily activities in classrooms (Barsotti, & Martins, 2011; Gray, Andrews, & Schroeder, 2012) . In several studies (Peters, 2006; Wong & Benson, 2006; Lambert, Gong, & Cuper, 2008) found similar results, showing that a single course approach or short in-service CALL training are not sufficient, though it affects participants' attitudes towards technology positively. In contrast with these studies, Thiemann's (2008) findings of the study conducted with

the 223 pre-service teachers in which this longitudinal 5-year study showed that 85% of the pre-service teachers infused several technology tools into instructional practice with their K-12 students. Kressler's (2007) web-based survey of 108 graduates of TESOL master's degree programs show that although the teachers were confident about CALL overall, they did not feel the same way in creating and integrating CALL materials. The study conducted by (Fisher, 2009) on the perceptions of 5 trainee teachers over the nine months of their postgraduate training course in England showed that the teachers were reluctant at the very beginning due to a lack of confidence; however, when they are provided with good classroom practice, they adopted methodological approaches to their own teaching. The need for technology education in the teacher education, professional development has been stressed out by several studies (Daniel, 2010). As Egbert (2010) points out, teachers should also find out the ways to work with technologically rich and poor environments, focusing on how to assess students‟ needs, interests and abilities. Whether and how the knowledge and skills that teachers "learn" during their education programs or professional development in CALL actually transfer to their teaching practice in real learning contexts requires utmost importance (Hong, 2010; Egbert, Huff & Lee, 2011). Here the important question is, how learning opportunities for teachers can be made so that they learn how to infuse technology into their teaching. In other words, planning each and every detail of the training, as in each stage of life, is important (Sergeant, 2000; Mayo & Kajs, 2005; Toledo, 2005; Hockly, 2012. Moreover, Göktaş, and Yıldırım (2008) suggest that ICT courses can help to improve teachers‟ ICT competency; however, they add that in addition to the ICT courses offered to the students in the faculties of education, another ICT related course should be included in the curriculum which will integrate their subject matter such as a foreign language. To the best knowledge of the author, there is no currently conducted on introducing an ICT related course that integrates teacher candidates‟ subject matter, which is English language teaching in the current study. Therefore, the current study concerned with the relationship of the integration of ICT into English language teaching and their use of computer technology in the classroom will fill this gap in the literature. Moreover, it will also help us find out the effect of contextual characteristics on the usage of CALL-based materials, especially the school climate.

Significance of the study

With recent advances in multimedia technology, computer-aided language learning (CALL) has emerged as a tempting alternative to traditional modes of supplementing or replacing direct student-teacher interaction, such as the language laboratory or audio-tape-based self-study. The integration of sound, voice interaction, text, video, and animation has made it possible to create self-paced interactive learning environments that promise to enhance the classroom model of language learning significantly. A growing number of textbook publishers now offer some sorts of educational software, and educators can choose among a large variety of various products. The practical impact of CALL in the field of foreign language education has been already rather modest. Most of educators are reluctant to embrace a technology that still seeks acceptance by the language teaching community as a whole (Kenning & Kenning, 1990). A number of reasons have been cited for the limited practical impact of computer-based language instruction. Among them are the lack of a unified theoretical framework for designing and evaluating CALL systems (Chapelle, 1997; Hubbard, 1988; Ng & Olivier, 1987); the absence of conclusive special evidence for the pedagogical benefits of computers in language learning (Chapelle, 1997; Dunkel, 1991; Salaberry, 1996); and finally, the current limitations of the technology itself (Holland,1995; Warschauer,1996).The rapid technological advances of the 1980s have raised both the expectations and the demands placed on the computer as a potential learning tool. Educators and second language acquisition (SLA) researchers alike are now demanding intelligent, user-adaptive CALL systems that offer not only sophisticated diagnostic tools, but also effective feedback mechanisms capable of focusing the learner on areas that need remedial practice. This study may help teachers by facilitating their role as well as students by helping them absorb the structures and rules of English quite easily and smoothly. Finally, this study may encourage other researchers to conduct further studies on the same topic, which will enrich both the local and international literature. Integrating computers and technological instruments 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.

