

# Using Single-player Video Games to Learn English outside of the Classroom in Japan: A Case Study

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## **Introduction**

Video games were once regarded as toys for younger children. However, in recent years many advances have been made in research and development towards providing evidence for and making video games that are conducive to education (e.g. Gee, 2007; Squire, 2011). In the field of CALL, other research has been done into how video games can contribute to Second Language Acquisition (SLA) in terms of vocabulary and grammar (e.g. deHaan, 2013; Vahdat and Behbahani, 2013). At this point in time, it would not be unreasonable to say that there is evidence for video games to contribute to student language achievement. However, in Japan, there is still a sizable gap in research for this relatively new field, especially in analyzing the qualitative feedback when students play video games. This paper will present a short vignette involving a Japanese university student using video games to study English in her time outside of class. It does not attempt to use video games in a pedagogical fashion; video game are presented in an informal context where games can be played in one's off time, away from the classroom. In addition, suggestions for how students could possibly utilize video games outside of school to support their English studies will also be given. The hope is for teachers to possibly consider suggesting video games as a source of English study when outside the classroom.

## **Literature Review**

### **The Definition of a Video Game**

It can be easy to define a video game simply as a toy; something that is nothing more than a child's play toy. However, as research has developed in the field, there have been a few attempts at providing a clear definition of what defines a video game. Salen and Zimmerman (2004) as, "a system in which players engage in an artificial conflict, defined by rules, that results in an quantifiable

outcome,” (p.80). In other words, video games create an environment in which a cycle of challenge and desirable outcome are repeated. To the interested, this constant cycle presents a uniquely strong chance for learning (Squire, 2011).

### **Digital Natives**

As stated above, language acquisition being attributed to video games is a field which is still in its relative infancy. Due to this, it is important to justify why video games would be worth investigating. Prensky (2005) introduced the concept of “digital natives” or people who grew up surrounded by and learned how to use technology. According to Prensky, these individuals are more accustomed to using technology to gather information and thus, they are more responsive to information being introduced in a digital form. On the contrary, individuals who were already adults when technology and the internet began to flourish are called, “digital immigrants.” While these individuals can become adept at using technology, Prensky stated that there is a qualitative difference in how these two types of individuals process information in a digital form. Taking into account the emergence, or rather realization, of digital natives, it is important to understand how much they can retain if they are exposed to certain types of technology.

### **Video Games as L2 Input**

Contrary to video games made for the purpose of education, commercial off-the-shelf (COTS) games have been cited as a source of L2 input (e.g. Chik, 2015; deHaan, 2013). These studies have found that the level and amount input that is present in video games can facilitate learners who have a vested interest in video games. Gee (2007) published a list describing the ways that video games promote learning. The list, adapted for length is introduced below:

- Players must solve and interact with problems in order to progress and continue the game.
- A sense of identity is shared with the character on screen.
- Manipulation of the virtual world is allowed which promotes interaction and investment on part of the player
- Meaning and concepts are shown clearly to the player through experiences in

the game world.

Squire (2011) also supports this notion by calling the phenomenon, “interest-driven learning.” This concept illustrates how players who experience motivation through video games can learn a substantial amount. It is essentially a restatement of what has been introduced above, however a similar concept being introduced by a different researcher provides evidence for the benefits that have been described.

### **Studies in Video Games as L2 Input**

This section will briefly illustrate a few studies from different countries which involved using video games as language learning tools.

Ranalli (2008) used a simulation game called “The Sims” to investigate if nine intermediate ESL learners from various countries could improve their vocabulary. Students paired up to play the game; some students were designated as “players” while others would use supplemental materials such as dictionaries to inform the player about what certain objects on the screen were. Results from the study indicated that, with guidance from an instructor, video games could indeed facilitate L2 vocabulary learning. One limitation of the study was the clinical setting. Students were asked to play the game in sessions over several weeks in which the researcher would observe the students. This, as Squire (2011) observed, could damage student motivation to play the game.

Suh, Kim, and Kim (2012) conducted a study on 302 fifth and sixth grade students from five schools in Korea. They had the students play massively multiplayer online video games and tracked how their overall English score based on a Korean standardized English test changed. It was found that students showed a statistically significant higher score after playing video games for an extended amount of time in all areas except for speaking and writing. Qualitative data was not included in this study.

deHaan (2013) studied students from Japanese universities. He had his six university students play six different video games over a pre-determined amount of time and tested them on vocabulary and grammar proficiency in a pre and post test study. Qualitative data was also gathered which was used to describe how players felt over the time period they played the game. Some students lost

motivation due to repetitive dialogue or gameplay objectives. However, the same students also recognized that playing the video game was beneficial for their English skills. Quantitative data gathered from vocabulary and grammar scores showed slight improvements, also.

