Original Paper

The Impact of Computer Games on EFL Learners' Spelling: A Qualitative Study

Hossein Shokri [1] & Seyed Jalal Abdolmanafi-Rokni[2*]

[1] English Department, Science and Research Branch, Islamic Azad University, Gorgan, Iran

[2] English Department, Golestan University, Gorgan, Iran

[*] Seyed Jalal Abdolmanafi-Rokni, E-mail: j.abdolmanafi@gmail.com

Abstract

This is a qualitative study in which video games were applied as one of the basic steps of language learning and literacy skill for specific students i.e. spelling. In this study 40 students from two classes at the age group of 14-16were randomly divided into two groups, control and experimental (each 20). The participants in the control group receive a placebo while the experimental group was presented with original computer games. During the treatment period the experimental group worked with each game by the teacher in the class. The classroom was equipped with the computer, television, overhead projector, etc. Each week they was subjected to one game. At the end of each session, the students were required to play the games and elicit words and spelling of them. After eight sessions of treatment, a questionnaire was filled out by the participants in the experimental group. The results of the study showed that the experimental group outperformed the control group. This finding subscribes to the role and efficacy of video computer games on spelling among students.

Keywords

CALL, video computer games, spelling, EFL learners

1. Introduction

During the history of language teaching different methods and techniques have been developed. This area running a gamut from traditional classroom based techniques to new communicative tasks in compliance with modern technology. In early days scholars in TEFL get new theories from other sciences like psychology and linguistics. Then material developers applied those theories in designing new techniques, the result was a set of simple procedures based on repetition of graded structures. But after the Second World War, by the advent of new business and political arrangements among European countries, the efficacy of this kind of instruction as a tool for teaching communication lost its position. Considering status quo, researchers changed their view over language teaching. They broadened this arena with new approaches and they change their opinions toward the components of language acquisition models.

The idea of incorporating computer technology in EFL instruction has always been the focal point of discussions and debates for a very long period of time. This integration of computer technology into the domain of foreign language education began during 1950s and since then, as the technology witnessed drastic changes, this use has also undergone tremendous modifications and become the part and parcel of modern day education system. The result of all these has been evident on all those related to EFL instruction including teachers. The advent of computer technology in EFL instruction has led to significant changes in teachers' approaches, methodologies and strategies to teaching foreign languages like English. With many practical benefits both for EFL teachers and learners, today, the use of computer technology in EFL teaching and learning has achieved great popularity.

It is about two decades that using technology has become more widespread, and even more predominant with the arrival of the computers and the Internet. Computer technologies have changed greatly since their first introduction as drill and practice exercises in the late 1980s to today's interactive and social applications (Liu, 2002).

The role and importance of the use of computer technology in EFL classrooms for teaching, learning, practicing and testing purposes has always been a widely contemplated subject among the ELT researchers and pedagogues. Though this use of computer technology into foreign language teaching, learning and assessment started during 1950s, it was not so widespread practice then. It did not form very important place in teaching and learning process of EFL due to the technology and infrastructure related issues.

However, with the emergence of first generation of personal computers in the 1980s, the use of computer technology in education, in general, and in EFL classrooms in particular, was accelerated. As this use proved fruitful, producing positive results in teaching, learning and testing processes, it paved way to further research on possible exploitation of this technology for achieving maximum results.

Since the invention of the computer in the 1960s, research studies in computer use for education has grown steadily. One of these cases of using computers in the education is "computer assisted language learning" or CALL (Bax, 2003; Chappelle, 1998).

Changes came when CALL applications were considered as a medium for interaction. Rapidly, the computer was designed not to replace the human teacher, but to assist the work of the human teacher; the technology enabled language learning through human-to-human interaction via computer (Levy & Stockwell, 2006) which was expressed through the term computer-mediated communication (CMC). With CALL, language teaching and learning enters a different dimension which is associated with the advent of Internet communication tools. CALL tools include communication technology (e.g., e-mail), language databases (e.g., online dictionary) as well as CMC tools (e.g., chat, discussion forum).

Using new media for language teaching and learning has many benefits including relative ease of use, flexibility in time and space, synchronous and asynchronous features and the option to work in isolation or in groups. However, challenges still may be encountered; in addition to students' motivation, the success of using social media in a foreign language classroom still relies on teachers'

267

ability to design and plan online tasks that are pedagogically pertinent (O'Dowd & Ware, 2009). Indeed, implementing new technologies for the sole purpose of following a trend has little relevance. It is important for instructors to carefully think about their course's objectives and how the tasks and technologies may enable students to reach these aims (Dubreil, 2006) before they implement CALL technologies in their courses.