Methodology

The use of technology, specifically multimedia, for foreign language instruction has expanded too fast in Iran during recent years. Studies of the effect of technology-enhanced instruction on achievement and studies of student attitudes regarding learning with technology have also increasingly been reported. However, most of these studies have examined the use of only one element of technology, and those regarding student grammar have been largely concerned with the use of computer-mediated communication via e-mail or networking (Beauvois, 1994, 1996, 1998; Cononelos & Oliva, 1993; Kern, 1996; Sanaoui & Lapkin, 1992; Warschauer, 1996). This article reports on a descriptive study of student grammar learning about the use of a variety of Technological components within one course. Specially, it reports the perceptions and ability of understanding and learning of university students enrolled in basic English

grammar classes during the first year of implementation of technology- enhanced language learning. On the other hand, the world is heading towards knowledge economy and a lot of money will be invested in computer assisted language learning instructional software programs. The wide access to the internet might help learners to improve their grammatical competences and learn linguistics in a better manner of understanding. The present study intends to investigate the effect of CALL–based instruction on improving the grammar learning of ESP learners. Based on this we considered **2** groups of EFL learners from Payam Noor University. We divided them in to a control group and experimental group. The classroom material was "Modern English II". In the traditional class, only the book was utilized while in the computer-enhanced class, incorporated task-based Internet activities, an interactive, electronic pen pals, interactive whiteboard (IWB) technology and threaded discussions in addition to the book. In this research as a first step, to homogenize the participants and to make sure that they are all at the same level of proficiency in English, the Michigan test was administered. Then, the participants received their treatment, during which half of the participants were 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 asked to respond to the same questionnaires again. The obtained data will then be submitted to statistical analysis. A modified CALL-based version of Stauble's Test questionnaire was used as a questionnaire. This questionnaire played as a pretest after homogenizing of the participants and also played the role of post test after the treatment to find out if teaching through using CALL makes any significant different on learners' production or not.

Instrument

In this research we want to find out if CALL and modern teaching tools have any effect on **ESP learners' grammar achievements** and on the other hand finding the quality of learners' productions. The main purpose of this study focuses on the method of teaching grammar and distinguish the results of using both modern teaching method (CALL-based) and traditional teaching method (GTM, Audio-lingual and etc.). As it is mentioned in the previous sections we used Michigan proficiency test to homogenizing the participants. The Michigan test consisted from 25 items in a reliable multiple-choice format. Other instrument which used in this study was a modified version of Stauble's questionnaire on a 5-point Likert scale from 'strongly disagree' to 'strongly agree' including 25 items. The descriptions are 1 disagree strongly, 2, disagree moderately, 3, neither agree, nor disagree, 4, agree moderately, and 5, agree strongly. The questionnaires were submitted to a panel of five experts who were instructors in the English language and another panel of 10 individuals who majored in English education. The majority of these individuals possessed academic credentials at the level of a master's degree or above. These experts confirmed the relevance of each item and indicated no question in their view appeared irrelevant.

Participants

The participants in the study were 98 Translation training program who were passing grammar (1&2) via technical tools and internet offered during the 2014-2015 academic year in the Department of Foreign Language Education at **Payam Noor University (PNU)**, Tonekabon branch. Considering the amount of the information that was needed to be cover in the course, a two hour lab class allowing structured practice was held for students, especially who were not comfortable with technology. The profile of the participants is provided in Tables 1 and 2.

Table1. The Profile of the Participants in Grammar (1&2) course

Age		Gender		Year of learning English	
19-21	**36**	**Male**	41	**5-8**	28
22-26	44	**Female**	29	Less than5	70

Table2. Teachers' Information

Years of experience via CALL and technical tools	3 years	
Gender	**Male**	1
	Female	2

Test Validity and Reliability

The test content was validated by a team of English language specialists. The team was asked to validate the content of the test with regard to test instructions, the relevance of questions to the main content of the study, its suitability to the research goals and objectives, the arrangement and number of questions, and the suitability of the time allocated to the test. The remarks of the validating team, their notes and suggestions were taken into consideration, and the researchers made the necessary modifications before applying the test. The test reliability was obtained through a test-retest method, which was applied on a pilot group of (15) students who were randomly chosen from the population of the study and excluded from the sample. The test was repeated on the same group to check its reliability two weeks later. The reliability correlation coefficient of the test-retest

was calculated using Pearson correlation formula. It was found to be (0.81), which is considered to be suitable from a statistical point of view for the purpose of this study.

