THE EFFECTS OF A GAME-ENHANCED LANGUAGE LEARNING INTERVENTION ON STUDENTS'L2 DEVELOPMENT AND L2 MOTIVATIONAL SELF-SYSTEM

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Approval of the Graduate School of Social Sciences

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ABSTRACT

THE EFFECTS OF A GAME-ENHANCED LANGUAGE LEARNING INTERVENTION ON STUDENTS'L2 DEVELOPMENT AND L2 MOTIVATIONAL SELF-SYSTEM: A MIXED-METHOD STUDY

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The purpose of this study is to investigate the effectiveness of a game-enhanced language learning intervention on language learning and on the development of L2 motivational self-system of EFL students. The study employed a quasi-experiment design with 76 EFL students at a private university. The experimental group (N=38) participated in a game-enhanced language learning program for 10 weeks, whereas the control group (N=38) received traditional instruction. Students in the experimental group were asked to play the game *Life is Strange* as a part of their instruction and classroom activities designed along the PCaRD were conducted an hour per week. For the quantitative data an achievement test (TOEFL ITP) and L2 motivational self-system questionnaire was implemented with both the experimental and control group at the beginning and end of the semester. The qualitative data were gathered from 7 students from the experimental group via semi-structured interviews. The findings of the study indicated that even though there was no significant difference between control and experimental group regarding both the achievement exam and L2 motivational self-system questionnaire, the participants

had quite positive attitudes toward game integration. Overall, the participants suggested that game play and its integration provided them with a great amount of language input, especially vocabulary and daily expressions, and it was motivating for their language learning process.

Keywords: Game-Enhanced Language Learning, Second Language Learning, L2 Motivational Self-System, PCaRD

ÖZ

OYUN TABANLI DİL ÖĞRENMENİN ÖĞRENCİLERİN DİL ÖĞRENİMİ VE İKİNCİ DİL MOTİVASYONAL BENLİK SİSTEMİ ÜZERİNE OLAN ETKİLERİ

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Araştırmayla oyun tabanlı dil öğrenmenin İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil öğrenmelerine ve dil öğrenmeye yönelik motivasyonlarına etkilerinin incelenmesi amaçlanmıştır. Yarı deneysel desen uygulanan araştırmanın çalışma grubunu özel bir üniversitede İngilizceyi yabancı dil olarak öğrenen 76 öğrenci oluşturmuştur. Araştırmanın yürütüldüğü 10 haftalık süreçte deney grubunda (N=38) oyun tabanlı dil öğrenme programı, kontrol grubunda (N=38) geleneksel öğretim yöntemi uygulanmıştır. Deney grubundaki öğrencilerden öğretim süreçlerinin bir parçası olarak Life is Strange isimli oyunu oynamaları istenmiş ve haftada bir saat PCaRD teorisi ile uyumlu etkinlikler sınıfta yapılmıştır. Araştırmanın nitel boyutunda veriler, dönemin başında ve sonunda bir başarı testinin (TOEFL ITP) ve ikinci dil motivasyonal benlik sistemi anketinin deney ve kontrol gruplarına uygulanmasıyla elde edilmiştir. Nitel boyutunda ise veriler, yarı yapılandırılmış form kullanılarak deney grubundan 7 öğrenciyle yapılan görüşmelerle elde edilmiştir. Araştırmanın bulgularına göre deney grubunun ve kontrol grubunun başarı testi puanları arasında ve ikinci dil motivasyonal benlik

sistemi puanları arasında fark yoktur. Diğer yandan, katılımcıların oyun entegrasyonuna yönelik tutumlarının olumlu olduğu bulgulanmıştır. Araştırma sonucunda, katılımcılar oyun oynamanın ve öğretim programında oyuna yer verilmesinin kelime ve günlük dile ait ifadeler başta olmak üzere yoğun dil girdisi sağladığını ve dil öğrenme sürecinde motivasyonlarını arttırdığını belirtmişlerdir.

Anahtar Sözcükler: Oyun Tabanlı Dil Öğrenme, İkinci Dil Öğrenimi, İkinci Dil Motivasyonal Benlik Sistemi, PCaRD

to my beloved husband…

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whole process. I would not be who I am today without them. You are my chances in life!

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LIST OF ABREVIATIONS

EFL	English as a Foreign Language
GaNA	Game Network Analysis
ICCE	Inquiry, Communication, Construction, Expression
L2	Second Language
L2MSS	L2 Motivational Self-System
NPCs	Non-player characters
PCaRD	Play Curricular activity Reflection Discussion
TPACK	Technological Pedagogical Content Knowledge

CHAPTER 1

INTRODUCTION

This chapter presents a brief background of the study, the problem statement, the significance of the study, research questions and finally limitations of the study.

1.1. Background of the Study

The purpose of the current study is to explore the effects of a game-enhanced learning on students' language development, language learning motivation and its affordances for improving foreign language instruction

With English becoming the most largely used language in various domains such as the mass media, commercial and industrial communities, various societies, economic domains and education, it is required to have a good command of English and become an integrated member of the language community. This can be realized by effective teaching and learning of English, which is essential for accessing to the technical, educational and knowledge sources required to keep up with the contemporary society (Richards & Burns, 2012). As a consequence of the growing demand for effective English teaching and learning, practitioners are looking for ways to make the language learning experience more effective and permanent. Based on the contemporary educational philosophies, technological advancements and research, there is a shift to different practices (Richards & Burns, 2012) because what counts as language learning and our perceptions changed with the digital rise. This brings a need to redefine some concepts in the field of language education and innovations may be utilized to create online learning environments (Wang & Winstead, 2016).

Game companies are producing and launching new games every year. As people have more access to games through computers, mobile phones, consoles, TVs and tablets, gaming is no longer a minority activity, rather it is a quite prevalent activity with millions of players all around the world. Due to the prevalence and accessibility of video games, people are highly engaged in and through gaming industry worldwide and 152.1 billion is spent on games in 2019 showing an increase of 9.6% year on year (Wijman, 2019). While the number of players was 1.82 billion in 2014, it is expected to increase more than 2.7 billion by 2021 (Gough, 2019).

As games are developed and launched in various countries, the multilingual and transcultural reality of games which could affect language learning should be acknowledged by educators. The traditional definitions of the concepts 'work', 'learn' and 'study' should be revisited considering the reality of post-industrial and internationalizing economy. Actually, language learning is thriving in virtual environments such as chat rooms, video games and online networks instead of face-to-face interaction (Reinhardt, 2013). Hence, educators should be aware of the fact that traditional methods may no longer be effective in teaching languages for a post-industrial and technology-mediated future as the information and knowledge required is digital rather than traditional (Lankshear & Knobel, 2006).

Even though researchers highlighted that digital games are not a panacea or an ultimate solution (Sykes, 2018), digital games and their potential for education have drawn attention from researchers and practitioners with the advancement of technology and computers, and it has been accepted as an innovative educational approach (Gee, 2003; Shaffer, Squire, Halverson, & Gee, 2005; Foster, 2009; Squire, 2006, 2008; Gros, 2007; Prushotma, Thorne & Wheatley, 2008; Skyes, Reinhardt & Thorne, 2010). Researchers claim that well-designed digital games are rich, engaging, motivating and rewarding environments in which they can challenge themselves and develop socially by interacting and communicating with other people. Also, the use of digital games in instruction is based upon the proposition that fruitful learning is incorporated in the sociocultural context of students' lives and promotes collaboration and lifelong learning (Reinders, 2012). Everyday millions of people play games of different genres, interact with people from different

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countries, texts, cultures and ideas in different languages, which is a good reason to harness games for language teaching and learning (Reinhardt, 2013).

Games that could be exploited for language learning and teaching are divided into two; serious games designed for educational purposes and games designed for fun. Nonetheless, a clarification should be made regarding a confusion. *Commercial off-the-shelf games* which are also called *vernacular games* are created for entertainment, not for educational purposes, while the ones which are designed specifically for educational or language learning purposes are called *educational games* or *serious games* (Reinhardt & Sykes, 2012). Other than just being used as form of entertainment, commercial off-the-shelf (COTS) video games can be used as a medium for language teaching (Purushotma, 2005). Players spend a great amount of time playing games in natural contexts and what they acquire from this experience is vital from an educational perspective. Often times these are intrinsically motivating as they involve elements such as curiosity, collaboration, fantasy or competition that attract players (Malone,1981; Malone & Lepper, 1987). Research suggests that students benefit from the use of COTS in foreign language learning (Bryant, 2006; Franciosi,2017; Hitosugi, Schmidt & Hayashi, 2014; Reinhardt, 2013; Reinders & Wattana, 2015; Reinhardt & Sykes, 2012; Sundqvist & Wikström, 2015; Sykes, 2018).

Motivation is a very important factor for second/foreign language achievement and a lot of research is carried out regarding the nature and role of motivation in L2 (Dörnyei, 1994). Both researchers and teachers accept motivation as a key factor both effecting the rate and accomplishment of language learning. When motivated learners feel a need to learn a language and uphold the urge to sustain learning which can be long and boring sometimes. In the absence of motivation, it is considerably hard to achieve long-term aims even with great abilities, good teaching and appropriate curricula supporting learning experiences (Dörnyei, 1998). Therefore, it is safe to say deep learning might not take place without motivation and engagement (diSessa, 2000).

L2 motivation construct is extended under the approach called L2 Motivational Self System (Dörnyei & Ushioda, 2009) which is kind of an updated reconceptualization of L2 motivation (Ushioda, 2001). L2 motivational self-system takes the ideal L2 self, the ought-to L2 self and the L2 learning experiences into consideration in foreign language learning and teaching (Dörnyei, 2009) to provide reasons for learning languages, increase awareness and motivation for language learning and enhance learners' perceptions of their Ideal L2 self. There are a number of studies validating the effect of L2 motivational self-system in various contexts (Dörnyei et al., 2006; Al-Shehri, 2009; Ryan, 2009; Csizer & Kormos, 2009; Taguchi et al., 2009; Magid, 2011; Islam, 2013; Jianying, 2016). It was observed that as a result of the interventions aiming to increase participants' English language learning motivation, participants' motivation for learning English increased and their Ideal L2 selves were enriched (Magid, 2011; Islam, 2013; Calvo, 2015; Madkhali, 2016).

The current study utilized game-enhanced learning approach to improve students' language skills and motivation to learn the target language by integrating a commercial off-the-shelf (COT) video game into the curriculum through a structured framework for this end.

1.2. Statement of the Problem

One of the major problems with the current education contexts in Turkey is that although there have been great advancements in technology, not much change can be observed regarding teaching methods and curricula in foreign language education (Zengin & Aksu, 2017). In most contexts, including the specific context the study is implemented in, conventional teaching is in the heart of curricula and instruction. However, novel teaching methods should be adopted considering the requirements of the era and the needs of the new generation for whom technology and technological devices are number one priority and indispensable (Sykes, 2018). Computer games which are casual parts of young people's lives serve as a great potential for education and foreign language learning because of including certain elements such as feedback, engagement, curiosity, authentic contexts, motivation, interaction etc. (Reinders, 2012). However, in Turkey foreign language teaching

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does not seem very successful because of conventional approaches adopted and mechanical practice, and this is a preliminary problem to be solved for proper language teaching and learning (Oktay, 2015; Işık, 2011) and innovative approached should be embraced.

One might say that there is a growing literature in Turkish context in educational games and the results of these studies on games and language learning revealed that educational computer games have effects on students' English language skills and achievement (Yıldırım, 2012; Donmuş, 2012; Melek, 2014; Aksoy, 2015; Yurtseven, 2016; Inuwa, 2018), vocabulary learning (Kocaman, 2015; Akkuzu, 2015; Zengin, 2019), interest and motivation (Donmuş, 2012; Melek, 2014; Aksoy, 2015; Akkuzu, 2015; Inuwa, 2018). As it can be seen although there are a number of studies regarding game-based learning, few studies (Altınbaş, 2018; Arslan, 2017; Kızıl, 2017) are found on game-enhanced learning and game integration. Over the years, some research has been carried out on commercial off-the-shelf (COT) video games and on how they can be exploited for language learning in the international context and the results pointed out that commercial games are quite influential in acquiring and improving target language skills (Peterson, 2006; Rankin et al, 2006a; Thorne, 2008; Rankin et al, 2009; Peterson, 2010; Peterson, 2012; Thorne, Black, & Sykes, 2009).

The studies using commercial off-the-shelf (COTS) videogames for language learning conducted in Turkish context focused on the effects of using commercial games on English language learning or motivation (Altınbaş, 2018; Arslan, 2017; Kızıl, 2017). Arslan (2017) and Kızıl (2017) investigated students' attitudes and opinions on digital games, which revealed the potential of digital games for English language learning. The purpose of the study carried by Kızıl (2017) was to investigate students' perceptions on the efficiency of computer usage and web-based games in language learning. The study was carried out with 231 university students between the ages of 18 and 22 using a questionnaire probing their computer usage abilities and attitudes towards web-based games. The results revealed that participants find their computer skills sufficient, and they believe that technology integrated education has potentials for learning because of its innovative nature. The

study carried out by Arslan (2017) involved 151 preparatory university students and it aimed at investigating the new culture of online computer games and their application for foreign language learning through a survey. The results demonstrated that students who played computer games had higher scores on reading skills than the ones who did not and highlighted that playing computer games has potentials for foreign language learning.

On the other hand, Altınbaş (2018) examined the effects of multiplayer online computer games for the development of English as a foreign language (EFL) skills. The data was gathered from 13 students who played multiplayer online computer games out of school during a period of four weeks under teacher guidance to enhance their English language skills. The effects of the multi-player computer game on English language learning is measured by looking at the results of a proficiency test conducted at the beginning and end of the gaming period, and the qualitative data is also collected through semi-structured interviews about the effects of the game on foreign language learning. The results of the study pointed out a significant outcome in the achievement results, especially for listening and speaking skills. However, no significant difference is observed in the reading and writing skills. Also, the interviews indicated that participants have positive attitudes towards the benefits and contribution of digital computer games to foreign language learning. The literature on game-enhanced language learning in Turkey shows both the premise and the need for integrating COTs to the curricula in language learning context.

Although studies utilizing L2 motivational self-system questionnaire were carried out before in Turkey, these studies generally utilized the questionnaire by selecting 43 items (Goktepe, 2014; Şentürk & Demir, 2019) whereas current study used 87 items.

Moreover, L2 motivational self-system is a relatively recent topic and there are few studies in the literature in Turkey (Arslan, 2017; Partal, 2017; Yapan, 2017; Altınayar, 2018; Sıvacı, 2019; Şentürk, 2019; Şentürk & Demir, 2019; Göktepe, 2014) and the research is generally focused on different aspects of L2 motivational

self-system such as ought-to self, ideal L2 self and learning experiences rather than L2 motivational self-system as a whole. The results of these studies point out that there are different factors impacting students' English learning motivation such as attitudes, family, school environment and friends. For instance, in a study carried out by Altınayar (2018), the purpose was to investigate 254 secondary school EFL students' ideal L2 self, ought-to self and language learning experiences. The results pointed out that ideal L2 self and L2 learning experiences were quite influential in students' language proficiency and achievement in English. Nonetheless, the ought-to L2 self scores are observed to be higher than ideal L2 self scores, which might be an indicator for social and peer pressure in Turkish context, or the age might be a factor (Altınayar, 2018). Şentürk and Demir (2019) aimed to investigate the attitudes of foreign students' toward learning Turkish as a second language. They used L2 motivational self-system questionnaire, but unlike present study in which 87 items were utilized, they adapted the questionnaire and only chose 43 items and administered it. The results showed positive attitudes toward Turkish. The same questionnaire was also administered by Göktepe (2014) and Şentürk (2019) in their studies. Şentürk (2019) wanted to study the attitudes of undergraduate EFL students' attitudes toward learning English and found positive attitudes for learning English. Also, Göktepe (2014) investigated the first-year Turkish undergraduate students' attitudes and motivation toward learning English and found that instrumentality and integrativeness are dominant reasons for learning English.

As the concept of L2 motivational self-system is new and stills developing, there is a need for more research on that to shed light on L2 motivational self-system itself and how it could be utilized to foster English language learning, L2 motivation and enhance ideal l2 self, especially in Turkish context. Nevertheless, investigating how game-enhanced learning contributes to L2 motivational self-system would bring a new perspective to the literature. When all the aforementioned points are taken into consideration, this study aims at examining how a game-enhanced language learning intervention affects students' English language skills and L2 motivational self-systems.

1.3. Research Questions

The purpose of this study is to investigate the effectiveness of game-enhanced learning intervention on language learning and on the development of L2 motivational self-system of EFL students. To this end, an experiment has been conducted on a C level (defined by the Common European Framework) English language course and in this respect the following research questions are investigated;

1. Is there a significant difference in terms of language achievement between students who participated in game-based learning design and students who participated in conventional learning design?
2. Is there a significant difference in terms of L2 motivational self-system between students who participated in game-based learning and students who participated in conventional learning design?
3. What are the perceptions of the students about the effectiveness of the game-enhanced learning intervention designed within the PCaRD framework in terms of language achievement and L2 motivational self-system?

1.4. Significance of the Study

Video games have empirically proven affordances for foreign language learning (Gee, 2003; Purushotma, 2005; Bryant, 2006; Squire, 2008; Reinhardt & Sykes, 2012; Peterson, 2006; Reinders & Sykes, 2012; Peterson, 2012, 2013; Schmidt & Hayashi, 2014; Reinders & Wattana, 2015; Franciosi, 2017; Sykes, 2018). However literature provides some studies pointing out the fact that teachers have to be careful with using games in language teaching (Bakar et al., 2005; deHaan, 2011; Chen et al., 2012; Can &Cagiltay, 2006; Barbour&Evans, 2009; Bourgonjon et al., 2013) as there is research showing that using games do not always afford the promised benefits in terms of language learning (Chen & Yang, 2013; Vandercruysse et al., 2013). This makes the need for empirical research to prove and set example of new ways to integrate games effectively into the curriculum more important.

Initially, the present study is significant in terms of providing insight into the use of commercial off-the-shelf video games and their integration into curricula thorough the theoretical frameworks developed for this intention. This study provides an example for integrating commercial games into the curricula using PCaRD that makes it possible for teachers to design classroom activities that support students' development by blending the game experience with the learning goals in engaging and meaningful ways (Foster & Shah,2015). Using a theoretical lens to exploit these games for English language teaching and learning and integrating them into curriculum is a recently expanding topic of study as mentioned earlier, therefore studies exemplifying the process in a structure way would add value to the literature in that sense. Hence, this will be a contribution to foreign language education and may arise awareness among institutions, teachers and even students.

To summarize, the contribution of this study to the literature can be seen as two folded. One part is about being an example of how a ten-week commercial off-the-shelf video game playing is integrated into curriculum and how an intervention is carried out, while the second is about how the experience of playing a commercial game contributes to students' English language skills and motivation. Furthermore, this study seeks to reflect students' perceptions regarding the usage of commercial off-the-shelf games and their integration for English language development and motivation and future self. In addition to all these, the study also aims to provide implications for further research.

1.5. Definition of Terms

Game-enhanced learning: Game enhanced-learning is deployed when games that are designed for entertainment purposes are used for instruction. These games are also called vernacular games or commercial off-the-shelf games (Reinhardt & Sykes, 2012). In this study, a commercial game was utilized for teaching the target language abilities.

