

VIDEO GAMES: THE INTERFACE BETWEEN LANGUAGE LEARNING AND STORYTELLING

Farzad Parsayi

Monash University, Australia

Ali Soyooof

Islamic Azad University, Shiraz, Iran

ABSTRACT

Among the ever-increasing number of media, video games have enjoyed an ever-rising popularity among different generations of players. In a parallel fashion, researchers have continued to investigate their educational merit. The annual revenue of video games now exceeds the most lucrative film industry worldwide of Hollywood (Gee, 2012). Video games have been found to be an asset in learning in various educational contexts, and especially in teaching a new language, including the genre of story/narrative. It would therefore seem that a reciprocal relationship might be possible in their usefulness for teaching English literature as well the language involved in using video games. Thus, probing the former and latter area simultaneously may provide a relatively new vantage point in relation to ESL/EFL learners. To this end, this research sought to put the spotlight on video games as an educational tool for both storytelling and teaching English. A total of ten ESL/EFL language learners from the three different countries of Iran, Brazil and Italy were participated in semi-structured interview to explore their experience in playing video games and their views on the usefulness of the experience for their ability to grasp the narrative of the story and the extent to which they thought the experience assisted their learning of English. The findings of the study underpin the veracity of the argument that video games are highly influential in not only narrating new stories but also in facilitating the learning of a new language, but as small, exploratory study these results encourage further research that is designed to reveal the detail and depth of learning.

Keywords: Language learning, EFL pedagogy, English literature, English teaching, Meaningful learning, Narrative and video, Second language acquisition, Storytelling, Video games

INTRODUCTION

In the last several decades, technology and the use of new media has taken an ever-expanding crucial role in various aspects of human's life. As we move on in the digital age one of the spheres most influenced by technology continues to be education. In fact, as Bindé (2005) recommends, free access to the Internet and use of technology has the capacity to revolutionize learning and support intercultural literacy and collaboration worldwide. Among various tools that are helpful in the process of teaching and learning are video games. They have attracted a large body of research in different fields of study, from engineering and medical sciences to history and language learning (D'Angelo et al., 2014; Dubbels, 2009; Malik & Wiseman, 2017). Having considered the merits and demerits of video games, some studies accentuate the extent to which video games provide unique elements that are very helpful for learning, especially in education and language learning (e.g. Chik, 2014; Cole & Griffiths, 2007). The

literature on video games and language learning includes many studies that also highlight how video games can play a facilitative role (Deen, 2015; deHaan, 2011; Higgings, Xiao & Katsipataki, 2012). On this basis, the present study was undertaken to help illuminate the interface between the usefulness of video games for language learning and storytelling. Learners' experiences of playing each of the two versions of a particular video game. Specifically, the research focused on the learners' experiences of playing *Metro 2030* (2010) and its sequel *Metro last light* (2013) to explore their views of the games' potential for promoting both learning a new language, and being effective storytellers in enabling them to grasp the narrative. An introduction to the video games is provided as an advance organizer to inform on not only the video games themselves but the helpful elements included in them that relate to narration and support for language learning.

Metro 2033 (2005) is a novel written by Glukhovskii. It is set in a dystopian near future in which the world has been ravaged by a nuclear holocaust, which has almost extinguished humanity. The novel began as an interactive experiment on the author's personal blog. Over time, the online readership grew exponentially and later the novel was launched to the mass market with unexpected success (Howanitz, 2012). *Metro 2033* is interesting because it integrates elements of horror, fantasy and science fiction with philosophical overtones. The atmosphere is very well constructed; dark alleys, the gloom that pervades most of the seasons, the traps with poison gas, mutants, and armed human beings that altogether create a sense of unease and anxiety in the reader (Howanitz, 2012).

The novel begins in 2033. After a nuclear holocaust, large parts of the world have been buried under rubble and ashes due to radiation. Moscow has become a ghost town. The survivors have taken refuge underground in the metro network, and created there a new civilization. A civilization different from all that had existed previously. The intricate network of the Moscow metro becomes the setting for this claustrophobic and revealing novel. The stations turned into small states and their inhabitants are grouped around the most diverse ideologies, religions or driven by a single goal: to prevent invasion by mutant creatures from the outer (Griffiths, 2013).

Artyom, the protagonist, is a young soldier who is commissioned to leave the subway station where he has spent much of his life, and delve into the depths of the underground metro network and reach a legendary station called Polis to alert every one of the danger that is threatening all the stations. The mission is not simple, and to do it, Artyom must carry his rifle and leave his friend and mentor Sukhoy. Thus, he starts a long and intricate journey through tunnels dug under the ruins of Moscow, a route full of threats, colorful characters and fast-paced action that will keep the reader in suspense throughout its 450 pages.

Classified as science fiction, *Metro 2033* is a fierce critique of contemporary Russian society, using the subway as the main allegory. Thus, each station becomes a nucleus that concentrates on a specific ideology and only relates to the other stations when there is the possibility of obtaining some benefit from this collaboration. That is, sharing a limited space, and being the few people who have managed to escape the terrible holocaust, the survivors are unable to live with each other, establishing new borders that keep them isolated from the rest by their inability to forget their past conflicts and differences. Glukhovskii (2013) paints a hostile environment, not so much by the unpleasant conditions nor the creatures lurking in the shadows, but using the survivors themselves.