Procedures

The following procedure was 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**) was administered at the beginning of the study. This descriptive study has illustrated the perceptions of one group of university students about language learning in a technology environment. These were beginning language learners who perhaps had limited English skills as well as limited motivation and performance. The students' knowledge of grammar regarding the effect of technology-enhanced instruction on their learning of **English grammar** requires follow-up study. Ideally, the purpose of both the traditional and computer-assisted cooperative language leaning classrooms is to provide a space in which learning and its facilitation can take place. During the process of optimizing the multimedia English teaching, students are not too dependent on their mother tongue, but will be motivated and guided to communicate with each other. Concerning the development of technology, we believe that in the future, the use of multimedia English teaching will be further developed. The process of English learning will be less time-consuming but more student-centered. Therefore, it promises that the teaching quality will be improved and students' applied English skill scan is effectively cultivated, meaning that students' communicative competence will be further developed. In conclusion, we believe that this process can fully improve students' ideation and practical language skills, which is helpful and useful to ensure and fulfill an effective result of teaching and learning. The main aim of this study was to find out if ESP learners can learn grammar via modern systems and tools better or not. During the treatment it has been seen that students were so satisfy of learning in this way and tried their best to be active. Also it was asked from the students to make a PowerPoint about a section, related to the mentioned grammar book. Also its better to mention in here that we modified the Stauble (1984) questionnaire in the form of computer- based questionnaire and the participants of this study were all had to answer the questions by choosing items in personal computers in lab.

Data Analysis and Findings

At last the results clearly showed that the teachers mainly focused on the tools that helped them have the students improve their grammar, and interactive whiteboard (IWB) technology and instructional software programs was the common tools which teachers used for introducing grammatical structures as well as brain-storming activities to the classrooms. The research question was translated into the following hypothesis: There is no significant difference between the CALL-web based method and traditional on EFL learners' grammar learning. To probe the present question we considered table 1for investigating the results of the pre-test as follow:

Table1. Pre-test results

Group	N	Mean	Std.	Std. Error	Sig
Experimental Group	40	58.41	8.14	1.46	.351
Control Group	40	56.85	5.62	1.21	

As Table 1 shows, there is no difference between the two groups in terms of learning grammar ability prior to giving them any instruction regarding the conventional methods. After the pre-test, four one sessions of call/web based instruction regarding grammatical characters in English were given to the experimental group. Finally, a post-test was given to both groups to see whether call/web based instruction has any effect on their grammatical competences or not. The results are as follows:

Table2. Post-test results

Group	N	Mean	Std.	Std. Error	Sig
Experimental Group	40	63.10	2.89	0.37	.001
Control Group	40	56.41	8.16	1.39	

As Table 2 shows, there is a significant difference between the two groups in terms of their grammar learning due to instruction is undeniable and it has been proved that CALL and web- based instruction is more effective method than traditional one.

Results and Discussion

In considering 'the impact of technology' what do we mean by 'technology'? Current information and communication technologies are diverse, ranging from access to broad band and the internet, to classroom display technologies, networked technologies such as online learning environments, and specific tools and devices such as data loggers and handheld computers. We must not wrongly transfer findings from specific uses of technology to broader judgments about the effect of technology in learning. The often quoted Angrist and Lavy study of 2001 offers an example of this error. It found small negative impacts on learning. It in fact evaluated a very specific programmed learning approach, the outcomes from which cannot be generalized to other

contexts or uses of technology. Nonetheless it received considerable attention in the press, including false conclusions that technology was bad for learning. In considering any study of the role of technology in learning, it is important to bear in mind which findings can or cannot be generalized to contemporary UK settings. Shifting from pedagogical paradigm is not always necessarily successful. Language teaching and learning has the same position. With the wide spread and development of Information and Communication Technology (ICT) in our daily lives, technology provides lots of opportunities for language teachers and learners to benefit or suffer from. Learning a foreign language, such as English, French, etc., has increased in popularity, and also became a necessity in our communicative world, therefore, the need to combine both technology and language became a vital part of language scholars and researchers' jobs. Literate, communicative, and technology-based world has to accept the challenges of applying new movement in education either negative or positive. Several e-learning technologies are available for use in educational context. Although its forms are different in different context based on the economical situations of that context, almost all of the settings are trying to apply technologies in their education to meet the demands of learners and teachers. For the purposes of this article, data are reported in numbers and percentages of student responses for each statement. The statements are ordered from those receiving the highest number to the lowest number of responses expressing agreement. The findings of the study revealed that: 1. there were statistically significant differences between the students' achievement mean scores in grammar attributed to the instructional method of teaching. This difference is in favor of the students in the experimental group. This difference is in favor of male students. 3. There were statistically significant differences between the students' achievement mean scores in grammar attributed to stream of study. This difference is in favor of the scientific stream students.