Game-based learning: Game-based learning is utilized when games specifically designed for instructional purposes are used for teaching and learning. There games are called educational games or serious games (Reinhardt & Sykes, 2012).

L2 Motivational Self-System: L2 motivational self-system is a theory proposed by Dörnyei (2009) and it involves various factors influencing language learning motivation such as ideal L2 self, ought-to self and L2 motivation. In this study, L2MSS is utilized as a theoretical perspective to explain game-enhanced learning and English language learning.

PCaRD: PCaRD (Play, Curricular activity, Reflection, Discussion) is a pedagogical framework that helps instructors to integrate commercial or educational games to the curriculum for learning purposes (Foster & Shah, 2015). In this study, PCaRD is utilized as a framework to integrate a commercial game and game-related activities to the curriculum.

CHAPTER 2

LITERATURE REVIEW

This study aims to investigate a game-enhanced language learning intervention on students' language learning and L2 motivational self-system. Therefore, this chapter provides an overview of literature on game-enhanced learning and L2 Motivational Self-System to clarify these two theoretical perspectives this study was grounded in. This chapter also provides information about PCARD framework, as it was used to integrate both game and motivational activities to the curriculum.

2.1. Game-enhanced Learning

Game-enhanced learning and its potentiality for education has drawn attention from researchers and practitioners with the advancement of technology and computers, and it has been accepted as an innovative educational approach (Gee, 2003; Squire, 2006, 2008; Gros, 2007 ; Reinhardt, 2013; Sykes, Reinhardt & Thorne, 2010; Peterson, 2010). A number of COTs are already found appropriate for classroom usage and there are a lot of games that were already used in the classroom such as *The Sims 2*, *Age of Mythology*, *Civilization* and *SimCity 4* (Eck, 2006). Commercial games give an insight into creating novel and strong ways to learn at schools, workplaces and communities meeting the necessities of the Information Age and should not be just perceived as pure entertainment but their potential to provide numerous prospects for learning by aiding people participate in new worlds with all the things we have and care about should also be acknowledged (Shaffer et al., 2005).

Moreover, digital games have an immerse effect on cultural, economic and social domains (Squire, 2006) and today's youth is more interested in games used in educational context compared to books, films or television (Funk, Hagen &

Schimming, 1999). Therefore, the potential of commercial games for education should not be ignored considering that there is a great shift in youth's perception of entertainment and learning (Beck & Wade, 2004; Squire, 2006; Gros, 2007).

Computer games can provide learners with a new culture in accordance with their interests and habits (Prensky, 2001). Educators, especially curriculum designers, should take this into consideration as designed experiences as they are rich contexts for learning for both practical and theoretical reasons (Squire, 2006). Practically, as players spend a great deal of their time playing games, what they acquire from them is vital. On the other hand, theoretically, these contexts are natural, and they are intrinsically motivating. Besides, they involve such elements as curiosity, collaboration, fantasy, or competition to attract players (Malone, 1981; Malone & Lepper, 1987). Considering that almost each medium is used for instructions, games seem to be an inevitable part of educational system in the end (Squire, 2006). Moreover, it is self-evident that games and formal schooling have similar values such as collaboration, learning through failure or personalized learning (Beck & Wade, 2004).

Therefore, they should comprehend the potential of games which integrate strong learning principles used in different contexts such as teaching science in schools to enhance learning (Bowman, 1982; Gee, 2003, 2004, 2005). Moreover, good learning principles are embedded in good games; that is, the information in good games is given "on demand", "just in time" not detached from the context or students' purposes and goals dissimilar to some school contexts (Gee, 2003). Yet, this does not necessarily mean that lecturing should be abolished perpetually in as much as both game playing and lecturing are two different pedagogical techniques with their own values suited for various learning experiences (Squire, 2008). Indeed, practices in typical games and attained by schools show similarities such as mentoring, writing FAQs, participating in conversations or creating stories (Teinkuehler & Chmiel, 2006).

2.1.1. Game-enhanced Learning vs Game-Based Learning

Although the distinction between game-based learning and game-enhanced learning may not be made clearly or sometimes they are confused, they are two different approaches. Game-based learning is a broad interdisciplinary term which applies to the usage of games specifically designed for the sake of learning outcomes in a domain whereas game-enhanced learning is used when commercial digital games are used for learning (Reinhardt & Sykes, 2012). Serious games are specifically created for supporting learning by balancing educational and entertainment purposes whereas integrating commercial off-the-shelf games entails utilizing existing games and exploiting them for classroom. Using COTs for educational purposes is a popular approach in terms of cost-effectivity, accessibility and time. Moreover, they can be used with any learner in any domain (Eck, 2006). On the other hand, serious games are designed based on certain instructional objectives and the first aim of them is not entertainment rather the focus is on what is learned and the students (Sørensen & Meyer, 2007).

The focus of the present study is not educational games, rather the integration of a commercial game to the curriculum and its effects on students' English language learning and L2 motivational self-system.

2.1.2. Game-enhanced Learning and Motivation

Motivation is a very important factor for second/foreign language achievement (Prensky, 2003) and a tremendous amount of research is carried out regarding the nature and role of motivation in L2 learning (Dörnyei, 1994). There are several factors affecting students' motivation while learning a foreign language such as environment, friends, family and so on. Therefore, certain strategies can be exploited to boost learners' motivation and one of them is digital games that can be utilized to increase learners' motivation, engagement, interaction and participation (Prensky, 2003; Gee, 2012; Reinders, 2012). Also, higher motivation leads to deep learning which may not take place without motivation and engagement (diSessa, 2000).

An extensive amount of research is carried out regarding the effects of digital games on motivation toward language learning (Ballou, 2009; Reinders & Wattana, 2014; Shahriarpour & Kafi, 2014; Chin-Sheng &Chiou, 2007). For example, computer games seem to effect willingness to communicate in L2 (Reinders & Wattana, 2014), motivation to learn English especially vocabulary (Shahriarpour & Kafi, 2014) and intrinsic motivation (Chin-Sheng & Chiou, 2007). There are several aspects of games which help harness motivation for learning a foreign language. To begin with, games' including challenges yet being tempting and manageable is a good motivation for learners who adjust levels according to their capabilities, progress and styles of learning. With the advancements in technology, rich digital worlds with developed sound and graphics are fashioned (Squire, 2008) and it makes playing more tempting. For instance, Connolly et al. (2008) conducted a study investigating why people play computer games, how much time they spent on playing and the accessibility of games at university level and 551 university students responded to an online survey. One of the results obtained was that challenge is one of the top reasons for playing digital games.

Moreover, in computer games players are involved in distant, far worlds, which according to cognitive research makes them feel that their bodies and minds are in different spaces (Clark, 2003). These virtual worlds result in high motivation which may not be accomplished by other media such as books or movies since players have the opportunity of creating and investing in the character and game in a deep level, the outcomes of which seem to be high motivation, recreation, deep learning and mastery in the game (Gee, 2003).

Additionally, as players are immersed in a game, they undertake various roles. For instance, in a game constructed for a science class, students act, speculate, think and solve problems like scientists, resulting in genuine learning (Shaffer et al., 2005). Players also have the opportunity of creating new identities in games which are enacted through gaming communities (Squire, 2006). In these worlds of simulation, they can fly aircraft, build towns, become warriors or save the planet whereby they participate in virtual worlds with their languages, cultures and economies (Squire, 2002). "They can be a soldier in *Full Spectrum Warrior*, a zoor worker in *Zoo*

Tycoon, or a world leader in *Civilization III"* (Shaffer et al., 2005). All of these aspects are quite influential in boosting motivation and for bringing about incidental learning. Moreover, players are so immersed in games that sometimes they are in a state of flow unlike whereby a person is so involved in an action that he/she loses the track of time, is goal-oriented, performs something not for the sake of reward but for intrinsic motivation, recreation and goals (Csikzentmihalyi, 1990; Bowman, 1982).

Most importantly video games are arenas in which players can employ their autonomy; make choices, choose the game to play and enter a setting in which he or she is the protagonist. In reality, all the event taking place in the game are under the control of players. By means of their actions, they can change the virtual world and make such decisions they cannot simply make in real life, which makes them feel important and they matter. Despite being unreal, the experience itself feels real. Rather than being passive recipients, they are active participants in the virtual learning communities. This empowers students and increases their motivation toward embedded linguistic context in the game (Hitosugi, Schmidt, & Hayashi, 2014).

2.1.3. Game-enhanced English Language Learning

The internet provides opportunities for language learning beyond the confines of formal education that brings in the identity of 'student' and abolishes the boundaries that keep apart learning from social life, information consumer from knowledge provider and student from game player (Sykes et al., 2008). In the same way, digital games do not merely offer opportunities for motivation, engagement, interaction, or chances to satisfy curiosity or self-esteem; they can also provide high-stakes digital spaces that present social and communicative contexts both online and offline that mediate learning a foreign language (Sykes, 2018). Players may acquire and improve language skills by interacting with the game, texts, characters, other players in, through or across the game. As Reinhardt (2013) also asserts:

> One key reality is that FL learners are entering a post-industrial world where a
> variety of new literacies, mediated by the languages they are studying, are

crucial to success. These literacies include the capacities to interact with, through, and about multi-modal texts, to engage creatively with new semiotic and symbolic forms, and to participate successfully in technology-mediated social practices – texts, forms and practices that reflect the hybrid, glocalized, polycultural discourses of the 21st century. Digital gaming is an important means for developing these new literacies.

Both empirical and theoretical research that suggests that students benefit from the use of COTS in foreign language development have grown considerably (Bryant, 2006; Franciosi,2017; Peterson, 2006; Peterson, 2012; Sykes, 2013; Hitosugi, Schmidt & Hayashi,2014; Reinhardt, 2013; Reinders & Wattana,2015; Reinhardt & Sykes,2012; Sundqvist & Wikström,2015; Sykes,2018). Various aspects of game-enhanced learning have been investigated in the literature.

To begin with, research found a substantial amount of contribution of digital games to various language skills and development (Peterson, 2010; Purushotma, 2005; Sykes, Oskoz, & Thorne, 2008; Ranalli, 2008; Thorne, Black, & Sykes, 2009; Konngmee et al., 2012; Chen & Yang, 2011). In a study, nine non-native intermediate ESL university students were asked to play a commercial game, The SIMs. The purpose of the study was to understand whether it could be used pedagogically for English language learning. Supplementary materials were integrated into lessons and their effect on language learning was investigated. Statistically significant improvement in vocabulary knowledge was observed and, in the interviews,, students stated improvement in the language skills (Ranalli, 2008). In another study, Chen and Yang (2011) investigated the effects of an adventure game, Bone, on foreign language learning with a group of 35 college EFL students and found out that students perceived the game rather helpful for their language skills especially listening, reading and vocabulary skills and learning attitudes. Moreover, they stated that the game helped increase their motivation toward language learning. In another study, the aim was to investigate students' foreign language learning and performance while playing video games. There was an increase in the self-esteem of two L2 learner university students who used the target language by utilizing various communication techniques. Moreover, the results of pre-test and post-test that test English vocabulary, grammar and listening and interviews illustrated an increase in language abilities (Kongmee et al., 2012).

Although commercial games clearly contribute to the language abilities, the skill which improves most thanks to digital games is vocabulary according to studies. The research on the effects of video games on vocabulary learning revealed that via contextual clues within games vocabulary acquisition is mediated and enriched (Dehaan, 2005). Commercial video games seem to contribute immensely to vocabulary retainment and acquisition (Miller & Hegelheimer, 2006; Rankin et al., 2006; Peterson, 2010; Sylven & Sundqvist, 2012; Hitosugi, Schmidt, & Hayashi, 2014; Huang & Yang, 2014). In a study carried out in a L2 classroom in Japan a videogame named the Food Force was integrated into curriculum. According to the vocabulary tests and an affect survey, students preferred game-based activities over traditional ones and the game had a positive influence on their affect. Moreover, it was detected that students could easily remember words from the game whereas the words in the textbook were forgotten to a great extent. Also, students were engaged and motivated (Hitosugi et al., 2014).In another study, the effects of a 3D game, Ever Quest 2, on language learning and motivation were investigated with 3 Chinese ESL students and it was found that they increased their vocabulary learning by 40% and conversational skills thanks to the interaction with non-player characters (Rankin et al., 2006). In addition to these, in another study in which activities related to the SIMs were integrated into curriculum, adult ESL learners went through three different conditions of materials: in one condition they were provided with supplementary materials; in the second the materials were optional and in the third there were no materials. The results illustrate a significant increase in vocabulary learning and the students who were given supplementary materials reported an improvement in language learning (Miller & Hegelheimer, 2006).

Moreover, research suggests that commercial games make a significant contribution to the linguistic and social interaction abilities of players. For example, Sykes (2013) investigated virtual environments' effect on second language (L2) pragmatic development and found out a change in pragma linguistic abilities, which means language users' ability to choose contextually appropriate means of participation in linguistic interaction. In another study, Peterson (2006) investigated non-native speaker interaction in virtual worlds through chat transcripts and found out that players perform a variety of tasks by using interaction strategies. Another study that

aims to look into 4 intermediate EFL learners in terms of their linguistic and social interaction while playing a massively multiplayer online role playing game revealed that students could collaborate and interact with other players in the target language and the interaction lead to target language development regarding especially sociocultural aspect (Peterson, 2012). Also, Peterson (2010) carried out an exploratory study to examine the linguistic and social interaction among four intermediate EFL learners while they were playing a massively multiplayer online role-playing game (MMORPG). The text chats of the players were analyzed from a sociocultural perspective and a development in the sociocultural competence was observed. Moreover, the game play resulted in enhanced fluency practice, exposure to vocabulary and interacting with others leading to language development. Therefore, it is proposed that using online games serve a rich semiotic and social ecology as social media to learn L2 (Thorne & Fischer, 2012).

2.1.4. Affordances of Game-enhanced Learning

Literature points out that there are various affordances of games for education. For one thing, games give learners the opportunity of becoming creators as well as consumers unlike some school environment in which students are just consumers who are not often asked for their opinions on curriculum (Brown, 1994). Especially, in some games, students make choices, direct the story, build places, episodes, characters. For instance, in Life is Strange players rewind time or make choices, which affects the whole story including the present, past and future. Hence, an essential feature that good games is the choice and sense of ownership given to the player (Gee, 2007). The player is an active participant in the virtual environment, and she/he utilizes the target language to move in the game and direct the story. The player is no longer a passive observer, rather she/he is involved in the whole process actively, which makes it different from the other multimedia. This active participation also empowers intrinsic motivation, an important factor in learning (Hitosugi et al., 2014).

Gaining problem-solving skills is quite important for education and games are meaningful frameworks for providing students with problems (Kiili, 2005). Players

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acquire problem solving skills since from the beginning of the game, they encounter problems which they need to handle to proceed in the game. Hence, generally the first parts of the games are hidden tutorials illustrating how to find a way out when players face obstacles, challenges or complicated problems. As games confront players with similar problems, they achieve certain skills and acquire mastery. In this process, they integrate their old skills with new ones resulting in natural expertise reinforced with practice (Ericsson et al., 1993). For instance, Yang (2012) wanted to explore the effect of a computer game on students' problem-solving skills and 44 high school students were randomly assigned to either the control or experimental group. The students in the experimental group played the game over the course of 23 weeks and the results showed significant improvement in the problem-solving skills of the experimental group while there was no change in the control group.

Another affordance of digital games is that players establish a community of learners (Barab& Duffy, 2000; Lave & Wenger, 1991) in which they put forth and share their knowledge, skills, experiences values while interacting throughout the game, especially in massive multiplayer games. The sense of community has potentials to prepare workers for modern world rather than schools and it provides an opportunity for instructional technologists to better comprehend the effects of these digital worlds on individuals and communities and design digital environments accordingly (Gee, 2003; Squire, 2008). It is possible to design communities of practice or affinity groups surpassing physical space and connected by telecommunication tools (Squire, 2006). In these communities, players have a chance of improving their language skills or acquiring new skills through interaction, collaboration and exchanging knowledge.

Especially, massively multi-player games in which players communicate with various contexts in real time are rich in social learning which is called *persistent game world* as they are 24-hour available virtual worlds. Hence, if a player has a house on *Star Wars Galaxies*, it is in the world whether he/she enters or not (Squire, 2006). They undertake new identities such as genders through which they reside in novel worlds (Bruckman, 1999; Steinkuehler & Chmiel, 2005). When compared to

traditional games, persistent game worlds are digital nations built on mutual values and culture (Squire & Steinkuehler, 2006).

Moreover, games also encourage collaboration and interaction with other players of various backgrounds, which makes them socially rich contexts and immense environments which mediate and contribute to language learning (Peterson, 2006; Squire, 2008; Thorne & Fischer, 2012), and enriches students' social skills (Gee, 2003). According to a study investigating non-native interaction in Active Worlds, a three-dimensional environment (Peterson, 2006; 2012) reported the participants could carry out many tasks by interacting and communicating in the target language.

Finally, it can be said that games afford spaces for players to learn by doing. John Dewey stated that schools are characterized with '*fact fetish*'. Regardless of the discipline, the purpose is to teach facts and measuring how much they learnt from these facts by means of exams. However, we learn by doing with a community of people with whom we share similar goals and aspire to be a part of it (Shaffer et al., 2005). Playing games is characterized by learning by doing and performing. Players' actions are their involvement with the world and context (Young, 2004). Games are stated to be created around actions performed by players such as running, jumping, diving, punching, kicking, and hurdling enemies and obstacles whereby they become what they aspire to (Clinton, 2004; Squire, 2005). Besides, the characters in the game can be called *hybrid* characters in as much as they are a combination of who the player really is and his/her character in the game (Gee, 2003, 2005).

2.2. L2 Motivational Self-System

L2 motivational self-system (L2MSS) is mainly rooted in the possible selves theory. Therefore, to better understand L2MSS related literature review starts with an explanation of possible selves theory and moves on to L2MSS.

2.2.1. Possible Selves

Self-concept is one's perception about oneself including past, present and future shaped under the social roles and contexts. Hence, a decent self-concept is vital in

that it helps understand one's present, be aware of positive feelings about oneself and protect them, and directs and motivates for future goals (Markus & Nurius, 1986). Possible selves theory emerged as self-concept's future-oriented component and it refers to what a person aspires to be or is afraid of being in the future (Markus & Nurius, 1986). People have both positive images of the selves they want to be and negative images of the selves they fear to end up with. Thanks to possible selves, it is easier to comprehend that the present self is changeable, which encourages positive thoughts and belief (Markus & Nurius, 1986).

Additionally, possible selves are chances for self-development, plasticity, and personal growth. For instance, supposing that one desires to be a reputed athlete, he/she does a great deal of practice to be one for the positive consequences in the future. On the other hand, if one aspires to be thinner and fitter in the future, he/she avoids unhealthy and fatty food for the fear of being overweight. Whereas the gap between the present and future positive selves is desired to be decreased, it is the opposite with the present and future negative selves (Lee & Oyserman, 2012).