Like other science fiction novels, *Metro 2033* gives special prominence to the moral conflicts of its characters, and demonstrates, through extensive dialogues, strong theological and philosophical content. However, the constant exchanges of views disrupt the plot so often that at some points this results in uneven narrative. In many cases, they are not justified considering the context in which they develop. In addition, many reflections make mention of events and characters unknown to most readers. Presumably, Glukhovskii intended to express

his concern about the current Russian society, however the phenomenon of *Metro 2033* has transcended borders thanks to the Internet. Some parts of the novel may only be understandable to people who have experienced living in the context of Russia or through a deep knowledge of the history of this country. In this regard, the question arises whether the social audience of Glukhovsky intended to be limited exclusively to Russian people or whether he has tried to present the reality of his country to the world.

Soon after its release *Metro 2033* became a popular dystopian novel and one of the bestsellers in Russia. It has been translated into 37 languages and has attracted the attention of the video game industry and Hollywood, and has spawned a fictional universe and its own fan subculture throughout the world. Expectations from a *Metro 2033* video game was high from the very beginning due to two factors. First the reputation of the development team, creators of the successful *S.T.A.L.K.E.R* (2007). Second, the fact that it is an adaptation of Glukhovsky's bestseller. The game promised entrance to a universe in which the young Artyom lives and a chance to see what happens in the Moscow underground in the fictional 2033. The adventure begins with a flash-forward. The young Russian protagonist of the book and the game walks along a certain path in a hurry. We immediately see the surface in first person perspective and face an attack from a few strange creatures. When all seems lost, the game goes back, eight days before, to show us exactly what happened up to that point. A voiceover then gives us a first summary of the events. As if it were a book, the adventure is in form of intertwined chapters, each of which has its corresponding introduction.

Despite being an adaptation of the Glukhovsky's novel (the game is also co-written by Glukhovsky), 4A Games have worked hard to make Artyom and the post-apocalyptic world look different from that of the novel. Some elements of the book are exactly repeated in the game at times but overall the game ends up going down a path that is not strictly similar to the book. The experience of stepping in the atmosphere of the post-apocalyptic subway and living among the few surviving humans is an experience limited to the game due to its immersive and interactive nature.

LITERATURE REVIEW

Video Games and Storytelling

Tavinor (2009) demonstrates how the philosophy of art theories developed to address traditional areas of art can also be applied to the new risen medium, video games. He presents an exceptional philosophical approach to see the art of video gaming, putting video games in the framework and structure of analytic philosophy of the arts and explores the relationship between video games and earlier artistic and mainstream entertainment media, besides how games allow for interactive story-telling and the role of game narrative. He also claims that video games do indeed greatly qualify as a fresh and inspiring form of representational art. Hutcheon (2006) explores the omnipresence of adaptations in all their different media manifestations and questions their constant critical defamation and Stam (2005) introduces the process and art of creating adaptations. He also accentuates the importance of both the literary works themselves and their different adaptations and multiplies the perspectives and viewpoints through adaptation. Howanitz (2013, p. 108) explains the genre of *Metro 2033* in relation to storytelling, and the relationship between the novel and the video game:

This interpretation opens up a row of connections to the literary genre of the picaresque novel, which uses travel and the image of the 'picaro' [rouge, rascal], whose attributes suit Artem, the main protagonist of both the *Metro 2033* game and novel, quite well. Thus, the importance of space is more of a literary reference than a ludic one. This interpretation is backed up by Glukhovskii's sequel *Metro 2034*,

which stresses its connection to the *Odyssey* by means of introducing a protagonist called Homer. Aside from that, in an interview with RIA Novosti, Glukhovskii stated that Artem's journey is based on the author's every day commute to school when he was a child (Grishina et al., 2010). So the travelogue is inspired by biographical facts as well.

The relationship between storytelling and video game playing is also addressed by the [Artifice \(2018\)](#) online article that focuses on 'depth put into story'. It differentiates between the key features of how the story is conveyed through the interactivity of video game compared with storytelling that involves a narrative structure. While the player accesses the story through the designed experience of playing, combined with the operations and context created in the game, the common element with 'storytelling' is the narrative genre (Wong & Lim, 2014), meaning both the story and its telling (Garvis, 2015, p. 2-3). This reinforces Howanitz (2013, p. 108) examination of the role of narrative in video games and how the story is supported through the various features of the game genre. He also highlights how the game includes strong references to the novel and writing via the presence of a typewriter as the starting button and a copy of the book as a prop.

From the player or reader perspective when choosing a video game or a story, *Artifice* (2018) notes the same criteria apply in terms of players/readers trying to establish their potential interest through gaining insights into topic, content, characters and context. In defending the literary qualities of games, *The Artifice* argues that 'interactivity makes the story'. This interactivity that embeds the storytelling has become a key feature of contemporary video games as opposed to earlier video games that provided players with reading material to support the narrative. *Artifice* (2018, last para.) concludes:

It is therefore, a positive attribute for a game, if its story-telling foundation – character development, plot progression, environment use – is balanced and (preferably) matched with its use of interactivity – music, competent voice acting, sound design, character design, choice of gameplay mechanic, and overall capacity to help in plot progression.

