

The Impact of Playing Commercial-Off-the-Shelf Video Games on the Learner Autonomy

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Abstract

Although a considerable amount of money is spent on computer game-based language learning each year, there is very little empirical data to support the idea that computer games have any significant impact on language learning. The present study, thus, focuses on how Commercial-Off-the-Shelf video games can affect language learning and result in more autonomous learners. The impact of autonomy on proficiency is also examined to realize whether autonomous learners are more proficient in language. In this study, two groups of intermediate language learners are taught with and without implementing video games in their course. At the end of the course the level of autonomy and proficiency is measured in both groups. Analysis of the data collected indicates that students who make use of video games to learn English are more autonomous and as a result, more proficient. It is, therefore, implicated by the results of the study that Commercial-Off-the-Shelf video games have a positive impact and relationship with both autonomy and proficiency.

Keyterms: CALL, COTS Video Games, Learner Autonomy, Proficiency, Technology-Rich Setting

1. Introduction

Rapid changes in computer technology has led to more independent off-the school studies on the part of learners and has converted traditional print-based materials into more multimodal, interactive, technology-mediated formats (Sankey, 2010). This conversion has happened in many disciplines and language learning is not an exception.

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In the last few years, widening the curriculum in a way that computer assisted language learning (CALL) can be included has drawn considerable attention and the number of conferences and publications exploring how to successfully implement the computer in the language classroom has remarkably grown (Sandford, 2006).

Being an integral part of computer technology, video games and the important, if not crucial, role they play in language learning cannot be ignored by language practitioners anymore. With the massive marketing of commercial off-the-shelf (COTS) video games, easy and quick access to a wide range of them, the particular appeal and the unique experience they have for the player, language teachers and learners have now the possibility to bring variety to their practice.

In the last few years, the inspiring phrase of “learning how to learn” has emerged (Antoniou, 2012). This phrase is closely related to what is known as learner involvement. Learner involvement is defined as ‘the learner’s engagement with and responsibility for all aspects of his or her learning process’. Playing COTS video games can help learners develop more involvement in their learning process. This happens through the learner’s decisions on how, when and to what extent playing video games can influence their proficiency. In other words, through incorporating video games in the process of language learning and teaching as well, learners will be able to take a further step towards planning, monitoring and assessing their own learning process. In the event that games happen to replace traditional classroom assignments or homework, the learner will have the opportunity to work on his language at any time of the day. The learner will also be able to practice as much as he or she contents.

In the early 1990s, digital games were already called the “integral part of modern language teaching methodology”. Twenty years later, the global popularity of digital games certainly demonstrated that they are integral to many people’s leisure consumption, but their roles in language teaching methodology are still questionable.

The earlier suggestions highlighted the needs for educational games designs and scrutinized commercial games for educational purposes. The call for appropriating leisure digital technologies as learning tools is reiterated by Swenson (2005). The burden, then, is on the teachers to select, integrate, monitor, and evaluate digital games for application in the classrooms. The inclusion of digital literacy in language teacher education has been advocated, but the expansion is not strongly evidenced.

Studies show that teachers were more familiar with “passive” receptive popular cultural activities carried out in “private” domains (e.g. reading watching films and listening to songs). As a popular culture activity, digital games have not been listed as tools for foreign language learning. Teachers who are already familiar with digital gaming appear to have better imagination in envisioning its pedagogical potentials.

2. Review of the Literature

Today, a large number of universities and educational institutes are heavily investing in technology assisted learning and teaching. The idea is that technology can facilitate instruction and help the learner to internalize what he learns in classes. Commercial Virtual Learning Environments (VLEs) and the equipment related to these environments, such as Smart Blackboards, are increasingly being used in many universities and educational institutes. One very common technology that is used quite frequently in classrooms, especially language classrooms, is computer. The use of computers in language classes and the implications that computers have for learning have evolved into a very popular research area referred to as Computer Assisted Language Learning (CALL).