There are numerous chances of possible selves (Markus & Nurius, 1986) which can be influenced by certain factors such as role models, media, past experiences, social context or developmental context. Past experiences may affect one's beliefs about execution and attainment of possible selves, that is; a child from a low-income family or with a history of school failure is less likely to have desired possible selves related to successful academic record or a job (Oyserman & Fryberg, 2006; Oyserman & James, 2009; Oyserman & Markus, 1990). Additionally, social context is a vital determinant in the articulation and accomplishment of possible selves. Also, during various phases of life, individuals have different possible selves. Whereas in younger ages, the focus is mostly on school success or avoiding using drugs or becoming pregnant, in later ages, the desire to get married or find a good job becomes more significant (Oyserman & Fryberg, 2006).

However, strategies could be utilized to attain possible selves as they help to concentrate on and actualize goals. In a study carried out with 160 low-income eight graders, strategies seem to serve the purpose of helping students enhance their

possible selves and increase outcomes such as better grades and school behaviors (Oyserman et al., 2004). Furthermore, balance in positive and negative possible selves for the same goal is rather crucial for desired outcomes. Oyserman et al. (2006) states that balanced academic possible selves happen in the presence of both a desired self (e.g. a good academic record) and feared self (e.g. being a drop-out). This is especially important in social contexts one may have to overcome difficulties to realize aims.

School-based possible selves refer to one's expectations in terms of academic achievement such as being successful in math test (Oyserman et al., 2004) regardless of one's socioeconomic status (Oyserman & Fryberg, 2006). School is important in that it is a transition from adolescence to adulthood and according to several studies, some crucial components of teenager's possible selves include school, education and future jobs (Knox et al., 2000) and this affects students' current state in a good way (Cameron, 1999). Altering possible selves through intervention can result in positive outcomes in terms of academic attainment, desired academic performance and psychological well-being (Oyserman et al., 2002; Oyserman & Fryberg, 2006). Hence, as the future images show that change is possible, educators can bear in mind the importance of possible selves and how to manipulate them to help direct students in ways they achieve and maintain their efforts and goals as well as avoiding their fears and undesired selves. To exemplify, in a study carried out by Oyserman et al. (2002) the goal was to develop students' perceptions about themselves as successful adults and relate it to their current academic involvement through a 9-week after-school intervention. The results showed a better bond to school, enhanced possible selves and positive effects on school behaviors especially for boys.

2.2.2. Conditions for the Motivational Capacity of the Future Self-guides

Literature points out that future self-guides do not necessarily have a direct impact on motivation (Oyserman et al., 2006; Yowell, 2002). According to research, future self-guides have the potential to enact action by utilizing self-regulatory mechanisms, yet this does not mostly occur automatically, rather depends on certain conditions (Oysherman & James, 2009; Oyserman et al. 2006; Pizzolato, 2006). The

following conditions should be met for future self-guides to have full motivational capacity (Ushioda & Dörnyei, 2011):

1. *the L2 learner wants a positive future self-image:* not everyone is supposed to have an improved future self-image considering that it may not be simple for some to execute a desired possible self.

2. *There is adequate difference between the current and future self:* the learner should be aware of the gap between the current and future self; otherwise, he/she may not feel the need for an increased effort for the L2 motivation.

3. *There is a need for an elaborate and vivid future self-image*: for the necessary motivational response, a possible self should be sufficiently specific and detailed, and having a clear mental imagery helps motivate L2 learning. However, Ruvolo and Markus (1992) asserts that differences can be observed among people in terms of producing an accomplished possible self and it is not compulsory for everyone to have an advanced future self-image (Higgins, 1987, 1996). Even though one possesses a self-image, it may not necessarily have a satisfactory amount of elaborateness and vividness to be functional. As a result, although motivation increases with the rise of imagination, with the lack of sufficient detail and specificity, it is hard to yield the essential motivational response (Richardson, 1994).

4. *The future self-image is accepted as plausible:* the only condition that future selves are possible is learners' accepting them as plausible (Dörnyei & Ushioda, 2009). They should be perceived realistic and doable by learners (Ushioda & Dörnyei, 2011). Ruvalo and Markus (1992) supported that motivation realizes its full potential provided that possible selves are plausible:

   > It is an individual's specific representations of what is possible for the self that embody and give rise to generalized feelings of efficacy, competence, control, or optimism, and that provide the means by which these global constructs have their powerful impact on behavior. (p. 96)

If learners feel that they have control on achieving or abstaining from a possible self, they are more likely to take action (Norman & Aron, 2003).

5. The future self-image is not perceived as readily available and procurable: learners should be aware of the fact that they cannot acquire a desired future self without putting sufficient and increased effort in it. Effort is not exerted if the future self is easily reachable or too hard to reach (Oyserman & James, 2009).

6. The future self-image is balanced: It does not conflict with what others (family, peers, teachers etc.) expect from one. In the absence of the harmony, the motivation may be damaged (Dörnyei & Ushioda, 2009) and the learner's personal and social identities might conflict with each other. For example, at schools, generally in order to be accepted by their peers, teenagers tend to change their behaviors to fit in with their friends (Pizzolato, 2006) and this group membership makes them feel like it conflicts with their academic aspirations (Oyserman et al., 2006). So, they feel in harmony with certain social identities, that is, the ought-to L2 self and ideal L2 self are balanced.

7. The future self-image is activated from time to time: Hoyle and Sherrill (2006) state that in order for possible selves to influence behaviors, they need to be activated by different reminders and stimuli. For instance, Ruvolo and Markus (1992) found out that the students who imagined themselves successful in the future outdid the ones who imagined themselves unsuccessful. Therefore, positive future representations trigger motivation and performance.

8. Efficient and appropriate procedural strategies are implemented to achieve goals: Future self-guides should include effective components such as strategies, plans and imagination. Hence, Dörnyei & Ushioda (2009) states that "effective future self-guides need to come as part of a 'package', consisting of an imagery component and a repertoire of appropriate plans, scripts and self-regulatory strategies" (p. 21).

9. A desired future self-image is counterbalanced by a feared possible self in the same realm: Motivation is accomplished on the condition that one is also aware of the possible negative outcomes of not succeeding the desired result.

2.2.3. L2 Motivational Self-System

As mentioned earlier L2 motivational self-system (Dörnyei & Ushioda, 2009) is a theory grounded mainly in the possible selves theory. Considering that language

learning process is elaborate with its ups and downs, learners need a superior vision to keep them on track (Dörnyei & Ushioda,2009). Dörnyei & Ushioda (2009) claims that from the motivational perspective language learning can be compared with a professional athlete's training in that success is triggered by imaginary and vision. In this sense L2MSS is considered to be an updated reconceptualization of L2 motivation (Ushioda, 2001).

The main central components of L2MSS are determined to be the Ideal L2 self, Ought-to L2 self (regarding future self-guides) and L2 learning experience (Dörnyei & Ushioda, 2009). *The Ideal L2* self is interpreted as "L2-specific facet of one's ideal self". It is highly influential in stimulating L2 learning as learners long for decreasing the discrepancy between actual and ideal self. *Ought-to L2 self* refers to satisfying expectations regarding the traits one is expected to have and abstain from negative consequences. *The L2 learning experience* is defined as "situated, 'executive' motives related to the immediate learning environment and experience (e.g. the impact of the teacher, the curriculum, the peer group, experience of success)" (Dörnyei & Ushioda, 2009).

L2MSS is believed to be quite beneficial in that it provides new ways of motivating language learners through encouraging the potentials of ideal L2 self, one of the most important components of the system, by yielding imaginary enrichment and a language learning vision. Ideal L2 self can be employed as an influential motivator if the future self-image of the student is positive, clear and elaborate, and if it is reasonable and in balance with the responsibilities and obligations of the student, and expectations of others. It is activated in the learner's self-perception and helps learner come up with strategies to achieve the desired goals. As well as including the desired outcomes, it also involves feared-self, the negative consequences if the desired end-state is not accomplished (Dörnyei & Ushioda, 2009).

However, more components are added to L2MSS when a need to reconceptualize L2 motivation and integrativeness (Dörnyei & Ushioda, 2009) emerged as a result of a longitudinal research carried out in Hungary. An attitude/motivation questionnaire is used at regular intervals to examine attitudes towards five target

languages (English, German, French, Italian and Russian) with teenage language learners (Dörnyei et al., 2006). In this study, several dimensions such as instrumentality, direct contact with L2 speakers, cultural interest, vitality of L2 community, Milieu (e.g. what importance other people such as parents or friends attribute to language learning) and linguistic self-confidence were measured. Integrativeness was found to be the most prominent component of the L2 motivation construct because it influenced all the motivational components.

An important finding was that *Integrativeness* was determined through two antecedents: *Attitudes toward L2 speakers/community* and *Instrumentality*, which are influential in other components' contribution to *Criterion Measures* (Magid, 2011). Criterion measures is about learners' motivation for studying L2 and their language preference. Dörnyei (2005) explains the relation among abovementioned components by grounding them on possible selves. Attitudes toward the L2 community are associated with ideal language self-image. If one has positive attitudes toward L2 community, learning the language of that community will be more appealing.

Another component of L2 Motivational Self-System is *Instrumentality* that Dörnyei & Ushioda (2009) notes to motivate individuals to learn languages and enhances ideal L2 self since professional success and career development are parts of our images. Instrumentality can be categorized under two different kinds from a self-perspective: *promotion* and *prevention*. Whereas with regard to Higgins (1987, 1998), promotional instrumentality is linked with our ideal self-guides such as desires, development, growth, hopes and success, prevention instrumentality is rather related to our ought-to self-guides balancing the absence or presence of undesired results and worried about responsibilities or obligations. Hence, while promotional instrumentality is linked to desired outcomes such as a good career, goals and professional and personal success, preventional instrumentality tries to manipulate undesired outcomes such as responsibilities or obligations toward others.

A number of quantitative studies in various contexts were carried out to validate and test L2 Motivational Self System (Dörnyei et al., 2006; Al-Shehri, 2009; Ryan, 2009; Csizer&Kormos, 2009; Taguchi et al., 2009; Magid, 2011; Islam, 2013; Jianying, 2016). These studies were conducted in Hungary, Iran, China, Japan and Saudi Arabia and involved over 5000 participants from various levels including English-major, non-English-major universities, adults and a secondary school. All studies verified L2 Motivational Self System. Besides, correlations among the components of L2 motivational data were established with statistical verification: An average correlation of .54 was found between integrativeness and the ideal L2 self in the studies measuring the relationship between them, illustrating that they are closely linked. The ideal L2 self had more correlation with the criterion measures than integrativeness. Whereas, the ideal L2 selves showed 42% of the variance in the criterion measures a high number in motivation research, 32% of the variance in the criterion measures was explained by integrativeness. Furthermore, ideal L2 self showed a higher correlation with instrumentality-promotion than instrumentality prevention while ought-to L2 self showed opposite pattern. Besides, there was an independence between promotion and prevention explaining less than 12% shared variance of correlation. The structural equation models comprising the full L2 motivational self-system conform to the data.

L2 Motivational Self System can be beneficial to educators to enrich students' language learning motivation through altering their future self-guides. A learner does not necessarily have to be within the L2 community, there may only be imagined communities in their minds and these communities are related to the learner's investment in the target language and contexts he or she uses the language in (Norton, 2001). Therefore, educators should fashion language experiences in such ways that students could relate them to their language identities and possible selves. As motivation is an important factor in language learning and development, educators should raise awareness, prepare intervention programs or provide reasons for learning languages and enhancing their perceptions of their Ideal L2 self. For example, Magid (2011) investigated the effect of an intervention program prepared to encourage 31 university students to spare more time and energy to learn English through enriching their perceptions of their Ideal L2 self and as a result it was found

that participants motivation for learning English increased and their Ideal L2 self was enhanced as well as their imagination. Also, it is reported that their English language skills improved, they became more aware of the significance of English in their lives and they gained positive attitudes toward learning English. In a similar study, 1000 Pakistani university students were surveyed on their L2 motivation and 20 students were interviewed. According to the findings, how much effort they make to learn English is related to their L2 learning attitudes and ideal L2 selves (Islam, 2013).

By using L2 motivational self-system as a framework, Calvo (2015) investigated the effects of motivation on learning English. The study was carried out with 29 Spanish high school students and the results showed a strong relationship between L2 self and language achievement scores.

Madkhali (2016)also explored the relationship between L2 motivational self-system and language learning. 103 Saudi college students participated to the questionnaire designed to understand the effectiveness of L2 motivational self-system on language learning and according to the results, it is found to be effective in terms of developing interest and increasing motivation for learning English.

Although most research shows that L2 motivational self-system is immensely beneficial in developing the language and acquiring language skills, there is some skepticism toward L2 Motivational Self System, too. For instance, MacIntyre et al., (2009) critiqued L2 motivational self-system theory by highlighting that the concept of the self may vary across cultures. They based their criticism by citing Markus and Kitayama's (1991) article, which claims that the concept of self is perceived rather differently in Western and Eastern cultures. While in the former the independency of self is thought to be important, in Eastern Cultures the self is mostly believed to be interdependent. Nonetheless, although cross-cultural differences are found among three Asian countries, the primary constituents of L2 Motivational Self System were the same for all (Taguchi et al., 2009).

Overall, as can be understood from the aforementioned studies, L2 Motivational Self-System is found to be quite beneficial in terms of increasing students' awareness and motivation toward language learning.

2.3. PCaRD

In this study game-enhanced language learning theory is adopted in designing the curricular activities. However, to integrate the game to the curriculum another framework was necessary. Therefore, Play Curricular activity Reflection Discussion (PCaRD) framework (Foster & Shah, 2015) was utilized to integrate both the game and activities designed to activate L2 motivational self-system to the curriculum. In particular, Discussion stage of the PCARD framework was helpful for integrating activities designed to appeal L2 motivational self-system together with the game.

PCaRD is a pedagogical framework in which teachers can utilize commercial or educational games to achieve learning goals in an engaging and novel way within the scope of curricula. It empowers teachers and aids them to design activities. PCard facilitates an other framework ingrained in it which is inquiry, communication, construction and expression (ICCE), and which allows teachers to use students' natural curiosities to promote novel learning experiences anchored in the game (Foster & Shah, 2015). It is nested within a larger framework called Game Network Analysis (GaNA) (see figure 1) whose purpose is to help teachers and researchers integrate game-based learning into classrooms by guiding them in game analysis and game integration in a new or existing curriculum. Within GaNA, PCaRD provides teachers with the flexibility of designing games within their teaching context by using not only pedagogy and content but also the process to use and implement games in classrooms (Foster, 2012).
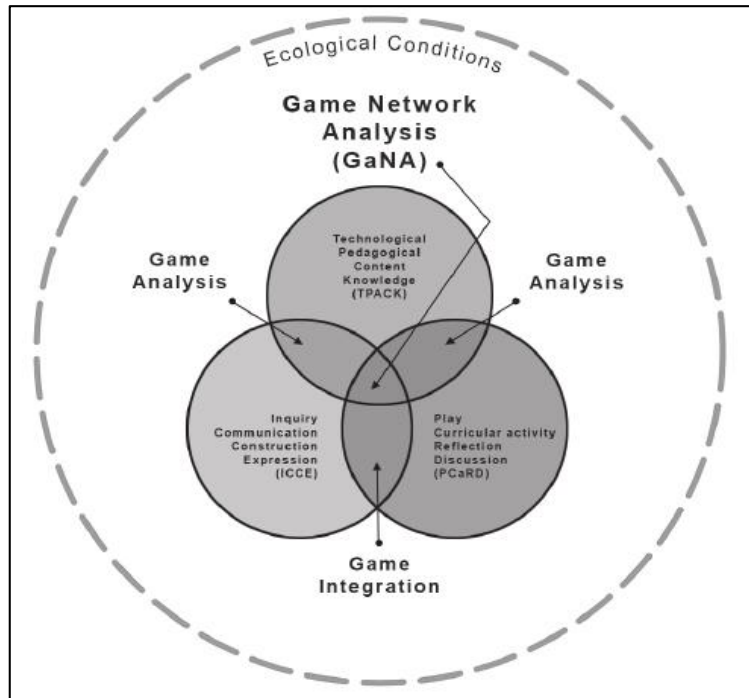
Figure 1. The Game Network Analysis Framework (Foster & Shah, 2012)

While Technological Pedagogical Content Knowledge (TPACK) is utilized to support the content and pedagogical knowledge through games, PCaRD facilitates the application or integration process of games in classrooms (Foster& Shah, 2012). Furthermore, The PCaRD framework guides students to discover possible selves (identities of what they may or may not want to become) (Foster& Shah, 2012) through undertaking new identities and aspiring goals (Markus & Nurius, 1986) thanks to their experiences within the game and curricular activities. Dissimilar to a generic technology integration model, PCaRD is a pedagogical model for teaching and learning in which learning activities are grounded in the game, not detached from the game or game-based environment. Therefore, it is a combination of students' knowledge construction and motivation toward academic content (Foster & Shah, 2015). In addition, as it enables integration of games and game features into lessons, PCaRD increases students' interest, willingness and motivation toward what they learn (Foster & Shah, 2011, 2015). Students' experiences help them undertake identities for future selves, which is necessary to develop expertise in a learning domain (Markus & Nurius, 1986). Thanks to PCaRD processes, students can find relatedness and make more effort for their learning goals (Foster& Shah, 2012).

An overview of PCaRD can be found in figure 2. Although the role of the teacher is mentioned in each phase, how the teacher should achieve that role is not especially specified, which permits teachers to take into account their own classroom contexts and develop strategies accordingly. Moreover, students display their learning in various ways including individually, learner-to-peer, learner-to-game and learner-to-teacher expressions (Foster & Shah, 2015). PCaRD constitutes four components. The first one is *'play'* in which students are introduced to the game and are expected to play it in a natural way asking their peers questions, communicating with teachers or discussing personal experiences. During this process, the role of teachers is to observe game play, support students and create a naturalistic environment by combining students' interest in game and personal experience with school knowledge. In the *'curricular activity'*, based on the course objectives and students' personal experiences with the game, teachers develop problem-based or case-based activities by bringing together their content and pedagogical knowledge. The curricular activity is followed by the *'reflection'* session in which students express their thoughts on play and activity and what they have acquired from them. During this session, students work either in groups or individually. Then, teachers scaffold students to share what they wrote through a *'discussion'* session (Foster& Shah, 2012).
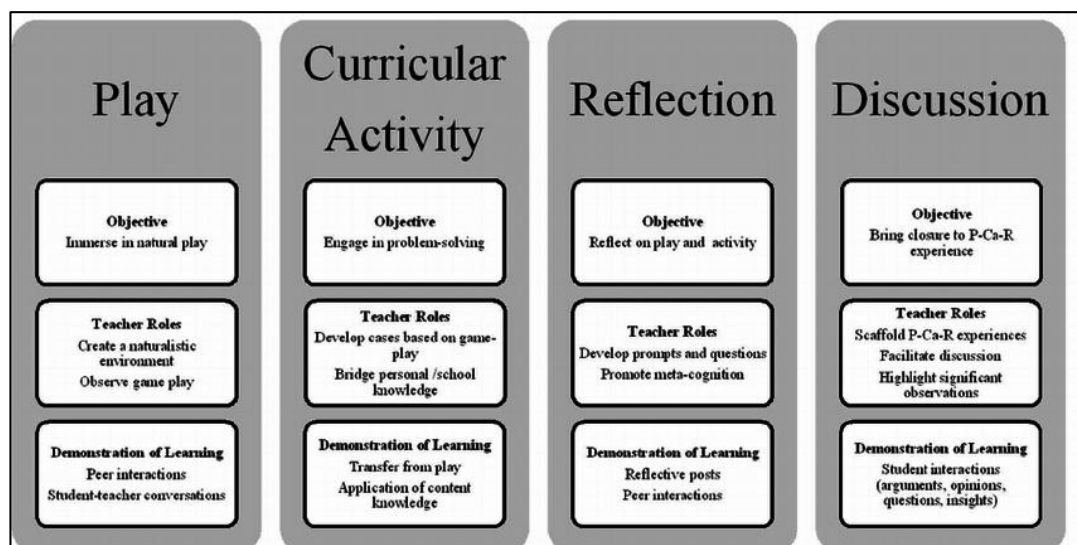
Figure 2. Example of PCaRD Components (Foster, Shah & Duvall, 2015)

Research looking into the effects of PCaRD reveals affordances of the framework (Foster & Shah, 2012). A mixed-method study was carried out with 25 high-school students to investigate the effect of PCaRD on students learning and motivation. Three educational games were integrated into an elective course for a year. These games were chosen for the study because of their content, pedagogical approaches and commercial popularity. According to the achievement tests, students had significant gains in terms of their mathematics knowledge, yet there was no significant gain regarding their physics knowledge and motivation. However, according to interviews and observations, PCaRD was influential in fostering learning, motivation and identity formation (Foster & Shah, 2012).