Language Skills and Technology

Levy (1997) defined Computer-Assisted Language Learning (CALL) as "the search for and study of applications of the computer in language teaching and learning" (Levy, 1997, p.1). Although the name includes "computer", the term CALL embraces any applications of Information and Communication Technology (ICT) to teaching and learning foreign languages. 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. The use of technology in foreign language learning also appears to influence the development of linguistic skills. Several researchers have reported an improvement in student writing skills through the use of networked computers (Beauvois, 1998; Cononelos & Oliva, 1993; Warschauer, 1996). According to Beauvois, students in the networked writing project displayed more fluidity of conversation, more use of complex sentences, and more self-disclosure. She believes that the elimination of strong teacher dominance freed students to express them, resulting in a larger quantity and better quality of communication. There have been reports of improvement in reading as well. In Beauvois' 1994 study, 43% of the students reported that reading skills had improved. Lunde (1990) also reported that students of Japanese enrolled in a computer mediated communication project showed improvement in reading comprehension. Furthermore, in follow-up interviews in the Beauvois study (1994), many students expressed an increased confidence in speaking. The researcher speculates that the increased language use promoted by the LAN environment promoted this self-confidence. She implies that the conversational aspect of writing via the network helped students to routinize a certain number of expressions, promoting the development of automatic structures that aid speaking. She concludes more boldly in the later study (1998) that LAN writing supports oral language development. Sanaoui and Lapkin (1992) also found that "considerable growth occurred in French-speaking skills and possibly listening and reading comprehension as well, which implies that an explicit focus on one area can have an effect on the other skills" as well (p. 544). With the rapid development of science and technology, the emerging and developing of multimedia technology and its application to teaching, featuring audio, visual, animation effects comes into full play in English class teaching and sets a favorable platform for reform and exploration on English teaching model in the new era. It's proved that multimedia technology plays a positive role in promoting activities and initiatives of student and teaching effect in English class. If we neglect or ignore technological developments they will continue and perhaps we will never be able to catch up, irrespective of our discipline or branch. For this reason it is important for language teachers to be aware of the latest and best equipment and to have a full knowledge of what is available in any given situation. Teachers can use Multimedia Technology to give more colorful, stimulating lectures (new Horizons). There are many techniques applicable in various degrees to language learning situation. Some are useful for testing and distance education, and some for teaching business English, spoken English, reading, listening or interpreting. The teaching principle should be to appreciate new technologies in the areas and functions where they provide something decisively new useful and never let machines takeover the role of the teacher or limit

functions where more traditional ways are superior. There are various reasons why all language learners and teachers must know how to make use of the new technology. Here we also need to emphasize that the new technologies develop and disseminate so quickly that we cannot avoid their attraction and influence in any form.

Conclusion

Sanaoui and Lapkin (1992) found that technology encouraged the development of independent learning characteristics in high school students. In an e-mail exchange project between these students and native French speakers, students assumed increased responsibility for their learning and broadened their cultural awareness. Beauvois (1998) found that students participating in a Local Area Network (LAN) writing project showed positive attitudes about learning in that setting. She concluded that students felt positive because the LAN represented a low-anxiety situation and because they had more control than in a traditional classroom. These results support findings from an earlier study (Beauvois, 1994) in which the researcher concluded that the LAN is an effective motivating force. Findings of the current study shows that using CALL-based instructions have more effect on ESP learners' grammar achievements Moreover this study implies that instructors have an important role in technology enhanced learning environments, especially those that incorporate complex learning paradigms involving constructivist or whole language principles. However, there are many more opportunities for students to gain confidence practice and extend themselves, especially for ESP students who learn the language for more than just fun. For them to keep pace with ELT and gain more confidence they have to stride into the world of multimedia technology.

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