A further vital consideration regarding the interface of video game playing and storytelling is how the narrative structure can support and reinforce learning in keeping with Csikszentmihalyi's (1990) theory of 'flow'. That is the optimal experience for learning is one that is truly gratifying and enabling a state of consciousness that is referred to as 'flow'. During the state of flow, people typically experience profound creativity, enjoyment, and a total involvement with the activities, and in terms of video game playing the play would be sustained through the positive rewarding experience (which does not necessarily happen in general learning experiences). Csikszentmihalyi (2008) illustrates the ways this positive and useful state can be harnessed as opposed to being left to chance. He shows how, by arranging the information that is going to enter the learner's consciousness, the true enjoyment of learning can be discovered, and therefore, with this knowledge designers of learning experiences can greatly improve the quality of learning.

Domínguez, Saussy and Villanueva (2014) give a general guide to the field of comparative literature and offer lucid, concise information alongside practical analysis and samples. Examining comparative literature within the context of transnationalism and cosmopolitanism (Melnic & Melnic, 2017), they also offer involvement and comparison with other visual arts, such as video games and cinema, Thus they are transnational, helping players or viewers to learn without borders. Besides, in the social aspects of both cinema and video games, there is a community with particular social morphologies. Interestingly, for this

study Guerrero (2011) argues that the simulation experience involved in playing video games augments the EFL teacher's instruction because it provides an alternative learning experience that appeals to students' interests and is deeply engaging such that the SLA aspect is delivered in a meaning-making context and more subliminally.

Video Games and Language Learning

The impact of video games on teaching and learning a new language is not in its infancy. There is quite a large number of scholars who support the role of video games as being indispensable as a resource for learning and teaching languages and literacy (Reinerds & Wattana, 2015; Rogers, 2016; Soyooof & Jokar, 2014). Studies have addressed the usefulness of playing video games for fostering vocabulary development, listening skills as well as reading and speaking.

Theoretically, Jones (2008) in an extensive study delves into listening comprehension and the impact of bridging from analog to digital that underpins the new media of current times. She further asserts that listening comprehension activities used today are more multisensory and interactive than any devised before. With the emergence of technology and instructional design, today's computers cannot only offer sight and sound, but also text to sharpen language learners' aural comprehension. The ways that opportunities for the teaching and learning of listening comprehension have evolved so dramatically over recent decades has all been due to huge advances in digital media and access to the Internet providing the easily accessible resources that facilitate opportunities for interactive and more authentic communication.

One of the most noteworthy examinations on listening comprehension was conducted by Anderson, Reynolds, Yeh and Huang (2008). Their experimental study of eight Taiwanese EFL students, found that after five sessions of studying a course through video games these students' post-test language listening scores were statistically significantly greater than their pre-test scores. This is in keeping with DeHann's (2005) study of Japanese EFL students. Following the incorporation of video games in a one-month long program listening tests results showed improvement. What is more, Correia, Pellegrini, Eskenazi, Trancoso, Baptista and Mamede (2011) also asserted that listening comprehension can play a very facilitative role for students who aim to learn a new language (Portuguese) via video games, and similarly the recent research of Yuditseva's (2015). Additionally, according to Hsu, Hwang, Chang and Chang (2013) one of the elements that bring about listening comprehension among language learners is the subtitle option in video games, playing a conductive role in sharpening listening comprehension. Soyooof and Sedighi (2013) reached similar results; that video games play a conductive role in sharpening students' language learning and particularly listening comprehension, whereas Reinders (2012) research found video games contribute to both listening and reading comprehension. Similarly, video games have been shown to improve students reading skills both in general literacy (Franceschini, Gori, Ruffino, Viola, Molteni & Facoetti, 2013), and including spelling (Shokri & Abdolmanafi-Rokni, 2014). In particular, there has been much research showing the advantages of video games for students' vocabulary acquisition (Aghlara & Tamjid, 2011; Ashraf, Motlagh & Salami, 2014; Smith, Li, Drobisz, Park, Kim & Smith, 2013; Uzun, 2009).