CHAPTER 3

METHODOLOGY

3.1. Design of the Study

The purpose of this chapter is to describe the methodology used in this study. This chapter presents the research design, sample selection, and ethical considerations. Data collection procedures, data collection instruments, and data analysis procedures were also discussed.

The purpose of this study was to investigate the effectiveness of a game-based learning design on language learning and on the development of L2 motivational self-system. In this study, embedded mixed methods research design was employed. A pre and post-test-designed quasi-experimental study was conducted and L2 motivational self-system questionnaire and student interviews were deployed to get a better understanding of the research questions.
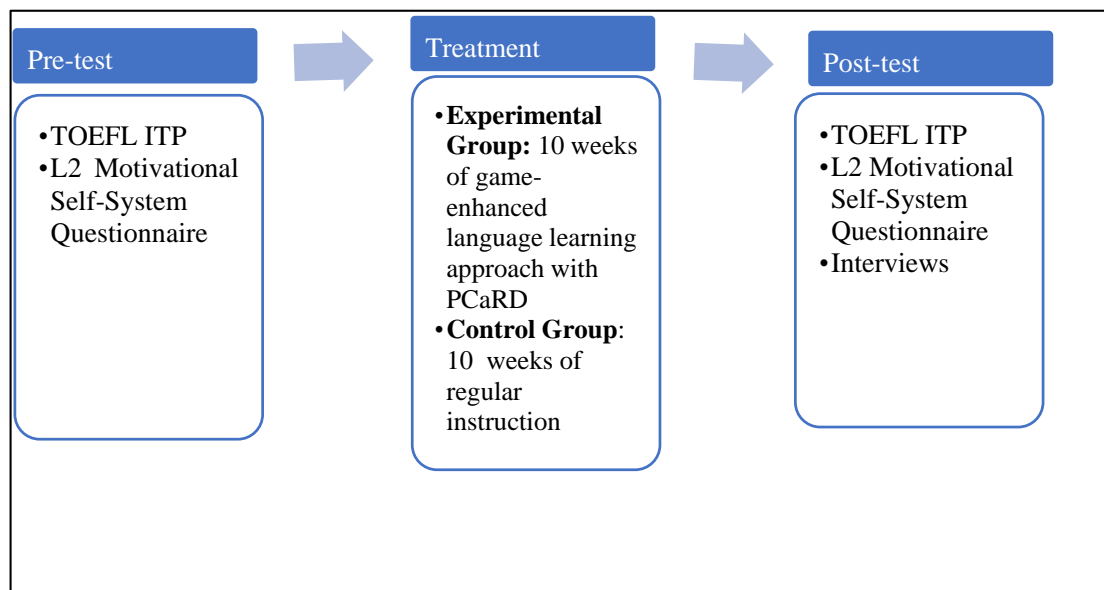
Figure 3. The Research Design Employed by the Current Study

A quasi-experimental study design has been adopted for the main phase of the study with around 76 students, selected from a private university prep class. In quasi-experimental design, the experimental and control groups are selected without random assignment. Both control and experimental groups take tests at the beginning and end of the semester, yet just the experimental group is exposed to the intervention (Creswell, 2009).The design is generally deployed when it is not possible or practical to assign participants randomly (Gribbons & Herman, 1997).

Table 1. *The Pretest- Posttest Control Group Quasi Experimental Research Design*

	R	O	X	O
	experimental group (38 students)	Pretests: TOEFL ITP test L2 motivational self-system questionnaire	Treatment: Game-based learning activities designed using PCaRD framework to support English Language Development and Ideal L2 self development.	Posttests: TOEFL ITP test L2 motivational self-system questionnaire Student interviews
76 students	R	O	C	O
	control group (38 students)	Pretests: TOEFL ITP test L2 motivational self-system questionnaire	No treatment: Traditional teaching	Posttests: TOEFL ITP test L2 motivational self-system questionnaire

In this study, the independent variables are two different modes of learning; game-enhanced language learning approach and traditional instruction. The dependent variables are language learning achievement and language learning motivation.

Another important issue to consider in quasi-experimental research is internal validity (Creswell, 2008). While conducting research, the researcher may encounter some internal and external threats to validity which he/she needs to detect and fashion the experiment in a way that threats are minimized or eliminated (Creswell, 2009). To minimize the threats to internal validity, many of the variables were controlled such as regression, selection, mortality, testing and instrumentation (Creswell, 2008).

3.2. Participants

Convenience sampling was utilized to select the participants of the study. Convenience sampling which is a non-probability sampling technique was utilized because of the availability of the participants (Fraenkel & Wallen, 2006). All of the students were at C level (defined by the Common European Framework). There were 2 experimental, 2 control groups in the study. As for the semi-structured interviews, 4 female and 3 male students from the experimental groups volunteered to take part in. All students have similar language proficiency levels as they are placed in C level based on their TOEFL ITP scores (between 450-499 out of 677). Demographic information about the students is given in Table 3. Both the researcher and another teacher form the same institute had one control and one experimental group. The second teacher was chosen because she was teaching at the same level and she agreed to take part in the study.

Table 2. *Demographic Information about the Students Involved in the Study*

Gender	Experimental Group 1	Experimental Group 2	Control Group 1	Control Group 2	Total	Percentage
Female	9	9	7	9	34	45%
Male	6	14	11	11	42	55%
Total	15	23	18	20	76	100%

3.3. Research Setting

The study was carried out at a private university located in the central Anatolia, in Turkey. It is a relatively new university founded in 2000. The medium of the education is 30% English and in almost all departments, except a few Turkish medium departments, students are required to pass TOEFL ITP exam to proceed in their departments. If they flunk in the exam, they are obliged to attend to preparatory school that is made up of three 13-week study periods.

All the students registered at the university are expected to take preliminary exam in which students are evaluated on certain English language skills: Listening (60 questions/50 minutes), Structure (40 questions/40 minutes) and Reading (25 questions/30 minutes). Students who get 65 in the preliminary exam are allowed to

take TOEFL ITP which is made up of three components: Listening (50 questions/40 minutes), Structure (40 questions/25 minutes) and Reading (50 questions/55 minutes).

The students who get 500 and above from TOEFL ITP are accepted as qualified enough to pass to their departments whereas for the English Language and Literature Department, the necessary score is 550 and above. The students who do not pass the score are obliged to proceed with preparatory school on more time during which they are placed in different levels depending on their scores in the preliminary exam and TOEFL ITP. The students who do not enter TOEFL ITP or get a score below 40 in the preliminary exam start as AF (A foundation/beginner) level while those who get a score between 40 and 64 study in A (elementary) level. Furthermore, students who get 450 or below (out of 677) are placed in B (pre-intermediate) level, whereas those with a score between 450 and 499 study in C (intermediate) level. AF levels have 30 hours per week and A, B and C level cover 25 hours a week.

There are three courses in each level: main course, reading and writing, and listening and speaking. In each course, various books are covered based on the skills, and the courses are covered by three different teachers for each class. Main course is 15 hours for AF level while it is 10 hours for A, B and C levels. Reading and Writing is 10 hours and Listening and Speaking is 5 hours for all levels.

During the semesters, students are evaluated through various examinations (quiz, midterm, reader, online assignment and portfolio). Although the main course follows a program based upon integrated skills (grammar, reading, writing, listening and speaking), the other two lessons are generally skill-based and so are the books (see table 3.4 for C level book list). Also, the exams are mostly skill-based and include multiple choice questions. Just the writing and speaking exams include open-ended questions.

Table 3. *C Level Book List*

C Level	Main Course	Reading &Writing	Listening &Speaking	Homework
	Focus on Grammar 5 (Pearson)	Reading Explorer 3 (Heinle)	Pathways Listening, Speaking, and Critical Thinking 3 (Heinle)	Skills Boost Reading and Listening B2 (Richmond)
				Longman Preparation Course for the TOEFL TEST (PBT) (Pearson) ENGLISH CENTRAL – Lab Access Code

3.4. Game Selection

Selecting the game was one the most significant steps in this study as a result of which *Life is Strange* was chosen based on careful consideration and elaborate analyses. Upon deciding on the topic of the research, five gamer students from the same university volunteered to have informal interviews on games, and their perceptions on the potentials of games for learning English language, game genres and appropriate games for language learning were consulted. They were informed about the research to be conducted and certain criteria for the game choice developed together with these students;

a) The game should be accessible for both computers and smartphones.
b) The game should be a story-based game which would enable more exposure to English language.
c) The content of the game should be parallel with the content of the curriculum so that the preparation of the activities for the curriculum could be more feasible.

After the elimination, the researcher examined the content and appropriateness of several games and also based on student views, settled on *Life is Strange* which is accessible on computers and smartphones, has interesting and fun content, and is appropriate for the curriculum.

3.5. Game Description

Life is strange is an award-winning and critically acclaimed game. It is a graphic adventure game that is played from the third-person view and it includes 5 episodes. Players can rewind time and redo any action that has been taken. Players can examine and interact with objects to solve some puzzles to continue their quests. They can communicate with the characters through readily available speech options which can be rewound as well. In some cases, the past, present or future will be changed and affected with short or long-term outcomes when a dialogue is rewound, or a puzzle is solved. Therefore, a player can direct the story in a different path and can have a totally different end. Players can easily roam in various locations of the fictional setting of Arcadia Bay. As the game is story-based, it exposes players to a great deal of written language such as the instructions, constant dialogues, the diary kept by the main character, text messages among players and texts within the game.

Figure 4. Choosing an Object to Solve a Puzzle in Life is Strange

The story takes place in a public high school in Arcadia Bay. As can be expected from a high school environment, students face everyday life problems regarding their families, friends, and other people. In the story, issues such as depression, bullying, domestic violence, illness and suicide are touched on. Players play the

game through the eyes of Max Caulfield, the protagonist. She tries to solve some puzzles with her friend Chloe Price. They start their quest by trying to reveal the truth behind their friend Rachel Amber's suicide and interact and deal with several people on the way. She finds out that a devastating destiny is waiting for her town and she has to try some ways to prevent it.

Figure 5. Choosing a Speech Option to Have a Dialogue

3.6. Procedures

Prior to the beginning of the semester, the researcher went through a process to decide an appropriate game for the purpose of the study. During the process, several students who were gamers and passed TOEFL ITP with high scores from the previous semesters were detected by the researcher and consulted for their reflections on the effects of games in English language learning and their affordances for lessons with casual interviews. During the selection, these volunteer students helped choose the game based on certain criteria. One of the significant criteria was that the game should be accessible, not just on PlayStation, yet through computers and smart phones so that the students who do not have PlayStation or even computers could play it on their phones. Moreover, the theme and the language use were also considered. The researcher especially chose a story-based game so

that there could be more language input. The price was another criterion. As the researcher provided all the students with the game, the price of the game should be taken into consideration. Also, the game's compatibility with the program was significant since it should be in coherence with the content of the books and objectives of the curriculum. Of all the suggested games, the one which serves best to the purpose was selected. After selecting the game, based on the TPACK theoretical framework as an analytical lens, the researcher herself played the game first to ascertain the technological characteristics, pedagogical affordances and the content of the game (Foster, 2012).

Table 4. *Time Frame of Data Collection*

Data Collection	Experimental Groups (C2&C5)	Control Groups (C1&C4)
TOEFL ITP	September, 2018	September, 2018
L2 Motivational Self-System Questionnaire	October, 2018	October, 2018
Activities	September 2018 – December 2018 (10 Weeks)	-
L2 Motivational Self-System Questionnaire	December, 2018	December, 2018
TOEFL ITP	December, 2018	December, 2018
Interviews	December, 2018	-

At the beginning of the semester, the participants took an achievement test (TOEFL ITP) the scores of which were saved to be compared with the results obtained at the end of the semester. The L2 motivational self-system questionnaire was also applied to both the control and experimental groups at the beginning of the semester before the study started. The semester was 13 weeks long and the study started in the third week and proceeded over a ten-week period. The participants in the experimental groups were told about the research and upon accepting to take part in, they were informed about the procedure and game. The game was purchased by the researcher and provided to the students. Some of them played it through their computers while several participants preferred playing on their phones.

The learners were asked to start playing the game, Life is Strange which is composed of 5 episodes making up around 15 hours of game playing in total. Students were expected to play an episode every two weeks. They were required to play the assigned episode before they came to the class to do the activities designed by the researcher in class. Each week, the teachers brought activities designed to incorporate students game experiences to language learning and motivation to be used in the experiment group classrooms and guided students to complete them considering the episodes and events that took place in the game. These activities were conducted for an hour in the reading & writing course.

At the end of the semester the post-intervention data collection tools (L2 motivational self-system questionnaire and TOEFL ITP test) were applied to evaluate the effectiveness of the game enhanced language learning intervention. Furthermore, 7 participants volunteered to have interviews to reflect on their game play experience over the course of the study, its affordances for second language learning and L2 motivational self-system.

3.7. Data Collection Tools

3.7.1. Questionnaire

For the quantitative data, the researcher utilized a questionnaire including items measuring the learners' attitudes and motivation toward learning English. A copy of the questionnaire is in Appendix A.

Dörnyei & Csizér (2002)'s analysis of the instrument over a large sample of L2 learners reported satisfactory internal consistency among items that load onto motivational dimensions as evidenced in the reported Cronbach alpha measures. Dörnyei & Csizér (2002)'s factor analysis also supported the choice of 5 main dimensions employed in the instrument, contributing to the internal validity of the constructs. Moreover, Taguchi, Magid & Papi (2009) employed the same L2 Motivational Self System instrument at multiple L2 settings in different countries such as Japan, Iran and China. The structural equation model analysis conducted

over the three samples revealed similarities between how the L2 motivational constructs relate to each other in these settings and the sample investigated by Csizer & Dörnyei (2005) in Hungary where the instrument was first administered. Therefore, these findings provide additional evidence that the instrument has high reliability across L2 contexts, and the proposed theoretical constructs have external validity.

Face validity was utilized to see whether the instrument measures what it is intended to measure (Patton, 1997; Fitzner, 2007). Mosier (1947) claims that a test has face validity 'if the items which compose it "appear on their face" to bear a common-sense relationship to the objective of the test'. Also, statistical procedures do not necessarily have to be carried out as the test bears a common-sense relationship to what it is intended for (Mosier, 1947). Four instructors teaching C level and knowing the C level student profile were asked to read the items on the questionnaire and decide whether students would be able to understand what the sentences tell. The instructors have been teaching in the current institution between 8 and 11 years, so they know the student profile and curriculum well. The instructors all agreed on the idea that items were appropriate for students' level and they could comprehend them without any difficulty.

The questionnaire includes both statement-type and question-type items, both of which were measured by six-point Likert scales with "strongly agree" anchoring the left and "strongly disagree" anchoring the right end.

There were 87 items on the questionnaire, and it included the following 10 factors:

1 *Criterion measures* (ten questions): e.g. I think that I am doing my best to learn English.
2 *Ideal L2 self* (ten questions): e.g. I can imagine myself living abroad and having a discussion in English.
3 *Ought-to L2 self* (ten questions): e.g. Learning English is necessary because people surrounding me expect me to do so.

4   *Family influence* (eleven questions): e.g. My parents encourage me to practice my English as much as possible.

5   *Instrumentality (promotion)* (fourteen questions): e.g. Studying English is important to me because I am planning to study abroad.

6   *Instrumentality (prevention)* (eleven questions): e.g. I have to learn English because without passing the English course I cannot get my degree.

7   *Attitudes to learning English* (ten questions): e.g. I always look forward to English classes.

8   *Cultural interest* (four questions): e.g. Do you like English magazines, newspapers, or books?

9   *Attitudes to L2 community* (four questions): e.g. Do you like meeting people from English-speaking countries?

10 *Integrativeness* (three questions): e.g. How much would you like to become similar to the people who speak English.

3.7.2. Achievement Test (TOEFL ITP)

TOEFL ITP is used as the achievement test in this study. It consists of three components: Listening (50 questions/40 minutes), Structure (40 questions/25 minutes) and Reading (50 questions/55 minutes) and utilized as both the placement and achievement test that   students are obliged to take to be placed according to their levels at the beginning of the term and to pass to proceed with their departments at the end of the term. The students in this study got a score between 450-500 and were placed in C level accordingly and they are required to get at least a score of 500/677 to pass the preparatory class. A sample TOEFL ITP questions can be found in Appendix J.

3.7.3. Semi-structured Interview

Semi-structured interview questions were utilized to ask students' views on the game (Life is Strange), game-enhanced language learning, its effect on their second language learning and L2 motivational self-system as well as getting a much deeper understanding of the whole process. Interview questions were developed depending on the literature review.

For the validation of the interview, 6 faculty members were consulted for expert opinion and based on their feedback the questions were refashioned. Additionally, two pilot interviews were carried out so as to fashion and improve the interview questions by checking the answers and comprehend if the questions could elicit desired answers.

4 female and 3 male students volunteered to take part in the interviews. Semi-structured interviews lasted between 25 to 35 minutes. Interview questions can be found in Appendix B.

3.7.4. Activities

A key way to engage learners upon playing the game and in comprehending L2 motivational self- system is through activities created by the researcher. The game is composed of five episodes, for each of which two activities were prepared. The activities were constructed in accordance with the program and objectives of the week and were basically made up of three parts: The first part included structure questions prepared in accordance with *Focus on Grammar 5,*(see Appendix I for a sample page) a book source used in the main course including integrative skills (reading, vocabulary, listening, writing, speaking and grammar), yet primarily intended to focus on grammar. The activities in the second part were prepared according to the reading skills of *Reading Explorer 3* (see Appendix H for a sample page), taught in the reading & writing course. In the last part, activities were designed to guide students to reflect on their language learning motivation and L2 motivational self-system, and thereby creating awareness in learners regarding their language learning process and future goals. Each activity designed for the study was thematically and grammatically situated within the context of the game and course objectives as much as possible and design to urge students talk over different themes of L2 motivational self-system by bearing in mind their experiences within the game. The activities were aimed to include diverse topics and skills to support students both English language development and second language learner identity (see appendix C for activities).