The purpose of language teaching goes beyond memorization of grammar rules and vocabulary, or even the development of individual communication skills. Rather, the purpose of foreign language teaching, and indeed of any educational process, is to enhance the human and social development of students and their broader community (Warschauer, 2002). This broader function of language education is one of the reasons why the use of technology in instruction can be so important. Through introduction of technology, language students can master the kinds of information and communications media that will allow them to use their new language in potentially powerful ways, such as for national and international communication, investigation and research knowledge production and dissemination, and publication of texts and multimedia documents (Shetzer & Warschauer, 2000).

The primacy of teaching language through controlled pattern practices waned concomitantly teaching language skills gained an important position. To achieve this purpose they took an integrative view over language skills then they defined sub skills for writing, reading, listening and speaking. One of the most important sub skills, which can play a very crucial role in language learning, is spelling.

This is an activity which is prescribed from basic levels (beginner and elementary). Therefore, students need it for success in their writing skills and also this can help them to memorize new words easily through having exposure. Because of the traditional view over teaching spelling and the role of spelling in language teaching, unfortunately there is a paucity of research. This study was an attempt to address this problem on the one hand by scrutinizing key factors in teaching spelling like retention and recall, on the other hand new method i.e. applying computer games was introduced.

2. Research Question

Do Iranian EFL learners perceive computer games leading to more learning in spelling?

3. Methodology

3.1 Participants

The sample participating in this study consisted of 40 out of a total of 80 male learners in the form of two classes. They were all native speakers of Persian and their age ranged from 14 to 15. The target population for this study was the two third-grade classes at Sama Middle school in Aliabad Katool, Iran. The participants were divided into two groups of experimental group and control group.

3.2 Questionnaire

The only instrument used in this study was a Likert-scale questionnaire which was designed to determine the experimental group's view and experience of learning language via videogames.

3.3 Reliability of the Questionnaire

For the reliability of the questionnaire, examining Cronbach's alpha reliability coefficient, it was found that the Cronbach's alpha of the measure (α=.79) was acceptable in social science research.

3.4 Treatment

The experimental group and control group both received the treatment. The participants in the experimental group were presented with original educational computer games like the control group. During the treatment period the experimental group worked with each game by the teacher in the class. The teacher taught spelling explicitly and consciously to the students. The students had a dictation after each game. The experimental group enjoyed each game a lot. The participants had some home assignments. The participants in the control group were presented with original computer games but the teacher did not teach any spelling. The participants just played the games and they enjoyed the games, but there was not and instruction, dictation and home assignment for them. The contents were practiced and performed via different games like: Hang man, Spelling bee, Fast hand, and Concentration Games.

3.5 Procedure

In order to have a homogenous group of the participants in terms of proficiency, the Nelson test was conducted at first. Then the two classes were randomly divided into two groups of experimental group and control group. The research was conducted during the second semester in February, 2014. The treatment was held in the school two sessions a week. The time limit for these sessions was 45 minutes. The participants received eight sessions of treatment during the semester. Finally, the experimental group filled out the questionnaire.

4. Results

With regard to the research question, "Iranian EFL learners perceive computer games leading to more learning", the data from the experimental group questionnaire was analyzed and converted into statistical results (the Likert-scaled answers were converted into percentages). The results show that the 67.5% of the gamers were satisfied with learning language via the video games.

269

Table 1.Questionnaire for the Experimental Group

	Questions	Strongly Disagree	Disagree	No Idea	Agree	Strongly Agree
1	I'm so motivated when I try to learn via video games.	0%	0%	15%	40%	45%
2	When I face a word that I don't know, I'm so motivated to learn it	5%	15%	5%	55%	20%
3	Video games make vocabulary learning more boring.	70%	20%	5%	5%	0%
4	Learning vocabulary via video games is stressful.	85%	15%	0%	0%	0%
5	Facing new words incidentally helped me to get them better.	5%	10%	0%	20%	65%
6	The virtual world of the game helped me to get the meaning of new words.	0%	5%	0%	25%	70%
7	The meaning of the words became crystal clear by supports from the virtual world of the game.	0%	5%	5%	80%	10%
8	When gaming, I felt like I was in an English- speaking country.	0%	0%	0%	15%	85%
9	I learned new words visually.	5%	0%	15%	50%	30%
10	When I recall the words I learned via the video game, I remember their images too.	0%	5%	5%	15%	75%
11	Having fun didn't lessen my learning.	5%	0%	20%	45%	30%
12	Having fun motivated me to continue my learning for long hours	0%	0%	5%	35%	60%
13	Sound bites, pictures, and graphics helped me to get the meaning better.	10%	5%	35%	55%	0%
14	The video game provided opportunities for deepening my word knowledge.	20%	5%	5%	25%	45%
15	The video game provided opportunities for developing fluency with known vocabulary.	5%	15%	15%	45%	20%
16	Repeated exposure provided by the video game helped me learn better.	10%	10%	0%	30%	50%
17	The video game helped me to learn word features, like collocation.	0%	15%	5%	50%	30%
18	Video games provide opportunities for the intentional learning of vocabulary.	5%	0%	5%	5%	85%
19	Video games made learning engaging.	15%	20%	5%	35%	25%
20	I don't feel the pressure of learning when I learn via video	10%	10%	0%	30%	50%