With regard to the impact of video games on the speaking skills of language learners, a wide range of studies has concluded positive results. In Soyooof and Jokar (2014) seminal study they claimed that not only the psycholinguistic aspect but also sociocultural aspect of language learning exist in video games, both of which are essential for students speaking skills to improve (Soyooof & Talei, 2013). Psycholinguistic inquiry focuses on the internal mental processes on the basis that conditions for optimizing learning can be nurtured. In addition, with respect to the theory of Second Language Acquisition (SLA) video games have been found to facilitate learning provided the language learners are actively engaging in the process of

reorganizing their ‘inter-language’¹ (Selinker, 1991) in the types of communicative activities that are goal-oriented (Gass, 2000). According to Soyooof and Jokar (2014), despite the fact that this approach to SLA may be more seen as more typical of traditional pedagogy, although it is also applicable to developing learner autonomy; theoreticians have expounded that the central constructs adhere to computer-based learning contexts. For instance, Chapelle (cited in Soyooof & Jokar, 2014, p. 1851) was of the opinion that:

utilizing computers in learning is a suitable approach when it is contingent upon the use of real-world communicative tasks. In the context of game-based and simulation-based learning, theorists have claimed that computers can support language learning in a couple of ways. Firstly, users of both games and simulations are involved in purposeful task-focused interaction and are exposed to a great deal of TL input. Most of this input becomes comprehensible through the feedback that occurs between learners and their interlocutors (Garcia-Carbonell, Rising, Montero & Watts, 2001).

Taking all of this into account the need to examine the interface between language learning and the storytelling aspect of video games is argued to be justified and particularly from the perspective of students as avid players as well as EFL learners. Thus, the research sought to investigate the following question:

In the opinion of EFL learners:

To what extent do video games promote students’ EFL learning through their ability to tell a story and enable students to grasp the narrative?

METHODOLOGY

This study benefited from a qualitative approach to the research where the researchers aimed to shed light upon language learners who had extensive experience of playing video games with respect to the interface between language learning and the storytelling of games. The research was conceived as an important starting point for the researchers’ intent to use the finding based as a springboard for future studies in this area.

To ensure some common base to the research, although the participants were experienced in game playing, it was ensured that the same game became the core experience for the study. Specifically, this involved the learners being experienced in playing each of two versions of a particular video game, namely, *Metro 2030* and *Metro last light* (the sequel), to explore their views of the games’ potential for promoting both learning a new language, and being effective story tellers, thus enabling them to grasp the narrative. An interview schedule was designed to facilitate the students’ ability to express their opinions about their experience playing their game from the perspective of improving their English language and grasp the story narrative. An introduction to the video game is provided earlier in this article as an advance organizer to become familiar with not only the video game itself (Horwanitz, 2011) but the helpful elements included regarding the narration of the story and the possibilities of support for language learning (The Artifice, 2018).

¹ Selinker (1991) devised this concept, which refers to the learners’ linguistic behaviour that emerges during their L2 acquisition, that teachers may use to better address their needs e.g. students may apply their knowledge about their first language to the new language, which may not work depending on the L2.

Sample Selection

The participants of this study were ten EFL and ESL language learners who were highly experienced in playing video games and the focused game involved in the research. In this regard, selection was based upon purposive sampling, which led to them all being male and of proficiency levels deemed appropriate for them to engage and learn through playing the game. As volunteers, they were familiar with their Oxford Placement Test (2007) results, which ranged from intermediate to advance level. The age range of the sample was 18 to 26 years.

Findings

The researchers categorized the perception of students in respect to their views about video games into two major themes of (1) story related content and (2) learning environment and related skills. Students' responses in interviews are presented and discussed in relation to the emergent sub-categories in each case. Firstly, story related content encompassed the way video games relate to literature in terms of characterization in video games, music and immersion. For the second theme the four subcategories of listening, reading, game atmosphere and motivation came to the fore. The results are couched in terms of students' comments.

Learning Environment and Related Skills

Listening

The ten participants showed consensus over the impact that video games can have upon their language listening skill. They unanimously supported that in the course of playing video games, they became attuned to the language of the video games as their need to listen in order to successfully interact. They found the video games were quite understandable and the rate of delivery of language for them as EFL learners did not involve very much oscillation, although some element of challenge depending on their proficiency. For instance, Participant One maintained:

Yes, because you have to listen to different voices and some of them are not so clear, also most of the games have subtitles so you can make the connection between what you are hearing and what you are reading, so improving the listening skills and also learning vocabulary.

This student's idea is supported by the comments of Participant Four who in his reply to the same question expounded:

I always find video games story-based, where the different levels of the video game are inseparable. Moreover, it is usually a must for players to listen to the video games' instructions and objectives to be able to pass a given level. It is interesting that the language of video games is mostly paraphrased or repeated several times for the players, so as to better enabling me to find out what the objectives and instructions of video games are at each of the levels.

The finding in this theme is in line with Yudinseva's (2015) study, in which he draws the conclusion that video games have positive effects on language learners' listening comprehension. What is more, Correia, Pellegrini, Eskenazi, Trancoso, Baptista and Mamede (2011) also assert that listening comprehension can play a very facilitative role for students who aim to learn the new language of Portuguese. In a parallel vein, Reinders (2012) concluded that there is a relationship between the learning of both reading and listening comprehension and playing video games. Additionally, according to Hsu, Hwang, Chang and Chang (2013) one of the elements that bring about listening comprehension in language learners is the subtitle

option incorporated in video games, playing a conductive role in sharpening listening comprehension.

Reading

The majority of the participants also claimed that video games contain elements that are able to foster second language reading, especially because of video games using subtitles. While this feature was perceived as helping players with lower listening skills to stay on track with the story and objectives of a video game, moreover, in turn, the results suggested that combined with automaticity they also served to boost video game players reading skills. To support this claim Participant Three asserted:

The sub-titles of video games play a very facilitative role in not only helping players to find out whatsoever is going on in the video game but they also aid the listening comprehension as well as enhancing my reading skills, acting as clues.