Table 5. *The Distribution of the Activities over the Weeks*

Weeks	Focus on Grammar 5	Reading Explorer 3	L2 Motivational Self-System
Week 1	Definite and Indefinite Articles (Activity 1- Part A)	Guessing the Meaning of Unfamiliar Words (Activity 1- Part B) Introduction to writing (Activity 1- Part C)	Criterion Measures, Ideal L2 self, Ought to L2 self
Week 2	Quantifiers (Activity 2- Part A)	Scanning for Specific Information (Activity 2- Part B) Understanding Cause and Effect Relationships (Activity 2- Part C)	Ought-to L2 self
Week 3	Passive Voice (Activity 3- Part A)	Being an active reader (Activity 3- Parts B&C	Possible Self, Ought-to L2 self
Week 4	Gerunds and Infinitives (Activity 4- Part A)	Thesaurus: spectacular (Activity 4- Part B) Summarizing a Writer's Point of View (Activity 4- Part C)	Possible Self , Feared Self
Week 5	Noun Clauses (Activity 5- Part A)	Recognizing Metaphors (Activity 5- Part B	Imagination and Imaginary-streaming, Future Self
Week 6	Adjective Clauses (Activity 6- Part A)	Understanding Pros and Cons (Activity 6- Part B) Using a Venn Diagram to Classify Information (Activity 6- Part C)	Self Discrepancies
Week 7	Connectors (Activity 7- Part A)	Using a T-chart to organize your notes (Activity 7- Parts B&C)	Preparing a poster presentation on ideal L2 self, ought-to self and possible self
Week 8	Inversion (Activity 8- Part A)	Recognizing phrasal verbs (Activity 8- Part B)	Motivated Behavior and Effort, Desired-self
Week 9	TOEFL ITP practice (Activity 9- Part A)	Recognizing definitions (Activity 9- Part B)	Possible Self
Week 10	TOEFL ITP practice (Activity 10- Part A)	Ordering Information (Activity 10- Part B)	Possible Self

3.8. Data Analysis

The researcher adopted a mixed method research that "utilizes a strategic and purposeful combination of both qualitative and quantitative data collection and analysis for its studies" (Saldaña, 2011; p.10). Employing the epistemological and methodological benefits of both researches can support the findings or result in complementary or contradictory outcomes (Saldaña, 2011).

For the quantitative data analysis, the pre and posttest results of both L2 motivational self-system and TOEFL ITP were analyzed by performing Statistical Package for the Social Sciences (SPSS) IBM Version 25. Frequencies and mean scores were obtained

for both the questionnaire and TOEFL ITP through Descriptive Statistics. In order to test whether there is a significant difference between the post-test results between control and experimental groups regarding the questionnaire and TOEFL ITP results 2x2 mixed ANOVA tests were utilized where pre-test scores were used as a covariate.

For the qualitative part, data about the effectiveness of the intervention was gathered from seven students via interviews which "is the most common form of data gathering in qualitative research studies, perhaps because they directly solicit perspectives of the people we wish to study" (Saldaña, 2011; p.75). The data were voice-recorded, transcribed, and subjected to qualitative content analysis. After uploading the transcriptions on MAXQDA (see Appendix D for a screenshot), the whole data was repeatedly analyzed not to miss any emerging theme and in vivo coding and pattern coding methods (Saldaña, 2015) as well as codes from literature were employed. A code list with example quotations from the interviews and explanations (see Appendix E for the code book) was created.

Before finalizing the analysis procedure, interrater reliability was checked. The code list was explained to a second coder and a sample coding session conducted for calibration among the raters and the discrepancies were resolved through discussions. Two coders reviewed the transcripts individually to identify major themes and 20% of the data were coded by them separately. Then interrater reliability was calculated. Interrater reliability refers to the degree to which different raters give consistent estimates of the same code. Interrater reliability requires observers to be consistent in their judgements, so the researchers' coding should be correlated with each other (Marques & Mccall, 2005). In order to ensure this, Krippendorff's alpha was calculated and the reliability is found to be .84 ($\alpha > 0.7$). Alpha is calculated on SPSS v25 by using KALPHA script developed by Hayes and Krippendorff (2007). The rest of the data were coded by the researcher. After the first cycle in which codes were established, the second cycle coding was conducted which "is a way of grouping those summaries into smaller number categories, themes, or constructs" (Miles, Huberman, & Saldana, 2014 ; p.86) and finally 3 main themes were established.

3.9. Ethical Consideration

Some ethical issues were considered before and during the study. Firstly, the researcher wrote a petition to the institution the research would be carried out. The petition included the purpose and procedure of the study and the data collection methods to be used. Then, it was discussed in the institutional review board of the university and it was permitted to implement the research within the institution. Meanwhile, the study was presented to METU Ethics Committee and the permission was obtained (see Appendix L for Ethical Committee approval form). Moreover, consent forms were distributed to the students (see Appendix K for informed consent form). They included information about the purpose of the study, the procedures that students would follow if they take part in the study and students' answers would be kept confidential. Also, they could cease the study any time they wanted.

Moreover, students were informed orally about the procedure of the study and what they were expected to do during the semester. The procedure was explained in detail and clearly. 2 students from the experimental group stated that they did not want to take part in and consequently they were excluded. With regard to confidentiality, their identities were protected, and they were represented with a number and their class name (e.g. participant 1 from C2). Participants were treated with respect and the researcher sought cooperation with the subjects in research endeavor (Fraenkel & Wallen, 2006). Furthermore, the researcher was the teacher of one of the experimental groups and 4 volunteers of the interviews were in her class, so in order not to make students feel under pressure, the students were interviewed after the semester ended. Hence, they could feel more comfortable while expressing themselves.

To sum up, ethical issues were taken into consideration to carry out a study that did not harm the students and the study itself during the process.

3.10. Limitations of the Study

Several limitations can be observed in this study. Firstly, convenient sampling method is utilized to select the students because of the participants' proximity to the

researcher. Therefore, the data is collected just from a specific group of people. Because of this, it may be difficult to generalize the results to the whole population and there is a possibility of over or under representation of a group.

Also, the context of the study is the preparatory school of a private university in the center of Turkey. The participants' socio-economic background and their familiarity with the gaming experience might have affected the results. Therefore, it might not be possible to generalize the results to. It could have given a more complete picture if it were possible to apply the same intervention in different cases, compare and contrast the results among the cases and analyze the factors effecting the results.

Furthermore, the study was carried out in a ten-week period. If the application had been longer, the study could have yielded a better understanding about the process and the results (Peterson, 2006).

Moreover, the researcher is an instructor in the study context, and she taught classes to an experimental and a control group, which may raise questions about researcher bias. However, to overcome this limitation, another instructor taught an experimental and a control group as part of the study design.

While assessing students' L2 motivational self-system, the study employed a self-report survey where students read the items and choose the response best represents them. Therefore, students L2 motivational self-system scores were inferred based on their perceived progress in terms of motivation at the end of the intervention. Also, the study employed student interviews where they reflected on their experience of the intervention. It was assumed that students shared their honest views with the researcher during the data collection process of both survey application and interviews.

Finally, only one game was used during the study. There might be some specific features to this particular game that might have affected the results. Conducting similar studies with different games would be useful to develop a better understanding about the process of integrating games to the curriculum.

CHAPTER 4

RESULTS

The purpose of this study is to investigate whether a game-enhanced intervention affects students' English language learning and their motivation toward learning the target language. To this end, a mixed-method research was employed in this study. Different data collection tools were utilized, and these tools provided data to answer the research questions. In the figure 7, the representation of the design that is used in the report of findings is illustrated.

Research question 1	• Pre-TOEFL ITP • Post-TOEFL ITP
Research question 2	•Pre- L2 Motivational self-system questionnaire •Post- L2 Motivational self-system questionnaire
Research question 3	•Semi-structured interviews
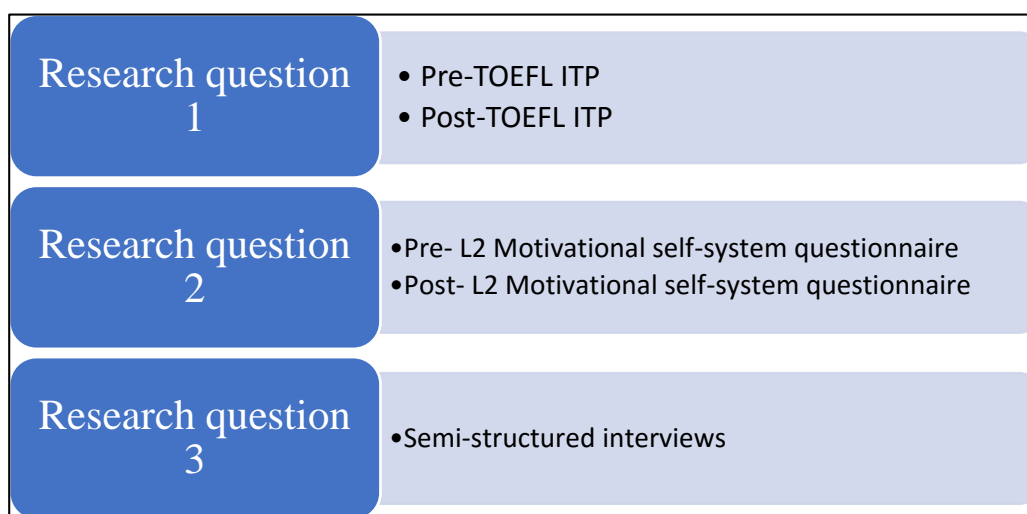
Figure 6. Data Tools Used for Answering Research Questions

As can be seen from the figure, for explaining research question 1, the results of TOEFL ITP implemented at the beginning and end of the first semester were utilized. As for the second research question, data gathered at the beginning and at the end of the semester via L2 motivational self-system questionnaire were used. Besides, the researcher conducted semi-structured interviews and used these interviews to explore research question 3.

4.1. Achievement Test (TOEFL ITP) Results

The first research question of the study aimed to reveal whether there was a difference between control group and experimental group regarding their TOEFL ITP results conducted at the beginning and end of the semester. For this purpose, the exam results of both the pretest and posttest were obtained, and they were analyzed for the descriptive statistics which is illustrated in table 7.

Table 6. *Descriptive Statistics for the TOEFL ITP Pretest and Posttest Results*

Groups	N	Pretest	Posttest
Experimental	38	469.84	540.05
Control	38	469.32	532.79

As can be observed from the table, whereas the arithmetic mean for the pretest results of the experimental group was 469.84, it increased to 540.05 in the posttest. On the other hand, the arithmetic mean for the pretest results of the control group increased from 469.32 to 532.79 in the posttest.

Moreover, the difference between the pretest results of the experimental group ($M=$ 469.84) and control group($M=469.32$) was not quite high. However, there was a difference between the experimental group ($M=540.05$) and control group ($M=532.79$) in terms of the posttest results. 2x2 mixed ANOVA was conducted to determine whether there was a statistically significant difference between experimental and control groups and the results are presented in Table 8.

Table 7. *2x2 Mixed ANOVA Results for TOEFL ITP*

Within Subjects Effects						
Source	SS	df	MS	F	P	$\eta^2_{partial}$
Time	169778.95	1	169778.95	378.99	.001	.84
Time ✶ Group	431.16	1	431.16	.96	.33	.01
Error	33149.90	74	447.97			

*p < .05

Between Subjects Effects						
Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	576.42	1	576.42	.79	.38	.01
Error	53939.58	74	728.91			

*p < .05

A 2x2 mixed ANOVA was conducted to test the effects of group (control & experimental) and test time (pretest & posttest) on the TOELF ITP scores. The analysis revealed a significant difference between pre-test and post-test scores, $F(1,74)=378.99$, $p<.05$, partial $\eta^2=.84$. However, no significant difference between control and treatment groups were observed, $F(1,74)=.79$, $p>.05$. The interaction also did not reach significance, $F(1,74)=.96$, $p>.05$. The results suggest that both groups significantly increased their proficiency, but the slight increase in favor of the experimental group did not reach significance.

In order to get a deeper understanding and see whether there were differences between the control and experimental group regarding their pretest and posttest results, all the skills in TOEFL ITP (listening, structure and reading) were analyzed separately.

4.1.1. TOEFL ITP Listening Results

To investigate whether the listening posttest results of the experimental group are higher than those of the control group, the descriptive statistics of the pretest and posttests were analyzed and are illustrated in table 9.

Table 8. *Descriptive Statistics for the TOEFL ITP Listening Pretest and Posttest Results*

Groups	N	Pretest	Posttest
Experimental	38	47.26	52.24
Control	38	47.61	51.92

As illustrated in the table, the arithmetic mean scores for the pretest listening results of the experimental group increased from 47.26 to 52.24. Similarly, the pretest arithmetic mean scores of the control group changed from 47.61 to 51.92. A 2x2 mixed ANOVA was conducted to determine if there is a statistically significant difference between experimental and control groups in terms of their posttest listening.

Table 9. *2x2 Mixed ANOVA Results for TOEFL ITP Listening*

Within Subjects Effects

Source	SS	df	MS	F	p	η^2_{partial}
Time	1744.90	1	1744.90	327.49	.001	.82
Time ✳ Group	.32	1	.32	.06	.81	.001
Error	394.28	74	5.33			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	η^2_{partial}
Group	7.16	1	7.16	.40	.53	.005
Error	1315.86	74	17.7			

*p < .05

As it is shown in the table, although there was a significant difference in terms of pre-test and post-test results $F(1,74)=327.49$, $p<.05$ partial $\eta^2=.82$, no significant difference between control and experimental groups was observed, $F(1,74)=.40$, $p>.05$. The interaction also did not reach significance, $F(1,74)=.06$, $p>.05$. The results suggest that both groups significantly increased their proficiency in terms of listening, but the slight increase in favor of the experimental group did not reach significance.

4.1.2. TOEFL ITP Structure Results

In order to examine whether the posttest structure results of the experimental group are higher than those of the control group, the descriptive statistics for both pretest and posttests results of the structure part are shown in table 11.

Table 10. *Descriptive Statistics for the TOEFL ITP Structure Pretest and Posttest Results*

Groups	N	Pretest	Posttest
Experimental	38	43.37	52.50
Control	38	43.26	51.32

The table shows that there is an increase in the listening scores of both groups when pretest and posttests results are taken into consideration. In the experimental group, the arithmetic mean of the listening results increased from 43.37 to 52.50 while the arithmetic mean of the pretest results went up from 43.26 to 51.32 in the control group. A 2x2 mixed ANOVA is performed to see whether there is a statistically

significant difference between the experimental and control groups regarding their posttest results.

Table 11. *2x2 Mixed ANOVA Results for TOEFL ITP Structure*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	2805.32	1	2805.32	288.68	.01	.80
Time ✻ Group	11.60	1	11.06	1.14	.29	.02
Error	719.19	74	9.72			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	15.80	1	15.80	.96	.33	.01
Error	1216.80	74	16.44			

*p < .05

As illustrated in the table, the results showed a significant difference for pre-test and post-test results $F(1,74)=288.68$, $p<.05$ partial $\eta^2=.80$, yet no significant difference between control and experimental groups were observed, $F(1,74)=.96$, $p>.05$ and the interaction was also not significant, $F(1,74)=1.14$, $p>.05$. Hence, there is no statistically significant evidence that there is an interaction between time (pretest & posttest) and group (control & experimental).

4.1.3. TOEFL ITP Reading Results

To investigate whether the reading posttest results of the experimental group are higher than those of the control group, the descriptive statistics of the pretest and posttests were analyzed and are illustrated in table 13.

Table 12. *Descriptive Statistics for the TOEFL ITP Reading Pretest and Posttest Results*

Groups	N	Pretest	Posttest
Experimental	38	47.26	52.24
Control	38	47.61	51.92

As shown in the table, whereas the arithmetic mean for the pretest reading results of the experimental group was 47.26, it increased to 52.24 in the posttest. For the control group, the mean for the pretest results went up from 47.61 to 51.92 in the

posttest. A 2x2 mixed ANOVA was conducted to determine a statistically significant difference between experimental and control groups in terms of their posttest reading results.

Table 13. *2x2 Mixed ANOVA Results for TOEFL ITP Reading*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	819.80	1	819.80	87.09	.01	.54
Time ＊ Group	4.11	1	4.11	.44	.51	.01
Error	696.59	74	9.41			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	.08	1	.08	.01	.98	.01
Error	1155.49	74	15.615			

*p < .05

As can be seen in the table, a significant difference can be observed in the pre-test and post-test results $F(1,74)=87.09$, $p<.05$, partial $\eta^2=.54$. However, there is no significant difference between control and treatment groups $F(1,74)=.01$, $p>.05$. The interaction also did not yield significance, $F(1,74)=.44$, $p>.05$. Although both groups increased their proficiency in terms of reading, the slight increase in favor of the experimental group did not reach significance.

4.2. L2 Motivational Self-system Questionnaire

The second purpose of the study was to investigate whether there is a difference between the control and experimental group in terms of the L2 motivational self-system questionnaire. The questionnaire was carried out twice: before the study was performed and when the study was completed. The purpose was to observe the changes, if any, in the L2 Motivational Self-System of the students and compare the experimental group and control group. The participants evaluated their L2 Motivational Self-System on a continuum of 1 to 6: 1 being strongly disagree and 6 being strongly agree. Besides, they rated under 10 categories (e.g. criterion measures, ideal L2 self, ought-to L2 self, attitudes to learning English).

In order to test this hypothesis, the descriptive statistics including mean scores and standard deviations of all motivational components of the pre and post results are illustrated in table 15. To analyze which motivational components are relatively high or low and perceived important or less important stimulant for learning English by the students, the mean values were acquired. The standard deviation is utilized to show significant variations from the mean within the result of each motivational component.

Table 14. *Descriptive Statistics of the L2 Motivational Self-System Questionnaire Applied at the Beginning and End of the Semester*

Components	Experimental Group				Control Group			
	pre		post		pre		post	
	M	SD	M	SD	M	SD	M	SD
Criterion Measures	4.03	0.98	3.88	0.95	3.95	0.98	3.71	1.18
Ideal L2 Self	5.16	0.54	5.40	0.54	5.14	0.72	5.31	0.74
Ought-to L2 Self	3.56	1.07	3.96	0.98	3.94	0.97	3.90	0.98
Family Influence	3.80	0.99	3.83	0.88	3.82	0.70	4.05	1.10
Instrumentality (Promotion)	5.22	0.71	5.43	0.51	5.10	0.60	5.30	0.63
Instrumentality (Prevention)	4.68	1.14	4.95	0.89	4.50	0.89	4.55	0.92
Attitudes to Learning English	4.45	0.99	4.63	0.78	4.31	0.97	4.31	1.21
Cultural Interest	5.53	0.61	5.77	0.39	5.25	0.85	5.50	0.73
Attitudes to L2 Community	5.45	0.70	5.57	0.52	5.12	0.88	5.30	0.81
Integrativeness	5.22	0.63	5.25	0.68	4.77	0.91	5.20	0.74

As can be seen from the table, when the questionnaire was first applied at the beginning of the semester, the Ideal L2 Self scores for both experimental group (*M*=5.16, *SD*=0.54) and control group (*M*=5.14, *SD*=0.72) are quite high. Furthermore, Instrumentality (Promotion) is perceived to be an important motivation for the participants of both experimental group (*M*=5.22, *SD*=0.71) and control group (*M*=5.10, *SD*=0.60). What is more, not only the experimental group (*M*=4.68, *SD*=1.14) but also the control group (*M*=4.50, *SD*=0.89) desire to prevent possible negative outcomes in the future such as not wanting to be perceived as a poorly educated person. Also, similar to experimental group (*M*=4.45, *SD*=0.99), the control group (*M*=4.31, *SD*=0.97) illustrates positive attitudes toward learning English as well. Cultural interest in both the experimental group (*M*=5.53, *SD*=0.61) and control group (*M*=5.25, *SD*=0.85) seems to be an indispensable

factor urging students to learn English. As well as the experimental group (*M*=5.45, *SD*=0.70), the control group (*M*=5.12, *SD*=0.88) also displays high scores of positive attitudes to and interest in the L2 community. Moreover, the participants of both the experimental group (*M*=5.22, *SD*=0.63) and control group (*M*=4.77, *SD*=0.91) show a substantial willingness to learning English and being a part of the community.