	games.					
21	I don't get nervous when I don't know the meaning of a word in a video game.	0%	15%	50%	35%	0%
22	I think video games make language learning more interesting.	5%	0%	10%	30%	55%
23	Words in the video game were more related to male occupations.	20%	5%	5%	55%	15%
24	The main character of the game was a boy so I didn't care as much about the video game.	65%	20%	0%	15%	0%
25	If the main character were a girl, I would care more about the game.	15%	15%	55%	0%	15%
26	The video game was male-oriented.	5%	0%	15%	35%	45%

5. Discussion

In language classrooms many students have problems in spelling performance. Possibly spelling, as one of the most important sub skills in basic levels, is confined to a set of limited and controlled question and answer procedure. Applying this view will neglect the key role of spelling as a building block of teaching literacy. We should take this point into account that teaching spelling is a broad area in which there are various opinions involving different procedures and teaching methods.

Some researchers maintain that students can have a good performance at spelling words within sentences rather than in isolation. While others believe that by generalizing visual concepts, or teaching syllabication after spelling learning, students would have a better performance at spelling. Besides these, there are some fundamental strategies that scholars cited, to teach rules inductively through writing, to emphasize using dictionary, to encourage mnemonic devices and spelling tricks for memorization, to predict probable spellings, to teach visualization, and to analyze separately the structural patterns governing the spelling of words (Hinson, 1982).

Besides of the points mentioned by Griffiths (2002), Al Neyadi (2007) claimed that having implemented the strategy of using games to teach and to recycle vocabulary, and having collecting the data through the interviews, observations and a journal, three main themes emerged:

- Using games to practice and recycle vocabulary seems to increase word memorization.
- Using games to practice and recycle vocabulary seems to foster student interaction.
- Using games to practice and recycle vocabulary seems to enhance student motivation.

These findings are in parallel with our findings in this study in which video computer games have positive effect on students' spelling. Thornbury (2002) has observed that "the more decisions the learners make about a word,andthemorecognitivelydemandingthesedecisions,thebetterthewordis remembered"(p.25). Accordingly, it appears that using games enhances students' ability to memorize the words, as they activate learners' minds and give them the time to pause and think about the words,

271

whether to compare, contrast, match or draw pictures which represent them, which store the words into students' working memory and hopefully the long term memory. The implications of this study have shown practical information for teachers who wishes to use spelling games to increase the spelling performance of his or her students.

Another beneficial aspect of video games is skill learning. Gass and Selinker (2008) maintain that the natural repetition in games allows a language learner to be continuously exposed to the target language, creating more opportunities for acquisition to occur. Furthermore, according to Turgut and Irgin (2009),the sense of winning increases both the motivation and awareness of the gamers, and the average of 81.3% agreement for questions 1, 11, and 22 (which were designed to elicit ideas about motivation and fun) supports this idea. Finally, another advantage of using video games is its degree of interactivity. According to DeHaan et al. (2010), a defining characteristic of video games is "the extent to which users can participate in modifying the form and control of a mediated environment in real time" (p. 75). They state that video games incorporate various technological and pedagogical elements to both entertain and train the player, and when a degree of interactivity between players and these elements takes place, learning happens.

In spite of the emergence of new theories during the history of language teaching, the need for having new techniques and methods, which are context laden, is obviously cleared. To this end, in this study, we presented some games for enhancing spelling performance. As the results indicate, these games have positive influence on both retention and recall of spelling. Considering status quo games can be a good substitution for complicated tasks especially for children and young adult learners.

These kinds of activity have the potentials of adjusting different tasks with games which are exciting and surprising for children. Halliwell (1992) has summarized the benefits of meaningful games as follows: "They exploit and develop the capacity for interaction and talk, the capacity for indirect learning, the capacity for creative use of language resources, and the capacity for playing and fun" (p. 40). Accordingly, games and activities provide students with chances to examine the words closely, as well as enhancing their motivation to learn. Because of this point researchers should pay more attention to computer games in computer assisted language learning. You should bear in mind that this study was conducted just for spelling performance while computer games can adapt themselves with the teaching of different parts of the communicative competence.