His notion underpins Participant Five's similar response as he explained:

Yes, the subtitles in video games help me to make a connection between the writing and the pronunciation of the word - showing me the letters and combinations; it also helps me with grammar and learning new vocabulary as the words show again.

This research is in keeping with Dubbels (2009) and reiterates the work of Berger (2002) where video games are seen as having have a pivotal role in developing reading comprehension strategies amongst those players who play video games on a regular basis.

Atmosphere, immersion and flow

All but two participants raised the issue regarding video games providing a situation or context and atmosphere that not only immerses the players in the story and objectives of the game but also has exerts a huge sub-conscious influence upon the player's memory and belief, because of the power of the various elements such as the music, actions and graphics/images and simulation. Related to this in terms of other elements of video games, that were perceived as bringing about better learning were identified as the attractive atmosphere that is created, along with the similar to real life situations involved. For example, Participant Eight claimed:

In matters of the characters of the story, I can find the characters as well as the story of video games more deeply in video games rather than novels, if by novel we mean a book then a video game is for sure more immersive in space and details for representing both the story itself and the characters of the video games.

Participant Two alludes to the role of atmosphere in learning as being motivational during the playing of video games, noting:

I actually find the atmosphere in video games very attractive, sometimes I am under the impression that I am in a new world which is very similar to my world. I believe that this intriguing atmosphere makes learning new things easier.

In keeping with Frasca (2001), the students' responses suggest that video games can be very immersive tools for teaching new material, which can affect their deeper learning by influencing them sub-consciously, thus having a profound impact upon them as players/learners. Video games in matters of atmosphere are also very close to simplicity theory, a theory that asserts that simply learning and teaching in a more interesting atmosphere is facilitatory for learners and teachers alike (Juul, 2011). Other characteristics of video games that portrait them as ideal atmosphere providers includes the artwork and music involved. Participant Six noted the importance of this in his preference for video games:

The music and pictures of video games, are an indispensable feature in helping me to be greatly immersed in the atmosphere of video games and making video games much more attractive and exciting.

Thus, the attribute of immersiveness of video games as highlighted by Calleja (2011) bodes well with the above claim for their ability to foster students' subconscious learning and in Csikszentmihalyi's (2008) terms, experience 'flow'. In addition, Zhang and Fu (2015) in their study shared the idea that the music of video games in effect held a crucial role working hand-in-hand with the atmosphere of video games that players find as an immersive medium. What is more, DeHann, Reed and Kuwada (2010) concluded that a video game's music has an effect on players' interactions within the game, and this feature acts as an aid to players to grasp new vocabularies and key concepts more effectively. In keeping with this Participant Seven maintained that:

Since video games are similar to real life situations, and their atmosphere and music helps players envisage themselves in a similar atmosphere to real life, many students can 'guess' the meaning of new vocabularies on the basis of the situation in which various episodes of a video game take place. Moreover, because video games are story based they help players to guess, attain and remember new words more effectively.

This is in line with some of the most recent studies on video game and vocabulary learning, for example, Yudinseva (2015) supports the role video games play for attaining new words. AlShaiji (2015) accentuates the significant effect of video games on vocabulary retention, and finally, Osman and Bakar (2013) highlight that video games are of grave importance in enhancing new vocabulary learning strategies especially guessing new words.

Motivation

All the participants of this study emphasized that motivation plays a huge role in their experience with video games. As a matter of fact, this claim, is well grounded in the literature (Granic, Lobel & Engels, 2014) and numerous studies underpin the veracity of the argument that video games are replete with different types of affective variables especially geared to motivation (Reinders, 2017; Ruggiero, 2015; Soyooof & Jokar, 2014). Evidence of the students' awareness of this is evidenced in the response of Participant Seven:

From my perspective, video games are full of emotions, joy, enthusiasm and all other elements related to emotion and emotional aspects. I may not have knowledge of these terms, but I know motivation very best. I actually believed that video games have a large repertoire of various types of motivation especially the intrinsic and positive one.

Since the lack of motivation is known to be one of the greatest challenges in second language learning and particularly when learning in a foreign language context (Gardner, 2014) there is a powerful argument for the design of video games for the purposes of SLA. It goes without saying that motivation is regarded as the most integral driving source behind accomplishing whatsoever objectives and tasks the video game demands of the player.

In keeping with this Banyte and Gadeikiene (2015) as well as Granic et al. (2014) expound that video games create the appropriate atmosphere to not only learn new information but also be involved in the motivations that the game provides. Most recently, Ushioda and Dörnyei (2017) have also addressed this and note that video games are imbued with motivation, arguing that they are responsible for bringing about vision among learners that is the cornerstone of motivation. They propose that through learners creating the vision involved in mastering a video game enhances learners'/players' ability to sustain their participation. Thus, a game is seen as involving them in a cyclical chain of motivation.