With regard to the application of the questionnaire after the study was carried out, the mean values of the experimental group for all motivational components are reported to be relatively higher than the control group except family influence which is observed to be higher in the control group (*M*=4.05, *SD*=1.10) than the experimental group (*M*=3.83, *SD*=0.88). Moreover, except from ought-to L2 self and family influence, all the other components show high mean values (above 4) in both pre and post application. This can be an indicator of how learners' motivation to English learning is influenced and shaped by inner motivation rather than expectations of others including family, friends, school and others.

Overall, it can be deduced that all the participants of this study are immensely motivated to learn English and there are several factors influencing their willingness to learn it. Among these factors, Cultural Interest, Attitudes to L2 Community, Integrativeness, Attitudes to Learning English, Instrumentality (Promotion), Instrumentality (Prevention), Ideal L2 Self and Criterion Measures have high mean values (above 4), which denotes that the participants are highly aware of the necessity and significance of English for their own selves. Moreover, the role of English language in today's globalized world and the outcomes of failure to acquire this language seem to be comprehended by the participants. Moreover, Ought-to L2 Self and Family Influence show comparatively lower mean values (below 4) suggesting that family, friends and other agents do not affect L2 Motivational Self System to a great extent.

A 2x2 mixed ANOVA was conducted to determine a statistically significant difference between experimental and control groups in terms of their post questionnaire results and the results are presented in Table 16.

Table 15. *2x2 Mixed ANOVA Results for L2 Motivational Self-System*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	6605.29	1	6605.29	3.35	.07	.04
Time ✲ Group	404.63	1	404.63	.21	.65	.003
Error	146061.08	74	1973.80			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	4620.03	1	4620.03	1.33	.25	.02
Error	257731.82	74	3482.86			

*p < .05

A 2x2 mixed ANOVA was conducted on L2 motivation improvement with respect to time (pretest & posttest) and group (control & experimental). An alpha level of .05 was utilized. There was not a statistically significant interaction between time and group $F(1,74)=.21$, $p>.05$. Also, the results showed a non significant difference for time, $F(1,74)=3.35$, $p>.05$ and group $F(1,74)=1.13$, $p>.05$. Hence, the interaction between time and group seem to have no significant effect on L2 motivation.

However, in order to get a deeper understanding, 2x2 mixed ANOVAs were conducted over each dimension where pre/post administration was treated as a within-subjects and grouping as a between-subjects independent variables respectively.

4.2.1. Criterion Measures

Table 16. *2x2 Mixed ANOVA Results for Criterion Measures*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	1.50	1	1.50	1.81	.18	.02
Time ✲ Group	.63	1	.63	.08	.78	.001
Error	6133.17	74	82.88			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	.55	1	.55	.42	.52	.006
Error	95.13	74	1.29			

*p < .05

As illustrated in the table, the results showed a non significant effect for pre-test and post-test results, $F(1,74)=1.81$, $p>.05$ and for control and treatment groups, $F(1,74)=.42$,

p>.05. The interaction was also not significant, $F(1,74)=.08$, *p*>.05. Hence, there is no statistically significant evidence that there is an interaction between time (pretest & posttest) and group (control & experimental) in terms of criterion measures.

4.2.2. Ideal L2 Self

Table 17. *2x2 Mixed ANOVA Results for Ideal L2 Self*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	1.54	1	1.54	4.95	.03	.06
Time ✳ Group	.04	1	.04	.13	.72	.002
Error	23.01	74	.31			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	.10	1	10.01	.19	.66	.003
Error	38.20	74	.52			

*p < .05

As illustrated in the table, a significant difference can be observed in the pre-test and post-test results $F(1,74)=4.95$, *p*<.05, partial η^2=.06. However, there is no significant difference between control and treatment groups $F(1,74)=.19$, *p*>.05. The interaction also did not yield significance, $F(1,74)=.13$, *p*>.05. Although both groups increased significantly in terms of ideal L2 self when their pretests and posttest results are taken into consideration, the interaction between time and group did not yield a significant difference.

4.2.3. Ought-to L2 Self

Table 18. *2x2 Mixed ANOVA Results for Ought-to L2 Self*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	1.22	1	1.22	1.71	.20	.02
Time ✳ Group	1.90	1	1.90	2.68	.11	.04
Error	52.58	74	.71			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	.98	1	.98	.75	.39	.01
Error	96.31	74	1.30			

*p < .05

It is indicated in the table that there was not a statistically significant interaction between time and group $F(1,74)=2.68$, $p>.05$. Also, the results showed a non significant difference for time, $F(1,74)=1.71$, $p>.05$ and group $F(1,74)=.75$, $p>.05$. Hence, the interaction between time and group seem to have no significant effect on ought-to L2 self.

4.2.4. Family Influence

Table 19. *2x2 Mixed ANOVA Results for Family Influence*

| *Within Subjects Effects* | | | | | | |
Source	SS	df	MS	F	p	η^2 partial
Time	.61	1	.61	1.02	.32	.01
Time ✷ Group	.39	1	.39	.66	.42	.01
Error	44.39	74	.60			

*p < .05

| **Between Subjects Effects** | | | | | | |
Source	SS	df	MS	F	p	η^2 partial
Group	.59	1	.59	.51	.47	.01
Error	84.13	74	1.14			

*p < .05

As can be seen in the table, no significant difference can be observed in the pre-test and post-test results $F(1,74)=1.02$, $p>.05$. Also, there is no significant difference between control and treatment groups $F(1,74)=.51$, $p>.05$. The interaction also did not yield significance, $F(1,74)=.66$, $p>.05$. Hence, it can be stated that there is no significant difference regarding family influence.

4.2.5. Instrumentality (Promotion)

Table 20. *2x2 Mixed ANOVA Results for Instrumentality (Promotion)*

| **Within Subjects Effects** | | | | | | |
Source	SS	df	MS	F	p	η^2 partial
Time	1.70	1	1.70	7.88	.01	.10
Time ✷ Group	.001	1	.001	.003	.95	.001
Error	15.96	74	.27			

*p < .05

| **Between Subjects Effects** | | | | | | |
Source	SS	df	MS	F	p	η^2 partial
Group	.60	1	.60	1.10	.30	.02
Error	40.54	74	.55			

*p < .05

As illustrated in the table, a significant difference can be observed in the pre-test and post-test results $F(1,74)=7.88$, $p<.05$, partial $\eta^2=.10$. However, there is no significant difference between control and experimental groups, $F(1,74)=1.10$, $p>.05$. The interaction also did not yield significance, $F(1,74)=.95$, $p>.05$. Although both groups increased significantly in terms of instrumentality (promotion) when their pretests and posttest results are taken into consideration, no interaction effect was observed.

4.2.6. Instrumentality (Prevention)

Table 21. *2x2 Mixed ANOVA Results for Instrumentality (Prevention)*

Within Subjects Effects						
Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	.96	1	.96	1.52	.22	.02
Time ✽ Group	.53	1	.53	.84	.36	.01
Error	46.46	74	.63			

*p < .05

Between Subjects Effects						
Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	3.23	1	3.23	2.60	.11	.03
Error	92.04	74	1.24			

*p < .05

It is revealed in the table that there was no significant interaction between time (pretest & posttest) and group (control & experimental) $F(1,74)=.36$, $p<.05$. Also, no significance was observed in terms of groups $F(1,74)=2.60$, $p>.05$ and time, $F(1,74)=1.52$, $p>.05$. Hence, it can be said that no interaction effect was observed for instrumentality (prevention).

4.2.7. Attitudes to Learning English

Table 22. *2x2 Mixed ANOVA Results for Attitudes to Learning English*

Within Subjects Effects						
Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	.27	1	.27	.28	.60	.004
Time ✽ Group	.32	1	.32	.34	.57	.005
Error	71.27	74	.96			

*p < .05

Between Subjects Effects						
Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	2.04	1	2.04	2.00	.16	.03
Error	75.39	74	1.02			

*p < .05

The results showed no significant effect for time, $F(1,74)=.28$, $p>.05$ and group $F(1,74)=2.00$, $p>.05$. Also, no significant interaction between time and group $F(1,74)=.34$, $p>.05$ was found. Therefore, it can be said that no interaction effect was observed for attitudes to learning English.

4.2.8. Cultural Interest

Table 23. *2x2 Mixed ANOVA Results for Cultural Interest*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	2.19	1	2.19	6.37	.01	.08
Time ✶ Group	.004	1	.004	.01	.92	.001
Error	25.46	74	.34			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	2.97	1	2.97	5.41	.02	.07
Error	40.65	74	.55			

*p < .05

The analysis revealed a significant difference between pre-test and post-test scores, $F(1,74)=6.37$, $p<.05$, partial $\eta^2=.08$ and control and experimental groups, $F(1,74)=5.41$, $p<.05$, partial $\eta^2=.07$. However, the interaction did not reach significance, $F(1,74)=.01$, $p>.05$. The results suggest that both groups significantly increased their L2 motivation and the time has a significant effect, but the interaction was not significant.

4.2.9. Attitudes to L2 Community

Table 24. *2x2 Mixed ANOVA Results for Attitudes to L2 Community*

Within Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Time	.76	1	.76	1.92	.17	.03
Time ✶ Group	.03	1	.03	.08	.77	.001
Error	29.30	74	.40			

*p < .05

Between Subjects Effects

Source	SS	df	MS	F	p	$\eta^2_{partial}$
Group	3.41	1	3.41	4.87	.03	.06
Error	51.72	74	.70			

*p < .05

It is suggested in the table that although there was a significant difference between the control and experimental groups, $F(1,74)=4.87$, $p<.05$, partial $\eta^2=.06$, the results showed no difference in terms of time $F(1,74)=1.92$, $p>.05$. Also, the interaction did not reach to significance, $F(1,74)=.08$, $p>.05$. The results suggest that both groups significantly increased their L2 motivation, yet the interaction was not significant.

4.2.10. Integrativeness

Table 25. *2x2 Mixed ANOVA Results for Integrativeness*

Within Subjects Effects						
Source	SS	df	MS	F	p	η^2 partial
Time	2.13	1	2.13	4.00	.05	.05
Time ✶ Group	1.55	1	1.55	2.91	.09	.04
Error	39.47	74	.53			

*p < .05

Between Subjects Effects						
Source	SS	df	MS	F	p	η^2 partial
Group	2.46	1	2.46	3.23	.08	.04
Error	56.36	74	.76			

*p < .05

It can be seen from the table that the interaction between group and time was not significant, $F(1,74)=2.91$, $p>.05$ and no significant effect for group was observed, $F(1,74)=3.23$, $p>.05$. However, the analysis revealed a significant difference between pretest and posttest results, $F(1,74)=4.00$, $p<.05$, partial $\eta^2=.05$. No interaction effect was observed for integrativeness.

4.3. The Perceptions of the Students about the Effectiveness of the Game-enhanced Learning Intervention Designed within the PCaRD Framework in terms of Language Achievement and L2 Motivational Self-system

Interviews aimed to investigate students' perceptions on the effectiveness of game-enhanced learning in terms of language learning and L2 motivation. Seven students from the experimental groups volunteered to take part in the interviews. The students who volunteered for the interviews were from different socio-economic backgrounds, different geographical parts and with various career objectives. The information about students' characteristic are provided in Appendix G. As can be

seen from the table, while one of the interviewees has never played a game before Life is Strange, 4 of them played games on a regular basis. 2 of them mentioned that they played games during holidays or when they had time.

The interviews were carried out after the volunteers signed the consent form and admitted that they were willing to participate. They were informed about the confidentiality of interviews and they were assured that their identities would not be revealed, and their answers would just be used for the research purposes. During interviews, their voices were recorded under their permission. Each of the interviews lasted around 25 to 35 minutes and they were transcribed by the researcher. Content analysis technique was employed to analyze the data, and as a result of the analysis 26 codes, 9 sub-themes and 3 main themes emerged. The 3 main themes were listed as the nature of game play, the nature of game enhanced language learning, the nature of Life is Strange (See Appendix F for themes and sub-themes).

4.3.1. The Nature of Game Play

There are some features games inherently possess and these features give way to learning. According to Gee (2003), good games inherit several learning principles by nature. For instance, players can get information just "on demand" and "on time" within the context. As players move through the game world, they encounter information, acquire it and sometimes apply it to the world. Moreover, good games are challenging, yet do-able which is motivating and interesting for players. While playing games, players have challenges to overcome in order to level up. In our case, the challenge is comprehending the language for proceeding in the game. Another principle that games have naturally is that players are not consumers, but creators who direct and shape the game world. Generally, at schools, students are perceived and treated as consumers and they are not given the opportunity to build up their learning. Additively, games provide an environment furnished with context and narrative in which a meaningful language learning is possible "through interaction with the game, through the game and around the game" (Sykes & Reinhardt, 2012).

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The first main theme of the qualitative data analysis is about the nature of the game play. This theme is composed of 3 sub-themes as repeated exposure to the main language skills, immersive language learning environment to support situated learning and games' being motivating to learn.

4.3.1.1. Repeated Exposure to the Target Language

The first sub-theme of the nature of game play is that games provide repeated exposure to the target language. Commercial off the shelf games employ extensive exposure to the target language (Purushotma, 2005; Ranalli, 2008; Thorne, 2008; Peterson 2010). This may be due to the rich and authentic contexts of the virtual environments. There are three divisions under this sub-theme: Games can afford exposure to the main language skills, exposure to the daily language use and they engage students in constant language repetition opportunities.

4.3.1.1.1. Game Experience Afford Exposure to the Main Language Skills

The first category suggests that digital games provide rich environments for language learning in which players are exposed to the target language continuously in an authentic context as a result of which undeliberate and permanent learning can take place.

Virtual environments are rich in different texts, interaction opportunities and a lot of words they come across perpetually, which gives way to repetition opportunities to vocabulary skill (Purushotma, 2005). Students' interviews showed that according to them the skill that they developed most through game play was vocabulary and game experience yielded rich vocabulary practice. Apart from providing a variety of vocabulary in context, it also creates a necessity to learn the vocabulary. To proceed in the game and/or resolve situations, students needed to comprehend the words:

> The vocabulary improves. To level up in a game, we must understand certain things and to understand the words in the game, we search them in the dictionaries. And since we see that word in the game, we remember it easily. (Participant 2, C5)

> If there is an unknown word that we encounter especially during the game, it catches our attention. Since the word creates a curiosity in us, it sticks in our minds. We have the feeling: "I finally learned it" (Participant 1, C2)

As the quoted statement suggests, in order to proceed in the game, the players should understand the text and flow of events for which they need to comprehend the meanings of the words. Moreover, the second excerpt indicated that the unknown words during the game arouse curiosity which leads to permanent learning.

Being exposed to the language incessantly helps students practice the language, acquire proper usages of words or structures, learn correct pronunciation and intonation, and recognize the usages in contexts. As the saying goes practice makes perfect. In this case, participants perceived the game as a great opportunity to language exposure, and they engaged in constant language repetition opportunities, which is a great chance to make language learning more permanent and improve their capacities:

> When we saw the word again and again, we learned it much better. On the other hand, when you see the words in the lesson, you need to memorize them. If you don't memorize it, you forget it immediately. You don't get to see it in the texts again. Yet, in games, you always encounter the words and you get the chance to practice them. (Participant 1, C2)

Students can see the same vocabulary in different context and dialogues again and again throughout the game play, which apparently made it more relevant to them. As the analysis pointed out, according to students, seeing the same vocabulary several times within a short period of time has a significant effect on mastering that vocabulary. Moreover, students highlighted that as the program of the school was quite intense, they did not have many opportunities for practicing and reinforcing what they learnt all the time. Also, sometimes for the sake of completing the weekly program, some teachers tend to teach structure and vocabulary detached from the context which makes the teaching rather mechanic for them. Student engagement in repeated exposure and in a context might be insufficient in those cases. Thus, students tend to compare their leaning experience to the repeated exposure that game afford.

Another main skill that game experience taps into is listening skills. Game experience provides a variety of active listening exercises. While playing computer games, players are exposed to a lot of authentic listening input and they hear from people of all nationalities and accents. Students reported that game experience facilitated and developed their listening skills:

> The games actually proved to be very effective and useful for me. They have an impact on my learning. Apart from this, for me listening has always been a priority in learning English. The game was on listening, reading and multiple choice. In terms of listening, games are beneficial, and it changed my mind in terms of learning English with games. It proved very useful. (Participant 1, C2)
> Well, as the first game, it was nice, it is in fact a different world, a much bigger world than I thought. I noticed when I entered into this world that there are lots of games and many versions of the games. It was something big. And it was also a lot of fun. In the beginning, you notice the texts/subtitles down there. They are actually talking, there is something loud and I was constantly reading the texts 'cause I was trying to understand it. Maybe I had problems about comprehending. However, towards the end of the game, I stopped looking at the subtitles. Whatever they were talking about… It is the same with TV shows. You listen to a character for a whole season, then you remember his/her way of talking. You can picture him/her in your mind, you embrace the character. It was the same thing. The more I played the game, the better I understood what the characters were saying without looking at the subtitles. The game contributed a lot in this way. (Participant 7, C2)

In second language learning context exposure to the target language is considered to be essential for listening skills and game environment can actually provide such exposure (Rama et al., 2012; Chen & Yang, 2012). Analysis of the transcripts revealed that students found game experience helpful in the sense and as they proceeded in the game, their ability to understand the spoken language increased, as they were exposed to the target language. While speaking to this theme, students also voiced that the game was effective in helping them to acquire the pronunciation and intonation of words too. Even though authentic materials are used for teaching pronunciation and intonation in classroom environment in traditional teaching too, proving rich and natural contexts with various characters with different backgrounds ensure quality exposure:

> If you have some previous knowledge of English, it helps you add more to it. Because as I said it before, it contributes to vocabulary. Or the style of speaking. We learn how to pronounce words. The way of pronunciation, how to stress vocabulary. It was very useful for me. (Participant 1, C2)

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It teaches how to speak, how to pronounce words… There were some words, I don't remember them specifically... I fixed my pronunciation of them. For instance, there is a word. I think "what is this word?" go search for it. And I learn the real pronunciation of it... I realize I was pronouncing it wrong. (Participant 4, C2)

Excerpts suggest that players are exposed to various pronunciations and accents through the game experience and value this as learning experience. Moreover, the participant in the second excerpt highlights that she/he could listen to pronunciations of words and correct her/his mispronunciations. Game experience provides them with the chance to realize that they are actually sometimes unable to recognize the vocabulary they actually know due the fact that they do not know the correct pronunciation of that word.