## **The Case Study**

### **The Participant**

The student who volunteered this study was a Japanese first year university student studying English communication as her major. Having intermediate English skills, she was placed in an upper level English class which focused much of its time on discussions on current event topics such as divorce and the death penalty in Japan. Even though she was put into a high-intermediate English class, the student did not have much confidence in her English ability and frequently went out of her way to state that she did not feel she would be able to keep up with the level of vocabulary in video games. Before she volunteered for this study, the student already had a vested interest in video games and manga but had never played English games before.

### **The Game**

For this case study, she played Pokemon Y, a single-player video game where the player must go on an adventure to capture monsters called "Pokemon" and become a stronger Pokemon trainer. It was played on a Nintendo 2DS handheld video game system. The game was chosen for its popularity amongst Japanese university students and for the fact that it is marketed mainly towards younger players. Comparatively, the vocabulary used in the video game is also not as complex when compared to other, more text heavy games.

### **Methodology**

For this study, the student was asked to play this game for a period of two months. No time restrictions were imposed. The researcher did not state that the student had to play a certain amount of hours a week. The student was simply asked to play whenever she wanted to in her spare time, outside of school. In addition to playing the game, the student was asked to keep a video game diary in which she would track how many hours she played the game, any new words she

encountered, and how she felt during her time playing each session. She was told that she could write the journal in either Japanese or English. This diary was then used to gain a deeper insight into how the student felt during her two months with the game. A short interview was also used before and after the duration of the study. These questions were used to gain biographical information about the participant before the study and to further probe into how the participant reacted to the game after the duration of the study.

### **Response to the Game**

The student took very well to the video game. This was expected her past experiences playing video games in Japanese. However, according to the fact that she willingly chose to write the journal in English, and the fact that almost every single entry in the diary includes a small section of around three to four new English words she encounter, it can be assumed that she was quite invested in attempting to learn English through playing this game. In addition to this, the student also took the time to not only write down vocabulary words, but also translate them into Japanese for later use near the beginning of the journal. As time went on, she began to simply write words she did not know without translating them into Japanese. In addition, the amount of time played during each session did not change. She continued to play one and a half to two hour sessions each day she played. By the end of the diary, the student skipped writing down words in some entries. Journal entries near the beginning make many references to the difficulty in learning English from video games. She stated, "the move names are different from Japanese names." However, as time went on she began to comment more on story and gameplay with entries such as, "There are many accidents in the Pokemon world. Furthermore, I should solve these problems. I don't know why." Many of the journals near the end deal entirely with what she encountered in her few hours of game play; she catalogued monsters she fought or characters she met in game, noting her reactions to the designs of the characters or story during that part of the game. According to entries logged into the diary, she played almost every day and logged a total of 70 hours in the game over a period of two months. In addition, each play session lasted at least one hour, with the longest of all the play sessions lasting 3 hours in one sitting. During the post study interview, the participant constantly remarked about how

much fun she had with her time during the game. She confirmed during this session that she started the game purely out of interest to learn English and see what Pokemon was like in English. However, during her time with the game, she slowly began to take to the game which led to a slow increase in play time with the game.

### **Implications**

There are many small changes in the student's behavior which suggests a much larger picture of how playing the video game affected her throughout the two months. As mentioned above, these observations were taken from analyzing diary entries. First off, the slow change from speaking about the English she was learning to simply writing about her experiences in the video game as mentioned above suggest a switch in motivation. It seems that while the student was eager to play the video game to improve her English near the start of the two months, she became more engrossed in simply playing the game itself over this time. This data confirms statements made by Dornyei (2014). However, the evidence stated above also suggests that the participant motivation to continue playing was upheld even after an initial burst. This is shown by the student continuing to play for a consistent amount of time which did not experience much change. The lack of words the student defined in the journal and the abundance of entries which are entirely devoted to explaining the story or new characters near the end, though, shows that the reason for playing changed to the student simply wanting to play for the sake of finishing the story. This loss in interest to learn English but continued interest in playing the game mirrors results that were found by deHaan (2013), as well. This could give insight into the motivational impact video games could have on other students. In essence, motivation to improve one's English is strong at the beginning, but finishing the game itself seems to slowly become the main motivator to continue playing. Many of the observations made from diary entries were also remarked upon by the participant in the post-study interview. She was aware that her reasons for playing the game slowly changed throughout the two months. The participant stated she had an interest in manga and video games during the pre-test interview, which could have possibly upheld her motivation to continue playing throughout the study duration. Were she not originally not interested in manga or video games, the outcome could possibly

have turned out differently.