6. Recommendations for Further Studies

This study was conducted based on limited number of computer games. So in the future more games should be assessed and also syllabus designers should consider student's opinions about the kinds of games applicable in the classroom. Videogame technology brings new challenges to the education arena as below:

Difficulty: Some games allow the players to choose the level of the difficulty. Others adjust difficulty level based on the progression of the player. This approach allows the game to become progressively

more interesting as it becomes more challenging.

Competition: Many games build in competition. Some players are attracted by competition. Teachers may wish to examine if the competition is presented in such a way that all can win and that one does not win at the expense of all others.

Participant age and characteristics: Computerized games have been developed for a range of ages. It assumes that the participant can understand the rules of the game and has the skill level to accomplish the motor aspects of playing the game. Some games allow for modification of text to meet the needs of poorly sighted players.

Number of players: Some videogames are solitary in nature. Others pit players against each other or the computer. Solitary games may meet the needs of those who find group work difficult.

Facilitator's role: In some videogames, the teacher or facilitator merely observes. In others, the facilitator may be an important part of the game format.

Setting: Fully prepare staff to integrate these games into the curriculum. Without proper acceptance, the games may be used primarily as a game or toy rather than as a therapeutic or educational tool.

Type of game: There are many types of activity content: games, puzzles, mazes, play, fantasy/adventure, simulations, and simulation games. Some games require physical skill and strategy, while others are games of chance. Some videogames are adventure, while others involve simulation involving real events or fantasy.

Information and rules: Some games allow the player to have a range of knowledge and information about past experiences with the game. Others provide minimal amounts of information to the player. Part of the strategy may involve the player's response to this lack of information. Rules and player participation in setting rules may vary among games.

Duration: Some games have very short duration, while others may go on at length. Making of user rewards, personal challenges, or changes in color or graphical surroundings to maintain interest some games can hold player interest for long periods of time.

Videogames have great positive potential in addition to their entertainment value. There has been considerable success when games are specifically designed to address a specific problem or to teach a certain skill. However, generalizability outside the game-playing situation remains an important research question. What is also clear from the empirical literature is that the negative consequences of playing almost always involve people who were excessive users of videogames.

References

Al Neyadi, O. (2007).*The Effects of Using Games to Reinforce Vocabulary Learning.* Cambridge: Cambridge University Press.

Bax, S. (2003).CALL: Past, present and future. *System*, *3*(1), 13-28.

Chapelle, C. A. (1998). Multimedia CALL: lessons to be learned from research on instructed SLA. *Language & Technology, 2*(1), 22-34.

deHaan, J., Reed, W., & Kuwada, K. (2010). The effect of interactivity with a music video game on second language vocabulary recall. *Language Learning and Technology*, *14*(2), 74-94.

Dubreil, S. (2006). Gaining perspective on culture through CALL. In L. Ducate, & N. Arnold (Eds.), *Calling on CALL: From theory and research to new directions in foreign language teaching* (pp. 237-268). Texas State University: CALICO.

Gass, S., & Selinker, L. (2008). *Second Language Acquisition set: Second Language Acquisition: An Introductory Course*. Routledge.

Griffiths, M.D. (2002). *Gambling and Gaming Addictions in Adolescence*. Leicester: British Psychological Society/Blackwells.

Halliwell, S. (1992). *Teaching English in the primary classroom*. New York: Longman.

Levy, M., & Stockwell, G. (2006). *CALL Dimensions: Options and issues in computer assisted language learning*. New York: Lawrence Erlbaum Associates.

Liu, Y. (2002). The impacts of frequency and duration of messaging on relational development in computer-mediated communication. In M. A. Fitzgerald, M. Orey, & R. M. Branch (Eds.), *Educational Media and Technology Yearbook 2002* (Vol. 27, pp. 33-51). Englewood, CO: Libraries Unlimited.

O'Dowd, R., & Ware, P. (2009). Critical issues in telecollaborative task design. *Computer Assisted Language Learning*, *22*(2), 173-188.

Shetzer, H., & Warschauer, M. (2000). An electronic literacy approach to network-based language teaching. In M. Warschauer, & R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 171-185). New York: Cambridge University Press.

Thornbury, S. (2002). *How to teach vocabulary*. Essex: Pearson.

Turgut, Y., & İrgin, P. (2009). Young learners' language learning via computer games. *Procedia Social and Behavioral Sciences*, *1*, 760-764.

Warschauer, M. (2002). A review of Language and the Internet by David Crystal. *Education, Communication, and Information*, *2*(2), 241-244.