4.3.1.1.2. They Afford Exposure to the Daily Language Use

Another recurrent theme in students' responses was about the exposure to the daily language and expressions. Students reported that the daily language exposure in the texts and dialogues (Chen & Huang, 2010) was quite beneficial as they could hear and acquire certain phrases, usages or expressions used in daily language. Nearly all of the students stated the variety and authenticity of the daily usage available in game experience helped them use the target language in a natural way:

So, all languages, I mean, most languages are living languages and they constantly evolve. They add new things and some things actually die because languages are alive like the people and cultures in our lives. New things are added and removed. It is not possible to follow this case in books. How does it change? Maybe, a new edition will be published in ten years or it will be updated, but still you will fall behind with the latest issues. However, the latest technology such as games allows us to follow this much more closely. Also, we need to talk about daily usage. That's how we learn- we learn with the complete patterns or discourses from the books, but when we go out, we know we will not have tea with the Queen, there is no such proper English. There is no such thing on the Street. If we have a chance to drink tea with the queen, we will not understand her since people have established their own forms of expressions and they have built their own understanding now, so we cannot understand in this way. We cannot talk. It will take another three months to get used to and we will say "They talk like that''. However, games, you know, open a door for us and show that there are such patterns in everyday language, people talk like that or young people talk like that. Such forms of agreement exist among themselves. And it teaches us this case. It shows us to be a more sincere person. So, if we, one day or today, go abroad and if we talk like in an

ordinary English language preparatory program or as we learn in books, people will say 'Yes, this is your foreign language. You come from somewhere else'. They will understand this situation. They will understand those expressions or that we try to express ourselves completely properly and how we say all the words exactly as they are, but we add these daily usages, idioms, etc. into our language, people will say this person has adapted to here. This person knows some things and has a command of the language. I think games will be very useful in terms of this situation.
(Participant 7, C2)
Especially, in 'Life is Strange', there were young people and we were able to understand the language of those young people or how they communicate with each other. We will be a person who lives the language in this respect. It was useful for us not to learn and use the language but to live it.
(Participant 7, C2)

As exemplified in the quotation, students appreciated that they encountered unique language use in real-life situations. The texts they are exposed to in traditional classroom environment often present language forms that are still conceptually rich, but may not always include everyday uses of language, or this kind of examples may be limited compared to what a game environment can offer. As reported in the quotation above students felt like game environment 'opened them a door' to the real use of language and enabled them to sound more natural. During the interviews, students tended to complain about traditional teaching which they claimed to be very mechanic and lack natural aspects of the language because students aspire to use English in natural contexts in an organic and fluent way. They believe that schools just teach book English and ignores the everyday usage of it and found game experience refreshing in that sense as the quotations above points out.

4.3.1.2. Immersive Language Learning Environment to Support Situated Learning

The second sub-theme is about the digital games' providing immersive environments that support situated learning. When learning is situated, it is more meaningful and permanent and as students actively participate in the learning experience, there is a higher chance of learning and creating meaning from the activities of daily life (Lave & Wenger, 1991). When players are involved in the game, learning the language is more meaningful as it is situated within the game (DiSessa, 2000; Squire et al., 2004; Shaffer et al., 2005; Gee, 2012).

4.3.1.2.1. Games Engage Students in Authentic Learning Opportunities in Meaningful, Realistic Situations

When students commented on how game play contributed to their knowledge of English, they highlighted the importance of acquiring knowledge through interacting with the contexts of the game environment and they noted that they could reinforce their existing knowledge with new learning experiences. Participants stated the importance of being engaged in authentic learning opportunities in meaningful and realistic situations as the following excerpts show:

> Definitely, it opens a new door so to say… There are basic things that we already know. What are you supposed to do? You will watch tv series, listen to music, watch movies, read a book… These are the classical methods that everyone is doing and settled to do. On the contrary, the games are supplementary to this, which not most of the people are aware of. There is a world of gamers and the other people are regarding them extraordinarily, as if they are doing something unacceptable. In fact, when used consciously, this is something as useful as other things. Moreover, it is going to be even more useful than the others. While doing this, you use the part of your brain commanding you where to go or what to do here. Yet while watching a TV series, what you do is only to watch it basically. Okay, you hear something, but there (games) you use your brain actively and also it also involves the language (English). Therefore, this is a method that will exceed the others in time. (Participant 7, C2)
> For example, while learning English at school, we learned to say apple to 'elma'. Yet while playing the game we cannot depict apple as a synonym for 'elma'. For example, we are seeing a picture of apple or we know that is an apple. Since that is an 'apple', since we learned it as if we have learned how to speak Turkish, I think it is much more solid. (Participant 6, C5)

As the quotations suggest, virtual environments games are quite beneficial in that learning English takes place in a situated context (Shaffer et al., 2005; Gee, 2008). These excerpts illustrate that digital games provide such environments and knowledge acquisition as a part of activity that happens naturally and within the ecosystem with its all components. As it is exemplified here students found being actively involved in the gaming process as the superior part of using games for language learning. They think it affords not only being exposed to the language and seeing the language in a meaningful context to support the acquisition of the target language like it is the case with 'apple' example, but also it affords opportunities for students to be active in the learning experience rather than passively listening as if

you are watching a movie, which indeed represent the situated nature of game environment.

4.3.1.2.2. Game Experience Provide Opportunities for Thinking in the Target Language

Situated learning takes place effectively when students are immersed in real life contexts or communities of practice (Lave & Wenger, 1991; Dawley & Dede, 2013). One of such environments, digital games can be highly immersive worlds and they can be utilized to deliver learning goals, experiences and outcomes (De Freitas, 2006). Based on the perceptions of the students, game experience in this study was tremendously engaging and they stated that they were so immersed that sometimes they lost track of time. One of the most important affordance of immersive game play can be seen as the initiation of the 'thinking in the target language' Students claimed that after sometime, they tend to get away from their mother tongues and start thinking in English as they were immersed and engaged in the game environment. This change in the language used for inner speech was found to be of worthy for the students:

> Naturally while playing the game, you get into the game. You internalize the character since you are the one who makes the choices for the character. Sometimes I started to think in English while playing the game and stopped thinking in Turkish. It asked me something and I thought 'If I…' in English on my mind. Later I came to realize that I was thinking in English. The game was engrossing; therefore, I was possessed with it. I forgot Turkish, English, English, English… (Participant 1, C2)

As the excerpt suggests, commercial digital games provide such immersive environments that enable players sometimes to immerse themselves to the language and trigger thinking in the target language. As making this choice is generally outside the control of the learner and happens intuitively (Pavlenko, 2014), it is crucial for language learners to adapt the target language in inner speech. The potential of off-the-shelf digital games for creating immersive worlds and reinforcing them to think in the target language effortlessly is appreciated by the students in this study.

4.3.1.2.3. Game Experience Provide Opportunities for Target Language Acquisition

Furthermore, as a result of immersion, unlike the courses in which students are aware of what they learn and the purpose is to learn English generally mechanically, participants suggested that game experience has considerable spin-off benefits. According to the student perceptions, this kind of learning is more natural, fruitful and digital games can be used as powerful interventions for learning English:

> Because there is an aim and this aim is not in fact English. Today when you open a book, you think of studying. Your purpose is to study English. You might be stressed when you think of it as the purpose. After a while when you consider it as an examination and a responsibility, you will be bored and eventually you will want to get rid of it. Instead in the game, your purpose is to solve the mystery. English is only a subliminal effect in the game. You don't realize that you are studying English at that instant. It is given to you as a gift. It improves you subconsciously. you don't get bored. You do not consider it as studying, learning, or an obligation… Therefore, in my opinion, it is quite efficient. (participant 7, C2)

It is suggested in the statement that English is the byproduct of playing games rather than being the purpose, which differentiates it from the school context that aims teaching English as a subject. Hence, participants felt like it was a gift presented as an addition to the game experience. The game itself does not target teaching students' language but players have to use it in the game in order to resolve situations, force themselves to be better at understanding the dialogues and texts in the game, chase levelling up, bonuses or rewards, and make quests. Therefore, they force themselves to utilize English to be better in the game and fulfill their goals. Students in general reported this need to know English to proceed in a game:

> In my opinion, Life is Strange requires more of an English. Since it is story based you have to understand the conversations and what you have to do. For example, a less familiar person replays the game over and overusing the rewind button and gets bored. However, if you get the insight of how to play it immediately and understand what they mean in English, you will enjoy it more. (Participant 3, C2)

As the participant suggests, in order to proceed in the game, comprehend what happens or what they should do, they must use English. Especially with story-based

games like the one used in this study, requires a certain level of English in order to comprehend what is happening in the game and level up. This compels students limits, challenges their knowledge and eventually pushes them to use English. That gives students a purpose and as the quotation suggest they believe the need to learn the target language, they believe it is more fun when they understand the what is being said.

4.3.1.3. Games Experience Makes Learning Fun and Motivates Students

Another sub-theme for the main theme of the nature of game play was about the fact that they are naturally fun and motivating. Motivation is an essential factor in learning in the absence of which it is hard to yield desired learning outcomes (DiSessa, 2000). Digital games are stated to be quite influential in increasing students' motivation toward L2 learning (Reinders & Wattana, 2014). They offer learning environments where the players are motivated to play to have fun and learn the target language (Ballou, 2009; Chin-Sheng & Chiou, 2007). Digital games' providing fun through game play engages learners and provides language learning opportunities in a rich learning environment (Reinders, 2012). Data analysis pointed out that having something fun as games made the learning experience fun for the students:

> … because you are playing a game and we all like playing games. That was the part which attracted us the most. When you approach us asking, 'there is a game and we will play it for learning English', we thought 'wow! A game! How?' and so on, we liked the idea. After all we were playing it at home. It is homework but it is a game. Our homework is playing the game. This was really interesting. Since it was a game, everyone had the incentive to play it even more. Indeed, if they gave us paper homework, believe me, no one would do that for two weeks. Since it was a game, everyone played it continuously. When you assigned the episodes of the game, we tried to play it. Because of this, we became more eager to learn within the game. (Participant 1 C2)

> It is like homework, but the one that we do willingly. It is a more enjoyable assignment. However, it is wrong to consider English in line with the other subjects. Those are courses, English is a language. Yet we are learning English as a lesson as well. On the contrary, it is an option that we can learn through games like this. Why wouldn't we learn it through games while we have the opportunity to do so? This is a language, not like a course. Therefore, playing games at home is something that we are willing to do in a way that we can cherish… We play it and talking about it when we get back to school. Actually,

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it is a way of having a good time and appreciating your time. Furthermore, it might eliminate our boredom. (Participant 2, C5)

As it can be seen in the excerpts, students felt motivated to play the game as a homework just because it is fun to play games. They mentioned if the same amount of workload was assigned as paper-based homework, they would not be willing to do it, however, as it is a game all of them tried to do the homework. Even though the game was assigned as homework, they did not find it dull rather they enjoyed it and perceived it as a fun homework. Participants also stated how they liked the idea of bringing the game into the classroom practices. Hence, it will be safe to say virtual environments that provide a lot of fun can be exploited for language learning because of raising curiosity and motivating students.

4.3.1.4. Games Provide a Safe Environment to Make Mistakes

In language learning, one of the significant issues which should not be ignored is creating a safe environment to help students feel positive about their learning experiences and abilities (Lucas, Villegas & Freedson-gonzalez, 2008). Although teachers aspire to provide such learning environments, there might be some parameters that are overlooked. However, it is not always possible to take them under control. Hence, virtual environments are safer places (Kebritchi & Hirumi, 2008) for students to express themselves by undertaking the role of a character or avatar and facing their fears. Most of the students stated that they felt safer and more comfortable while playing the game:

> That uneasiness… It also eliminates the feeling of 'I can't do this, I will read it in a wrong way, I will make this choice'… For example, vocabulary wise, since the game is more comfortable, we had the opportunity to find the vocabulary that we didn't know, and we could figure out their meanings. Since the other learning technique is much more oppressive, you have to memorize the words. It is better here, this way. The thing that makes you more comfortable, more relaxed… you cannot feel better on the other side (lesson). This game also made us feel better. (participant 1, C2)

Students commented about how game play creates them a safe place that they can function using the target language without feeling uneasy about the possibility of making mistakes. When they felt unthreatened, the language learning happened

naturally. 'That uneasiness about not being able' as the student highlights does not exist in the virtual world. They feel comfortable which is apparently something important and enabling in terms of language learning.

4.3.2. The Nature of Game-enhanced Language Learning

The second main theme of the analysis is about the nature of game enhanced language learning, which refers to instructional practices in which a commercial off-the-shelf game is utilized in formal pedagogical environments. There are numerous features of commercial games that could benefit learners (Gee, 2007) when they are integrated into the classes systematically, they can afford a number of benefits for learners (Eck, 2008). Game-enhanced language learning intervention design in this study adopted PCaRD framework as it is already mentioned to have systematic approach towards the integration of game to the curricula. This part of the analysis reflected students' perceptions about the aspects of game integration in which a commercial digital game (Life is Strange) was exploited for language learning purposes. The analysis were grouped under two sub-categories as creating a positive future self-image through reflection and game related curricular activities.

4.3.2.1. Creating a Positive Future Self image through Reflection/Discussion

This sub-theme covers students' responses in relation to one of the dimensions of PCaRD framework which is reflection. The game integration framework enabled the teachers in the experiment groups to guide the students to reflect and discuss about their experiences in relation to L2 motivational self-system.

Motivation is one of the most important factors for language achievement (Prensky, 2003) and enabling students to create a purpose and offering them chances to visualize themselves in the future boosts their motivation (Lee & Oyserman, 1986) and helps them create a positive self image related to their language learning identity. Students' perceptions of their ideal L2 self is essential in terms of their motivation for learning English (Magid, 2011; Islam, 2013; Calvo, 2015; Madkhali, 2016). Analysis of the interviews indicated that game integration offered them

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opportunities for introspection and imagining their future selves in relation to their language ability:

> And complications could have occurred both in the game and ahead of the game. And they occurred eventually. While witnessing this, I said to myself that I was able to understand those. If I can comprehend those, then I can do this in the future as well. It wouldn't cause a great problem if I do not undergo something 'ultra'. I could imagine myself in terms of my English abilities beforehand. I can manage it; I can understand it and I will be able to do this unless I encounter something I do not know ahead of the game. You have already explained them to us. From this perspective, it helped me to recognize myself better. (participant 1, C2)
> You see your English level and you think, 'wow, if I understand it, I will be able to communicate and comprehend when I go abroad'. That is why people who consider living abroad in the future think that they can understand the game while playing it, they will have the insight that it will be easier to live there too. (participant 3, C2)
> Definitely, in my future that I can think of, language has a huge place for me. It covers an enormous part. Everything that improves it and affects it positively is important for me. And I consider them as a priority. That is why I considered this game and activities this way. And I believe that they have affected my English abilities. Although I study English every day, daily language is something that you can learn through games. This is a continuous cycle that contributes to the utopic future that I dream of. (participant 7, C2)

The first quote shows that the participants believed that in the future she/he would be able to use English effectively as she/he achieved things and proceeded in the game. As it can be seen from students' perceptions, they started to build a positive self-image, a desired self who is able to function in the target language. They realize the possibility of reaching ideal L2 self as they are now able to function in a real like English speaking environment game play offers. The reflection and discussion activities designed to integrate game to the curriculum increased their consciousness about their English language learning, their ability and its usage in the future.

Reflection is critical in making sense of an experience and learning in relation to other experiences and ideas. Reflective thinking requires one to critically examine his/her ideas, experience and beliefs, and question all of them to construct a meaning for himself/herself (Dewey, 1933/1986) While speaking to this theme, students mentioned that game integration activities fostered this critical reflection about themselves;

Reflecting on ourselves… quite different conclusions came up from my friends… It is more like a self-acknowledgement. All those papers, those activities made up a complete totality with the game. If you brought activities and games separately, of course it has some effect but as a whole, they were in unity. I think it was really beneficial at that point. (participant 6, C5)

When those questions were asked about us at the end of the activities, not only about what happened during the games… We started to think and write in English in the reflection part. I can say that it was beneficial for thinking and reflection. (participant 5, C5)

As the excerpt shows the activities connected to game play and L2 motivational self-system helped them think beyond the game and transfer what they learnt in activities. During this reflection and discussion parts in which students could think about and project their future selves with their classmates, contemplate on various selves and get deeper insight students increased their awareness. They were able to reflect on their future selves in relation to and in addition to their academic learning (Foster & Shah, 2012) through PCaRD activities.

4.3.2.2. Creating Opportunities to Learn Structure through Game-related Curricular Activities

The second sub-theme is about curricular activities integrated into the curriculum. PCaRD as a framework designed to guide the integration of game into the curricula. The practical thing about PCaRD is that it allows instructors to design culturally appropriate activities that would tie the game experience to the curricular aims (Foster, 2012). In this study students played the game for 10 weeks and they had a worksheet for every week designed in relation to the game play and the syllabus that is to be followed. In the interviews, students especially highlighted the effect of using game related activities after game play. They shared the same feeling that activities designed to integrate game play to the curricula created them a more memorable learning experience:

…It is good to be integrated in. It might be beneficial for freeing the education system from the convention of memorization. For example, when I came to school, I was given a word and below the English or Turkish definition… Instead of this, words were present in the game… Taking the script from the game, separating the words and then asking them in the blanks would definitely make it more memorizable… (participant 3, C2)

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> (talking about the game play and integration activities) Both have deficiencies, but for example they complement each other as if they are parts of a puzzle. They should be utilized side by side. (participant 6, C5)

The excerpts indicated that the students think the two parts of the study, game play and integrating activities, complemented each other and made a better whole. According to them these game related curricular activities made the learning experience more remarkable and interesting as a whole, compared to using only games or worksheets instead.

Game integration can make it possible for instructors to design creative and powerful learning experiences that engage students (Foster, 2012; Kirriemuir, 2005; Mims &Charsky, 2008). Among the various advantages of integrating games into the curriculum (Sykes, 2018), students highlighted how game integration provided them with grammar and vocabulary learning opportunities;

> …Not at that moment regarding grammar, but along with the exercises that we did afterwards. Because you consolidate it. On one side, they teach grammar, solve a test and the grammar is done. However, in the game let's say we have learned it on the first level. Next week we have done the practice, it reoccurs during the second week, we come to see and hear it again and again. It was a continuous practice for us. We encountered the same word again and consolidated it. On the other side, it is the opposite. You have to memorize it when you see it, otherwise it is done, you have missed it. However, unlike games, I cannot see these words in the texts. (participant 1, C2)
> To be honest, there used to be some parts that I confused in the structure (grammar). I have restructured them thanks to those activities. Especially through the scripts in the game. (participant 4, C2)
> As I told before, we didn't know some words that we used in the game. At that instant we do not have the time to check those words. When we came here, you used to write the words that you thought we didn't know before. We both learned those words during the game, and you used to remind us those words in the context of the episode we played that week, say grammar wise. These were really beneficial. Because those grammar practices were consolidated with the subject that we were learning. We improved our grammar knowledge besides improving our knowledge on vocabulary. It was very useful both grammar and vocabulary wise. Moreover, in the later activities there used to be things taken from the game and suitable for reflecting on ourselves (participant 3, C2)

Students were exposed to some grammar and vocabulary in the game play first and then they had some activities in the class prepared in accordance with the syllabus which include vocabulary and grammar exercises. The activities were designed to

represent the narrative of the game. According to the analysis this link between the game and the activities enhanced student learning. As it is suggested by the students, repetition clarifies some problematic structure and improve student learning.