The student presented in this case study decided to play the game for a considerable amount of time. The playtime was considerably higher than students in another study done by Thanyawatpokin (2015). In fact, this startlingly high number of hours played could be attributed to the aforementioned interest in video games the student had. However, being the first English video game this student has played, it is worth noting the overall length at which the student was able to play it. She was not deterred by an unfamiliar environment and was able to continue playing for a significant amount of time. This could suggest a viability in video games being an effective tool for large amounts of English input in students who are familiar with technology and video games. This spurt of motivation when coming into contact with a new method of learning has been reported by other researchers as well (Dornyei, Muir, Ibrahim, 2014).

### **Suggestions for Practical Use**

For this suggestion, I would like to give a few suggestions for how language teachers could use the findings presented above.

While the current study made it a point to stay away from using video games as a pedagogical device, there are still some merits worth mentioning and possibly passed onto students. First, the idea of video games as being sources for input in students who are interested in this kind of format should not be left out when considering ways to get students interested in English outside the classroom. Video games could provide an easy-to-access and fun way for students to use their English outside of classrooms. It is also important to point out that single-player video games do not require students to communicate with other students. Thus, those who are unwilling or feel unready to communicate in English with real people could possibly first attempt to use their English skills in a virtual, game-based environment as practice before going onto more rigorous communicate exercises. This suggestion applies much more readily to east-Asian EFL classrooms due to students who could be more averse to communication-based activities. This applies especially to students at a lower level who may want to learn English, but are too reserved to speak out during class. (Hayashi and Cherry, 2004).

Secondly, the possibility of game-based curriculum or activities is one that

should be considered. While buying the same video games used in this study is out of reach of budgets for most schools, free-to-download games on the internet could easily be used in CALL classrooms. As Ranalli (2008) stated, video games can serve as a good source of English learning if there is adequate support from a teacher. Thus, if video games could be used alongside other CALL based learning activities such as online writings and message boards, then it would prove as a more effective way of using CALL resources. Teachers could play a certain game up until a point and use the vocabulary and interactions as basis for other language learning activities.

### **Limitations**

A large limitation to this study is the focus on only one student. There is still a need for much more research to see if the results in this paper apply to a wider audience. Studying only one student gives insight into a very limited case that could possibly only apply to this one student. In addition to this, the student had a previous interest in video games which could have contributed to her embracing Pokemon as much as she did. Other, less enthusiastic students who had interest in video games could have possibly played much less than her and changed the outcome of the study.

This study also relies entirely on qualitative data and does not attempt to see if there was actually any learning going on at all. While this was stated as purposely done, the inclusion of some form of quantitative data in a pre-post fashion could possibly have validated or strengthened some claims about English learning made by the participant. The only thing that can be said is that the student was getting a considerable amount of English reading input. Whether or not her vocabulary, reading, writing, speaking, or listening skills showed any changes was a focus of investigation. As stated above, much research, both quantitative and qualitative, is still left to be done.

### **Conclusion**

The case study presented above showed a brief glimpse into a Japanese student using video games for English input. The brief snapshot was taken over a two-month period in which the student played a single-player game called Pokemon Y. The data showed that the student played the game a considerable

amount and demonstrated continued motivation throughout the two months she played. While no quantitative data was taken on the effectiveness of this method, it is still worth mentioning that the video game was able to sustain motivation for the combined 70 hours the student played the game. There were many limitations, most notably the usage of only one student for data. However, there is evidence of video games being able to spur modern-day students to continue learning outside of the classroom. The hope of this short case study was to hopefully encourage other language teachers to begin suggesting video games as an alternative to more traditional methods of learning English at home or away from school.

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## Abstract

*Video games have slowly been moving towards being academically viable sources of education. In this paper, a case study is presented in which a Japanese university student uses English video games to learn English. The student, a first year English major, has had a vested interest in video games for quite some time, but has never played English video games before. The study is based around her first exposure to playing video games in English and how she reacts to an unfamiliar environment. Qualitative data was taken from a video game diary she kept while playing the game for a two-month period. This diary catalogued the student's experiences with the game and gives us further insight into how she played the game, what she felt, and how long she played the game for. Data from the study suggested that even though she felt unfamiliar with certain facets of video gaming in a different language, she was sufficiently drawn to playing the game and was able to sustain a constant stream of English input over two months which, in total, amounted to approximately 70 hours of gameplay. Evidence is shown for video games to be an engaging and critical way in which students can interact and be exposed to different mediums of English outside of the classroom. In addition, this paper also lists suggestions in which teachers can possibly recommend or use video games in or outside classroom as well.*

Keywords: video games, motivation, qualitative, case study