DISCUSSION AND CONCLUSIONS

Given the elements that video games have, they can be fruitful for narrating a new story and learning a new language. Accordingly, the researchers in this study conclude that video games are viewed as a very suitable tool for narrating a new story, since in terms of immersion video games provide a more immersive atmosphere for readers. Besides, it is shown here that it is easier for the player to identify with the protagonist of a video game, than a novel. What is more, the music and structure offered in video games help the audience to attain a better understanding of details and situations where the story come about.

Taking into account the language learning and teaching related elements of video games, they are helpful for vocabulary learning owing to the story-based structure of video games. Additionally, since video games take place in a context that can be more visual, language learners can guess new words more easily compared to a similar context presented in a novel. With this in mind, the researchers constructed the following mind map presented in Figure 1 to show how the various aspects of the interface between language learning and storytelling in the video game playing experience might be portrayed for exploration in any future research.

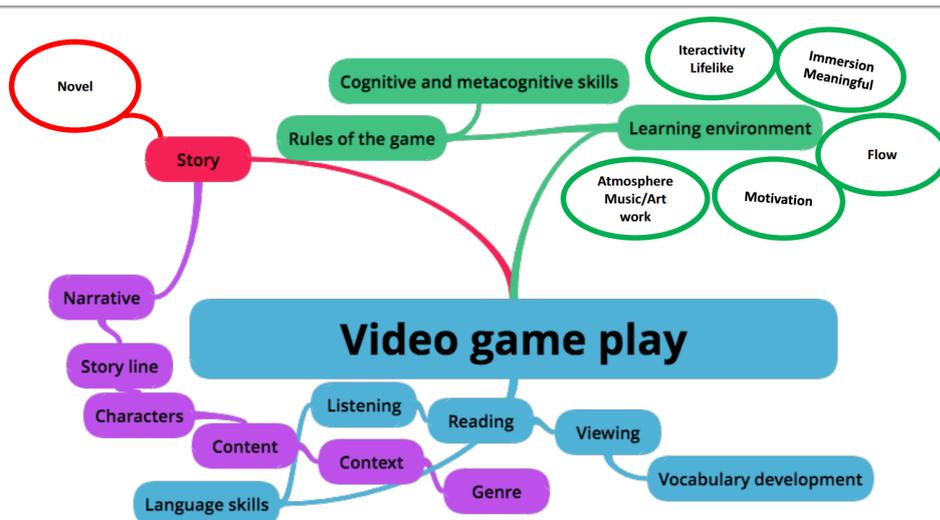


Figure 1: Mind map of the emerging interface between language learning and storytelling in video game play (Source: The authors)

It is not a myth that video games are replete with various types of motivations, both intrinsic and extrinsic. These types of motivations are the driving force for better accomplishing arduous tasks including learning a new language. Furthermore, the context of video games is very attractive and this in in line with simplicity theory, claiming that the more attractive the context of teaching and learning be, the better the process of teaching and learning occur.

The receptive language skills of players are largely affected by various elements that video games cater. For instance, most video games, and in particular the video game selected for this study, have subtitles. These characteristics aid players to firstly try to find out the language of video games primarily through listening channel and in case they do not get a good grasp of what is going on, they stick to subtitles as the second option for understanding the language used in a particular video game. To this end, video games help players acquire greater success with listening and reading skills through the demand to make meaning and grasp the

story, the fictional world, and atmosphere. It would seem the story would be a scaffold that supports the students' interactions and meaning making. Though this requires further research. However, having considered the above-mentioned features of video games, this study found them very helpful from the perspective of the ten participants. Given that video games are perceived by students as providing support for narrating a new story, and facilitating language teaching and language learning it is important to continue such research. While a small exploratory study these findings provide the basis for a more in depth investigation of such key elements of student engagement through video game playing such as assessment of language skills improvement, design features that sustain play and learning, and the achievement of 'flow'.

Acknowledgments

We wish to acknowledge the students who generously gave their time to be involved in the research.

Address for correspondence: Monash University, Australia. Email:< farzad.parsayi@monash.edu.au>