Technological developments in the last twenty years have attracted the attention of educators to learner autonomy. However, it has not been possible to thoroughly investigate the impact of a technology rich learning environment on the learner’s autonomy. One reason for this is that research and projects in CALL do not provide efficient and sufficient tool to measure, observe or guide autonomy in the language learner. There is obviously a lack of empirical evidence on whether or not CALL has any impact on the second language learner autonomy.

Davies (2001) defines CALL as the “academic field that explores the role of information and communication technologies in language learning and teaching” (p. 48). Technology provides educators and learners with an opportunity that would otherwise be impossible to reach in traditional class rooms. The use of technology has repeatedly been reported to have an impact on the learner’s autonomy. However, the complex and tight interdependence between CALL and learner autonomy is a characteristic of the nature of their relationship (Antoniou, 2012).

On the other hand, the definition of autonomy can be examined from a variety of different points of view.

Holec defines autonomy in his 1981 report to the Council of Europe as “the ability to take charge of one’s own learning” (p.17). Little (1991) presents a roughly different definition of autonomy which is based on constructivist theories of language learning. According to his reinterpretation, autonomy means an effective self-directed learning. Holec (1981) also pointed out that autonomy is not an inborn ability but it is one that must be acquired either naturally or through formal instruction.

Autonomy can also be examined from a different angle. According to self-determination theory (SDT), all humans share the psychological needs of competence, relatedness and autonomy. These three psychological needs help us develop a sense of self. It is argued that human will be able to maximize his performance and development if these psychological needs are satisfied. Ryan and Deci (2002) define the mentioned psychological needs as follows:

- Relatedness refers to feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community.
- Competence refers to feeling effective in one’s ongoing interactions with the social environment. The need for competence leads people to seek challenges that are optimal for their capacities.
- Autonomy refers to being the perceived origin or source of one’s own behavior. Autonomy concerns acting from interest. One can quite autonomously enact values and behaviors that others have requested or forwarded, provided that one congruently endorses them.

The importance of these psychological needs has been considered by many educators and various methods and teaching principles have evolved through focusing on them.

For instance, some approaches are based on the idea that not only can people learn better in a social context, but also they will take on new ideas (Vygotsky, 1978; Hymes, 1971). Such approaches are obviously pointing toward relatedness. Krashen’s concept of input+1, which means providing an environment of optimal challenge in order to elevate learning, refers to the psychological need of competence.

Autonomy has also been the subject of many studies and researches in the field of language learning. In the SDT framework, autonomy refers to our need to be agentic. According to SDT, people do not need to be the initiator of an activity in order to feel autonomous. This is, to some extent, opposing older theories of motivation. The fact that learners do not need to initiate an activity to feel autonomous is of particular significance in modern classroom situations where the demands put forward by the syllabus do not necessarily coincide with students' personal interest.

Autonomy determines how persistent the learner will be in completing a given task (Ryan & Deci, 2002). In order to help learners become autonomous and persistent in any given task, they need to be encouraged to be self-initiating and solve problems independently. If an activity is of value to the learner, if it reflects his personal interests and if it gives the learner the chance to make choices, then the learner will be more likely to engage in the activity more eagerly. Studies show that if the learner understands the value and use of an activity and sees it as a tool which is socially useful, he will maintain a stronger motivation to engage in it (Warschauer, 2000). With the introduction of computers to the language classes, learners gained access to an unprecedented amount of authentic materials. This evolution meant that lack of interest or relevance was not an issue anymore. However, teacher still face the challenge to provide and direct their instruction in a way that the use of authentic materials from the computer, internet, chat rooms, etc. still leads to interaction, information sharing and thus, persistence. This alone, however, will not lead to learner autonomy. Autonomy also means learning and making progress without being controlled by deadlines, threats, imposed goals or even imposed rewards (Noels, 2001).

What is currently happening in classrooms with access to technology and, particularly computer, is what is referred to by Hinchcliffe (2006) as "inversion of control". Inversion of control basically means the change in the hierarchy of order and authority.

This recent change in control and authority provides the learner with an environment in which the learner can actively involve in an activity, make choices, make adjustments and pursue his personal interests. For instance, the learner can choose the time and duration of dealing with an activity.

He is also able to change the topic of activity when he decides to stop reading from one website and start receiving input from another.

Considering what was mentioned, learner autonomy can be defined as enabling and equipping the learner to play an active role in his process of learning. Giving learners freedom to adopt their own styles and learning strategies has always been a concern for educators.

3. Methodology

3.1 Materials

In order to measure students' willingness and attitude toward working more independently with less intervention from the teacher, Chan, Spratt and Humphreys' (2002) Autonomy Questionnaire was used. The questionnaire is devised in three parts: responsibilities, abilities activities. In the first section, 10 questions relating to the learner's and teacher's responsibilities are asked and the learner has to determine the responsibilities assigned to himself and to the teacher. It should be noted that the questionnaire is originally developed to measure university students' autonomy. However, as it is mentioned by the authors, it can be used to measure autonomy in learners of different level of proficiency on the condition that the meaning and intention of the questions and sections are explained to the students if required.

3.2 The Video Game

The game chosen for this study was *Fallout II*, an action first person game with 15 stages, set in an apocalyptic area. *Fallout II* is set in a post nuclear war environment in which there is a critical lack of clean drinking water. The player has to find one last supply of clean water on earth and save humanity. In order to do this, the player has to talk to many game characters such as city dwellers, vendors, scientists, friends, police officers, bounty hunters, etc. and has to read maps, signs and instructions in order to find his way to the supply of water.

It is impossible to proceed in the game without having conversation with game characters as some of them are the only ones who know the way to the water supply. In addition, game characters refuse to help you unless you do them a favor.

They explain in detail what they want from the player in return for a hint toward the water supply. This demonstrates the need to be able to understand what game characters ask and what their pieces of advice are.

Another interesting point about *Fallout II* was that the player character needed to communicate and socialize with other game characters in order to survive in the game world. For example, he had to go to cafes or bars and order a meal to stay healthy and had to work to make money. In order to get a job in the game world, the player had to fill out a resume template and talk about his abilities. The player had to have a good relationship with his neighbors in order to avoid conflicts and this good relationship was established through saying hello, starting a small talk or breaking the ice with other game characters. Conversations between the player and the game characters could also be subtitled. This was, of course, optional. However, the researcher decided to have students play the game with subtitles for two reasons. First it could have been very difficult for students to rely solely on the speech. Second, subtitles would not fade away unless the player chose to. Thus, the player was able to read conversations, work on them and dismiss them only after he had a good understanding of the next game objective.

3.3 Participants

Initially 100 male intermediate students aged 12 to 16 were randomly chosen from Nateqi Language Institute, a language school located in Karaj, Alborz. This selection was random in that the first 100 students who had signed up in the institute in July and August, 2013 were asked to take part in the study. Then, an Oxford Placement Test (OPT) was administered to choose the students who were ranked intermediate based on OPT. After homogeneity test was given, 68 students scored as intermediate. However, the researcher decided to include only 40 of them in the study as the rest of them had already possessed the experience of playing video games. Final participants were randomly assigned into two groups of 20 students. The first group was Game Group and the second one was Non-Game Group. The participants mentioned that they had very little, if any, experience of playing video games in the past.

Care was taken to clearly explain to the participants that they should not watch movies in English during the course of study.

The reason is that the researcher believed that movies could have a similar effect as COTS video games on autonomy. Eventually the procedure of the study began.