REFERENCES

- AlShaiji, O. A. (2015). Video games promote Saudi children's English vocabulary retention. *Education*, 136(2), 123-132.
- Aghlara, L., & Tamjid, N. H. (2011). The effect of digital games on Iranian children's vocabulary retention in foreign language acquisition. *Procedia Social and Behavioral Sciences*, 29, 552-560.
- Anderson, T. A., Reynolds, B. L., Yeh, X. P., & Huang, G. Z. (2008, November). Video games in the English as a foreign language classroom. In *Digital Games and Intelligent Toys Based Education, 2008 Second IEEE International Conference on* (pp. 188-192). IEEE.
- Ang, C. S., & Zaphiris, P. (2008). Computer games and language learning. In T. T. Kidd & H. Song (Eds.), *Handbook of research on instructional systems and technology* (pp. 449-462). Hershey, PA: IGI Global.
- Ashraf, H., Motlagh, F.G., & Salami, M. (2014). The impact of online games on learning English vocabulary by Iranian (low-intermediate) EFL learners. *Procedia – Social and Behavioral Sciences*, 98, 286-291.
- Banyte, J., & Gadeikiene, A. (2015). The effect of consumer motivation to play games on video game-playing engagement. *Procedia Economics and Finance*, 26, 505-514.
- Berger, A. A. (2002). *Video games: A popular culture phenomenon*. Transaction Publishers.
- Calleja, G. (2011). *In-game: From immersion to incorporation*. MIT Press.
- Chapelle, C.A. (2001). Innovative language learning: Achieving the vision. *ReCALL*, 13, 3-14.
- Chik, A. (2014). Digital gaming and language learning: Autonomy and community. *Language Learning & Technology*, 18(2), 85-100. Retrieved from <https://pdfs.semanticscholar.org/d74b/0d164ad7c41eebf11301487cc51d1955b527.pdf>
- Cole, H., & Griffiths, M. D. (2007). Social interactions in massively multiplayer online role-playing gamers. *CyberPsychology & Behavior*, 10(4), 575-583. <https://doi.org/10.1089/cpb.2007.9988>
- Correia, R., Pellegrini, T., Eskenazi, M., Trancoso, I., Baptista, J., & Mamede, N. (2011). Listening comprehension games for Portuguese: Exploring the best features. In Proc. SLaTE, Venice.

- Csikszentmihalyi, M. (1990). *The domain of creativity*. In M. A. Runco, & R. S. Albert (Eds.), *Theories of creativity* (pp. 190-212). Newbury Park, CA: Sage.
- Csikszentmihalyi, M. (2008). *Flow: The psychology of the optimal experience*. New York: HarperCollins.
- D'Angelo, C., Rutstein, D., Harris, C., Bernard, R., Borokhovski, E., & Haertel, G. (2014). *Simulations for STEM learning: Systematic review and meta-analysis*. Menlo Park: SRI International.
- Deen, M. (2015). *G.A.M.E., Games autonomy motivation and education: How autonomy-supportive game design may improve motivation to learn*. Eindhoven: Technische Universiteit Eindhoven.
- DeHaan, J., Reed, W. M., & Kuwanda, K. (2010). The effect of interactivity with a music video game on second language vocabulary recall. *Language Learning & Technology*, 14(2), 77-94.
- DeHaan, J. (2005). Learning language through video games: A theoretical framework, an evaluation of game genres and questions for future research. In S. P. Schaffer & M. L. Price (Eds.), *Interactive convergence: Critical issues in multimedia* (pp. 229-239). London: Inter-disciplinary Press. Retrieved from <http://interdisciplinary.net/publishing/id-press/ebooks/interactive-convergence-criticalissues-in-multimedia>
- Domínguez, C., Saussy, H., & Villanueva, D. (2014). *Introducing comparative literature: New trends and applications*. Routledge.
- Dubbels, B. (2009). Dance dance education and rites of passage. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, 1(4), 63-89.
- Frasca, G. (2001). *Videogames of the oppressed: Videogames as a means for critical thinking and debate* (Master's thesis, School of Literature, communication, and culture, Georgia Institute of Technology).
- Franceschini, S., Gori, S., Ruffino, M., Viola, S., Molteni, M., & Facchetti, A. (2013). Action video games make dyslexic children read better. *Current Biology*, DOI: [10.1016/j.cub.2013.01.044](https://doi.org/10.1016/j.cub.2013.01.044)
- García-Carbonell, A., Rising, B., Montero, B., & Watts, F. (2001). Simulation/gaming and the acquisition of communicative competence in another language. *Simulation & Gaming*, 32(4), 481-491.
- Gardner, R. C. (2014). Attitudes and motivation in second language learning. In *Bilingualism, multiculturalism, and second language learning* (pp. 63-84). Psychology Press.
- Garvis, S. (2015). *Narrative constellations: Exploring lived experience in education*. Rotterdam, Netherlands: Sense Publishers.
- Gass, S. (2000). Changing views of language learning. *British Studies in Applied Linguistics*, 15, 51-67.
- Gee, J. P. (2003). What video games have to teach us about learning and literacy. *Computers in Entertainment (CIE)*, 1(1), 20-20.
- Gee, J. P. (2007). *Good video games+ good learning* (pp. 1-82). New York: Peter Lang.
- Gee, J. P. (2012). Digital games and libraries. *Knowledge Quest*, 41(1), 61.
- Glukhovskii, D. (2013). *Metro 2033* (Vol. 1). Dmitry Glukhovskii.
- Glukhovskii, D. (2005). *Metro 2033*. Moskva: Eksmo.
- Granic, I., Lobel, A., & Engels, R. C. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66.
- Griffiths, M. (2013). Moscow after the Apocalypse. *Slavic Review*, 72(3), 481-504. DOI: [10.5612/slavicreview.72.3.0481](https://doi.org/10.5612/slavicreview.72.3.0481)
<https://www.jstor.org/stable/10.5612/slavicreview.72.3.0481>

- Guerrero, H. A. G. (2011). Using video game-based instruction in an EFL program: Understanding the power of video games in education. *Columbian Applied Linguistics Journal*, 13(1). Online. Retrieved from http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0123-46412011000100005
- Higgings, S., Xiao, Z.M., & Katsipataki, M. (2012). *The impact of digital technology on learning: A summary for the education endowment foundation. Full Report*. UK: Durham University.
- Howanitz, G. 'Metro 2033' – More than a cinegame? *Digital Icons: Studies in Russian, Eurasian and Central European New Media*, 8, 97-116. Retrieved from <http://www.digitalicons.org/issue08/gernot-howanitz/>
- Hsu, C. K., Hwang, G. J., & Chang, C. K. (2013). A personalized recommendation-based mobile learning approach to improving the reading performance of EFL students. *Computers & Education*, 63, 327-336.
- Hutcheon, L. (2006). Interdisciplinary opera studies. *PMLA*, 121(3), 802-810.
- Jones, L. C. (2008). Listening comprehension technology: Building the bridge from analog to digital. *Calico Journal*, 25(3), 400-419.
- Juul, J. (2011). *Half-real: Video games between real rules and fictional worlds*. MIT press.
- Malik, S. A., & Wiseman, A. W. (2017). Revisiting and re-representing scaffolding: The two gradient model. *Cogent Education*, 4(1). DOI: [10.1080/2331186X.2017.1331533](https://doi.org/10.1080/2331186X.2017.1331533)
- Melnic, D., & Melnic, V. (2017). Playing with(out) borders: Video games as the digital expression of transnational literature. *Metacritic Journal for Comparative Studies and Theory*, 3, 75-92. DOI:10.24193/mjst.2017.3.05
- Osman, K., & Bakar, N. A. (2013). Teachers and students as game designers: Designing games for new pedagogical approaches in game enhanced learning: *Curriculum Integration*, 102-113.
- Reinders, H., & Wattana, S. (2015). Affect and willingness to communicate in digital game-based learning. *ReCALL*, 27(1), 38-57.
- Reinders, H. (Ed.). (2012). *Digital games in language learning and teaching*. Basingstoke: Palgrave Macmillan.
- Reinders, H. (2017). Digital Games and Second Language Learning. *Language, Education and Technology*, 1-15.
- Selinker, L. (1991) Along the way: Interlanguage systems in second language acquisition. In L. Malavé, & G. Duquette (Eds.), *Language, culture and cognition: A collection of studies in first and second language acquisition* (pp. 23-34). Adelaide: Multilingual Matters Ltd.
- Rogers, R. (2016). *How video games impact players: The pitfalls and benefits of a gaming society*. Lexington Books.
- Ruggiero, D. (2015). The effect of a persuasive social impact game on affective learning and attitude. *Computers in Human Behavior*, 45, 213-221.
- Shokri, H., & Abdolmanafi-Rokni, S. J. (2014). The impact of computer games on EFL learners' spelling: A qualitative study. *Studies in English Language Teaching*, 2(3), 266-274.
- Smith, G. G., Li, M., Drobisz, J., Park, H. R., Kim, D., & Smith, S. D. (2013). Play games or study? Computer games in ebooks to learn English vocabulary. *Computer & Education* 69, 274-286.
- Uzun, L. (2009). An evaluative checklist for computer games used for foreign language vocabulary learning and practice: Vocaword sample. *Novitas-ROYAL*, 3(1), 45-59.
- Soyoof, A., & Jokar, M. (2014). Video game: A way to reduce inhibition and enhance language achievement. *Procedia-Social and Behavioral Sciences*, 98, 1850-1858.

- Soyooof, A., & Sedighi, Z. (2013). Video game: A new trend for fostering automaticity. In *Conference proceedings. ICT for language learning* (p. 120). Libreriauniversitaria. it Edizioni.
- Soyooof, A., & Talei, M. (2013). Videogame: A fresh orientation for forging better gamblers. In *Conference proceedings. ICT for language learning* (p. 116). Libreriauniversitaria. it Edizioni.
- Stam, R. (Ed.). (2005). *New vocabularies in film semiotics*. London: Routledge.
- Tavinor, G. (2009). *The art of videogames*. John Wiley & Sons.
- The Artifice (2018). *Story telling and interactivity in video gaming*. Retrieved from <https://the-artifice.com/video-gaming-story-telling-interactivity/>
- Ushioda, E., & Dörnyei, Z. (2017). Beyond global English: Motivation to learn languages in a multicultural world: Introduction to the special issue. *The Modern Language Journal*, 101(3), 451-454.
- Wong, V-F., & Lim, J. M-H. (2014). Linking communicative functions with linguistic resources in short stories: Implications of a narrative analysis for second language writing instruction. *System*, 45, 147-162.
- Yudintseva, A. (2015). Game-enhanced second language vocabulary acquisition strategies: A systematic review. *Open Journal of Social Sciences*, 3(10), 101.
- Zhang, J., & Fu, X. (2015). The influence of background music of video games on immersion. *Journal of Psychology & Psychotherapy*, 5(4), 1.

Video games

- 4A Games. (2013). *Metro: Last Light*.
- 4A Games. (2010). *Metro: 2030*.