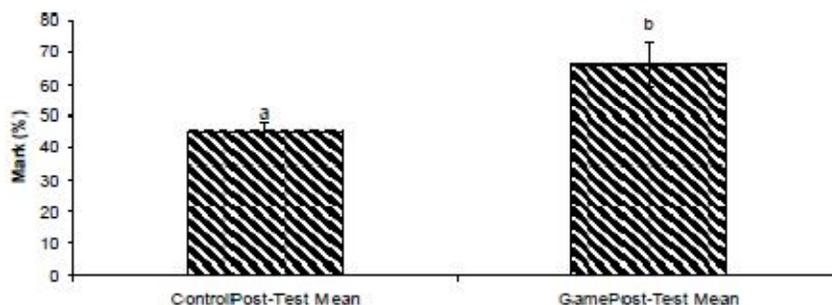
4. Results

As it is indicated in figure 4.1, the mean score of autonomy questionnaire is significantly higher in Game group. The results show that students who were instructed using video games have a stronger tendency toward working more autonomously and more independently. It is empirically expressed that employing video games in this study pushed students toward less dependence on the teacher and also reduced teacher intervention in the classroom.

Figure 4.1. The Mean Score of Autonomy in Control and Experimental Groups



Figure 4.2 show that the mean score of post-test is significantly higher in experimental group. As it is seen in table 4.3 in each group 20 students took the test. The mean score of control group in post-test was 45.40 and the mean score of experimental group in post-test was 66.13, which is a significant difference. The results also showed that the scores of students in control group were significantly lower than the scores of students in experimental group ($P < 0.0001$). The results, then imply that video games have an impact on the learner's proficiency.

Figure 4.3: The Mean Score of Post-Test in Control and Experimental Group

5. Discussion

The comparison of pre-test and post- test of each group, and also the comparison of the scores of each group with the other one revealed that at the end of the study, the students in the experimental group significantly outperformed the students in the control group. The results of t-test and paired t-test conducted in the present study indicated that the use of video games as a supplementary tool for instruction can have a statistically significant impact on both learner autonomy and learners' proficiency. It was also indicated that students who were taught using video games were more willing to study and work more independently and autonomously. In fact, students in experimental group developed both autonomy and a more positive attitude toward autonomy. The students in the experimental group could be said to take more charge of their own learning. They confirmed that teacher's role and intervention could be less apparent in their studying and that the teacher is not the only source of knowledge in the world of language learning.

Regarding what was mentioned above and the first research question, it can be said that video games actually have an impact on learner autonomy. With regard to the second research question and taking the results of the study into consideration, it can be asserted that video games and using them as a complementary means of teaching can have an impact on general language proficiency.

Examination of the literature on video games and autonomy reveal that the findings of the present study relating to the first research question are consistent with findings of Rankin et.al. (2006).

Rankin et.al. (2006) expressed that the use of video games can improve learners' vocabulary skill and his conversational skills. In the present study, too, the researcher realized that video games can improve general English proficiency in which vocabulary is embedded. It was also

Garris et.al. (2007) also conducted a research based on an input-process-output model. Their study concluded that the use of video games in language classes can increase students' motivation to take more responsibility for their learning process. The results of the present are consistent with Garris et.al (2007) in that video games can promote learner' willingness to work more independently and more autonomously.

Blunt (2009) also stresses that university students who use and do not use video games in their language learning have significant difference in their mean score of language proficiency. The results obtained in the present study are also consistent with Blunt (2009). As mentioned before, the results of the present study reveal that the use of video game in language learning has a significant impact on the mean score of intermediate language learners.

As it is clear from previous paragraphs, the findings of the present study are verified by the results of various earlier studies. These findings and results definitely have educational implications, which will be discussed in the following section.

6. Conclusion

The analysis of the data collected during the present study revealed that the scores of learners in autonomy and proficiency tests in experimental group is significantly higher than the scores of learners in the control group. This difference indicates that the use of COTS video games to instruct language can facilitate the development of autonomy in language learners. The development of autonomy in language learners can, in turn, result in the improvement of their general language proficiency. This is supported by the comparison of proficiency test scores of the students who applied video games to their learning and those who did not.

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