4.3.3. The nature of Life is Strange

The third main theme representing students' perceptions about how game enhanced intervention worked out in the application is about the nature of Life is Strange, the game utilized in the study. As mentioned earlier Life is Strange is chosen depending on gamer students' advice who are not involved to this study. The game is purposefully chosen among a few other suggested games for some certain characteristics and the analysis of the interviews actually pointed out a concurrent theme about the effect of these characteristics on students' perception. Life is Strange, a story-based game, is stated to be highly engaging, interesting, engrossing and fun by the players. There are some features of Life is Strange that students mentioned to be influential in their language learning.

4.3.3.1. Life is Strange Keeps Students Hooked

First students generally have very positive reflections about the game itself. Learning could be more memorable when it is reinforced with engaging activities, which makes learning more permanent, meaningful and fun. Students stated a number of media they benefit for learning English language such as music, TV series, newspapers and smartphones. However, they stated that although the other media are quite useful for learning English language and how to use it in real contexts, the most engaging and preferred one is computer games since they involve and combine all the elements (visuals, music, speech, interaction etc.) in the other media tools. Players are exposed to language of all registers and contexts thanks to various genres of computer games.

Students indicated that they felt pleasant and had fun while playing the game unlike formal school setting which is stated to be mostly dull and lack fun elements, and

they would rather play the game than learning with their course books as game play is more interesting and enjoyable;

> … but you know Life is Strange was really good in terms of the story. It was quite nice in terms of length as well. There is something amusing… it has the length… because normally I have played Until Down. It was short, but it would be boring if it was longer. Life is Strange has an average length and isn't boring. There is a continuous flow in the game. It is filled with incidents. (participant 4, C2)
> … We had a real fun, for me it was too much fun. The game was very absorbing. It was not boring like the normal games. (participant 1, C2)
> … Except that, it was fun. That was the most important part of the job. For instance, when you say, let's play it for an hour, I would love to play it for two or three hours. (Participant 7, C2)
> For example, even someone who never plays games played it, and liked it. (Participant 6, C5)

As the quoted statements indicated, while playing Life is Strange, participants were engaged in the game and the length of the game was found to be satisfactory. Hence, as the game engages and absorbs the player, they felt in a state of flow which is counted as one of the characteristics of commercial games (Squire, 2008; Cowley et al., 2008). They kept playing the game for 10 weeks which was important in terms of language exposure, and as the analysis points they say if were asked to play more they would play more.

4.3.3.2. Life is Strange is a Narrative, Story-Based, Quality Game

The immersive nature of this game results from the story with its good plot involving real life themes such as college, teenage issues and discuss them, twists and turns, characters with whom you can relate and empathize how they feel, and the science fiction elements that make it more captivating. Life is strange is a story-based game which is quite rich in narrative input that offers benefits for students' language learning abilities. There are a lot of conversations among characters, text messages, diaries thereby exposing the players to the target language. As the following excerpt shows:

> When we played that game, it was already a narrative game, based upon conversation. That is why there is a constant listening, reading and comprehension. With this, it has a narrative which appeals to us. For example,

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take both Chloe and Max, their dialogues are always in our ears. (Participant 2, C5)

… In one hand Life is Strange had an advantage because it didn't always include an action like the other games. You don't have to command with your one hand on the Mouse all the time… Your hand is not constantly occupied with Mouse like it happens in GTA. The density and frequency of the conversation is something which really contributes to your English level. It was quite different when I first started in prep year. My English was not as good. When I finished it, I can say that it was much more advanced. In the second term, there wasn't a huge progress. At the end of the first semester, I turned out with the feeling that I literally learned something. (Participant 4, C2)

Within the context of these narratives, students had the chance to develop their knowledge and skills in the target language. They expressed that they had the dialogues between the characters of the game in their mind as these dialogues were so central to the game story and as there were lots of them thought out the game. As it can be seen from the students' comments, they felt like they improved their language skills at the end of the term with the impact of these specific game characteristics.

4.3.3.3. Playing with Choice in Life is Strange

The final sub-theme is about the choice students had in their Life is Strange experience. Agency is defined as the feeling of control and influence over what happens to us or the world around us and considered to be one of the essential components of digital video games. Some digital video games provide players with the agency to have control over their choices and the flow of the story (Gee, 2007).

Life is Strange is such a game in which players have opportunities to make a great number of choices. The player choice and consequences affect the whole flow of the events. Throughout the game, the protagonist, Max Caulfield, is given the chance to make choices at various points and to resolve a case in various ways. There is also rewind option by which she can take the time back and manipulate the outcome of her choices if she is not pleased with them and transform the narrative, the whole flow of the events and the end of the story. The students employed their agency within the game by undertaking the role of protagonist and directed the whole story by making choices and deciding on the fates of the characters as well

as the whole story. The participants expressed that the feeling of autonomy and choice was satisfying for them:

> Like I said I see that every time, if I am to give an example from Life is Strange, we make choices and it asks us questions or makes us contemplate on things. While you are playing the game, naturally, you absorb in the game and internalize the character (Max). It feels like you are her, since you make the choices for her. (Participant 1, C2)
>
> … The thing is, it is really valuable to have everything in our hands. I think that is very important. (Participant 4, C2)

As the quoted statement suggests, as the game provided agency through controlling the acts of the main character, the participant felt more immersed in the game and the flow of the events. In a similar way, the second participant expressed how much she/he enjoyed the agency in the game. They could control and influence over what was going on in the story and interfere with the narrative.

CHAPTER 5

DISCUSSIONS AND IMPLICATIONS

In this chapter, the discussions of findings of the study and their implications for practice and further research are presented.

5.1. Discussions

The purpose of the current study was to reveal the effects of a game-enhanced intervention on learners' L2 motivational self-system and English language learning. The results of this study will be discussed in accordance with the aim of the study. There are three sub-sections in each of which different findings are discussed. Firstly, findings regarding the achievement test are discussed. Next, the findings of the L2 motivational self-system questionnaire are discussed with an emphasis on game-enhanced learning. Then, participants' perceptions and thoughts about games, game-enhanced learning and its effect on their language learning motivation are touched upon.

5.1.1. Language Achievement

One of the aims of the study was to compare the achievement exam results of the experimental and control groups. The exam was held at the beginning and at the end of the first semester. The results of the exam were compared to see whether the game integration led to a significant gain in the experimental group. According to the results of the achievement test carried out at the beginning of the semester, both the experimental and control groups had similar scores. This is due to the fact that students are required to get between 450-500 (out of 677) to be placed in the C level. Thus, the results were similar for both groups. In order to understand whether this

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difference was significant, statistical procedures were implemented, yet no significant difference was found (F (1,73)= 1.04; p= .311, p> .05).

This finding conflicts with some of the previous research which found significant gains for language skills such as vocabulary (Ranalli, 2008; Mazaji & Tatabaei, 2016), listening, reading (Chen & Yang, 2011) and grammar (Kongmee et al., 2012). The current literature especially highlights lexical gains as a result of game integration (deHaan, Reed, & Kuwada, 2010; Hitosugi, Sundqvist, 2009; Miller & Hegelheimer, 2006; Schmidt, & Hayashi, 2014; Purushotma, 2005; Rankin et al., 2006; Ranalli; 2008; Sylvén, L. K., & Sundqvist, 2012). However there is also some research underlining that games do not always deliver the intended gains in language learning (Chen & Yang, 2013; Vandercruysse et al., 2013).

For example, Salehi (2018), conducted a study about the effects video game on vocabulary retention and found no significant effect of game play on vocabulary learning. However, when he conducted a delayed posttest, the experimental group performed significantly better. Dalton and Devitt (2016) also investigated the impact of an AR based three-dimensional virtual environment on language learning. They used pre- and post- motivation questionnaire and a language test to examine language gains and no significant gain in terms of language skills was observed. In a similar vein, Hong et al., (2017) reported no significant change in students' language proficiency after a twelve-week, 5 days a week and daily 50 minutes on-line game experience, but they found significant change in terms of total pragmatic skill levels. An other experimental study conducted by DeHaan, Reed, and Kuwanda (2010) explicated the vocabulary retention in control and experiment groups, where the students paired up as one experimental and one control group and the students in the experimental group played a music video game while the paired students in the control group only watched them play. As a result, both groups of students recalled game related vocabulary, however; the watcher students in the control group recalled more vocabulary than the player students. Authors suggests this might be due to the gamers' having to split their attention between several tasks while playing the game and increased cognitive overload.

There might be a lot of reasons for these findings as the literature points out. Individual differences (All, Castellar, & Van Looy, 2016; Hitosugi, Schmidt, & Hayashi, 2014) or students' attitudes towards learning with digital games might also be effective in students' language gains (Hitosugi, Schmidt, & Hayashi, 2014). In their experimental study, Hitosugi, Schmidt, & Hayashi (2014) found game integration effective in vocabulary learning, however; they also reported some individual differences, such as cases where students from control group with the conventional instruction did better in the vocabulary test. Similarly, All, Castellar, & Van Looy (2016) emphasized the importance of taking individual differences into account when assessing the effectives of the game interventions. Even with the intervention studies with the significant results researchers suggest to interpret the results with caution as it might require some additional research to investigate if it is the game play experience or some other factors that are affective in the language gain (Sylve´n & Sundqvist, 2012).

Overall, the literature points out the positive effects of game enhanced language learning. There might, however, be factors that should be taken into consideration when interpreting the results. Still, the findings of this study contradict with the broader consensus about the effectiveness of the game enhanced language learning.

In the case of this study, the programme implemented in the C level covers three courses (main course, reading and writing, listening and speaking) with different books for each of them, various kinds of exams (quiz, midterm, reader, portfolio, online assignments) and practice for TOEFL ITP. Considering that the TOEFL ITP just measures receptive skills (listening, structure, reading), it cannot be suggested whether it improved speaking and writing skills. Moreover, when the interviews were analyzed, the participants claimed that the language skills that improved most thanks to the game intervention were vocabulary and daily language, yet the achievement test did not include parts assessing these two skills directly. Also, although there is no significant difference regarding the exam scores, while in the experimental groups just 2 students (out of 38) failed the exam and had to repeat C level again, in the control group the number of the repeat students was 4 (out of 38). Still, this should be interpreted with caution as there might be various other factors

affecting student success at the pass and fail level. As Hubbard (1991) pointed out the potential of digital games in language learning requires careful assessment.

An additional reason may be that the time allocated to the game play and activities was not satisfactory. Considering that the game was one episode made of roughly 15 hours and the activities were just implemented for one hour weekly, the effect of them both on language motivation and leaning might not be strong enough. Hence, if the game could be longer and the activities were carried out more, participants would have the chance of encountering with more language input and thus have a better post-gaming performance. In his study, Peterson (2006) who investigated the interaction of 24 English learners in *Active worlds* also asserted that one hour of game play was a limitation of the study and affected the results. Similarly, Sundqvist (2009) reported that the time spent playing games increases the L2 language proficiency of the students increases too.

5.1.2. L2 Motivational Self-system

Literature points out the importance of motivation in language learning (Gardner, 1985; Gardner and Lambert, 1972; Dörnyei, 1998, 2003; Masgoret & Gardner, 2003). Although interview results indicated a very positive attitude towards game enhanced language learning intervention in this study, the results of the motivation test batteries revealed no significant difference between the experimental and control group.

In terms of motivation there is a positive trend in the literature as an effect of game play (Dalton and Devitt, 2016; Hamari et al., 2016; Peterson, 2010; Squire, 2002, 2008; Shahriarpour & kafi, 2014; Wilkinson, 2016; Wehner, Gump & Downey, 2011), however; this was not the case for this study. A similar result was noted by Wu, Chen, and Huang (2014), where they designed an intervention to compare 3 groups of students (ordinary learning, simulative board-game blended language learning and computerized language learning) in terms of learning and motivation. The motivation was investigated under four categories as 'interest/enjoyment, effort, pressure/tension, and value'. No significant difference

was found in terms of enjoyment, effort and value subscales, however; in terms of pressure/tension subscale students in the board game blended group scored higher than the other two groups. Further qualitative analysis pointed out the cognitive overload as a possible reason for this higher anxiety. In board games, as the player has to deal with the rules in time while acting on the situation whereas in digital games students have computers to deal with some of the detail.

In terms of this current study, the questionnaire was evaluated on a continuum of 1 to 6: 1 being strongly disagree and 6 being strongly agree and the students rated under 10 categories (criterion measures, ideal L2 self, ought-to L2 self, family influence, instrumentality (promotion and prevention), attitudes to learning English, cultural interest, attitudes to L2 community and integrativeness). When descriptive statistics are analyzed, it is revealed that all participant have high mean values (above 4) in factors such as cultural interest, attitudes to L2 community, integrativeness, attitudes to learning English, instrumentality (promotion), instrumentality (prevention), ideal L2 self and criterion measures. Hence, it can be deduced that they are already quite motivated and willing to learn English language and highly aware of the necessity of English to keep up with the globalized world and its necessities.

Nevertheless, the mean values for ought-to L2 self and family influence show relatively lower mean values (below 4) that denotes that students' language learning is not affected by family, friends, environment and other agents to a great extent.

Another reason is that the semester was really hectic and as they were expected to sit the achievement exam, they were really stressed and developed a negative attitude to the school. They perceived everything extra as burdensome. So, they might not be absorbed in the questionnaire and gave enough attention. Also, the time span of the game play could be a factor influencing this result, if the game play was longer, and if more hours could have been dedicated to the activities instead of one hour a week, the students could have been more motivated towards their goals.

5.1.3. The perceptions of the Students on Game-enhanced Language Learning and its Effects on L2 Motivation and Language Learning

Even though no significant difference is found between control and experimental groups in terms of their achievement test results, the results indicated a positive attitude toward games and game-enhanced learning opportunities. They mentioned a lot of benefits of games and game-enhanced learning for their language skills and language learning process.

To begin with, all the participants stated the fact that game integration into lessons are natural outcomes of the digital age and hold the opinion that game integration is highly effective and interesting. Moreover, they highlighted the benefits of the supplementary materials and how they contributed to their language learning process and motivation. Also, they indicated that the activities assisted them comprehend the subjects of the course better especially grammar and enhanced the interaction among the classmates. In this respect, it is in line with the study of Ranalli (2008), in which almost all the students showed a positive attitude toward the use of games in language learning and supplementary materials used after playing the game. Also, in both the current study and the study of Ranalli (2008) students mentioned how much they enjoyed the supplementary materials which can be interpreted as an evidence for PCaRD. As a framework, it was an appropriate choice since its usage for game integration benefited students in several ways and participants held the opinion that game integration was quite effective. There was another study using of PCaRD in integrating COTs to curriculum to support students Math learning in the literature (Foster, 2012), and PCaRD in that case was reported to be effective in increasing students both Math knowledge and intrinsic motivation. PCaRD offers a systematic approach to teachers which enables them increase student engagement and learning (Foster & Shah 2015).

Furthermore, they indicated they had fun while playing the game due to the nature of the game. The game provided students with the choice via which they could manipulate the whole story and even change the ending. Also, they loved the story which is about college students and the issues they encountered. This could be due

to the dynamic nature of the story. Besides, they highlighted the rich text and narrative within the game, which gave way to improve their English language skills, especially vocabulary and daily usage.

Also, the students stated that the game (Life is Strange) was a good choice for game integration because of several reasons. Literature points out the importance of game choice in using game to support language learning (deHaan, 2011; Klimova & Kacet, 2017).

Moreover, all the participants mentioned that game-enhanced learning contributes to their language skills and development. Participants specified these language skills as vocabulary (Miller &Hegelheimer, 2006), listening and reading (Chen & Yang, 2011), grammar (Knogmee et al., 2012) and communication skills (Peterson, 2010). The skill that improved most according to students' responses was vocabulary, which is in line with the study of Hitosugi et al. (2014) who found a significant improvement in the participants' vocabulary retainment and acquisition since students could easily remember the words from the game in contrast to the words in the textbooks. The great amount of emphasis on this feature might have resulted from the fact that the game provided contextual clues and repeated exposure to the target language. In the light of the interviews, it was concluded that participants favored the repetition and engagement in the target language opportunities during game play. This tendency was also observed in a study that investigated learning through games (Ryu, 2013) and observed that thanks to the repeated exposure and engagement opportunities provided by the game play learners could learn language skills, especially words and phrases.

Beside vocabulary, most participants indicated that they acquired daily language skills thanks to game play, and this increased their self-esteem regarding their future selves. The reason is that they mentioned how they could imagine themselves speaking in front of a group of people by deploying the daily language and expressions they acquired. In this respect, the findings of the present study are in line with the ones of Chen and Huang (2010) in which students mentioned the availability of a lot of spoken input.

Normally, in the lessons formal language is used with the accurate structures and words, which lack an essential component of the target language: daily language and expressions. Also, students do not feel safe in the classroom environment to express themselves. However, they support the idea that games create safe environments that help students feel positive about their learning experiences (Lucas, Villegas, & Freedson-gonzalez, 2008). The findings of the present study is consistent with Medina (2005)'s in this sense. In both of the studies, the importance of feeling safe in digital game environment is highlighted.

Students also reported that they could enrich their self-esteem as a result of the game experience. As they noticed that they could proceed and accomplish missions in the game, which boosted their motivation and self-confidence. In this respect, the findings of the present study are in line with the ones of Kongmee et al. (2012) which indicates an increase in the self-esteem of players as they mastered the game and acquired language skills.

In addition, deep learning opportunities are possible not only because of the repeated exposure and engagement but also due to the immersion in the target language context where learners could engage in a number of authentic materials. These materials contribute to their speaking, reading, writing and listening abilities as also claimed in another study investigating online gaming environments for second language learning (Rama et al., 2012). Even though the game was not a multiplayer game, still students had the chance of interacting with NPCs (non-player characters) (de Freitas, 2006; Gee, 2003, 2005).

Furthermore, students in the current study highlighted the importance of the game and game integration in increasing their motivation toward language learning. Although in the L2 motivational self-system survey, there was no significant difference between two groups, all participant concluded that the game and its integration increased their awareness for their future selves and motivation for English language learning. Related literature also points out that gameplay increases student motivation and willingness to communicate (Reinders & Wattana, 2014; Shahriarpour & Kafi, 2014) and intrinsic motivation for learning English (Wan &

Chiou, 2007). They realized that actually they could comprehend English, so if they could manage to use the language, they could use it in real life and their future aspirations as well.

One of the highly appreciated nature of digital game environments is that it allows changes, affords choice and lessen restrictions in the learning environment enabling students act as they want (De Freitas et al., 2010). Whereas students are not autonomous individuals in conventional teaching environments, they emphasized how autonomy provided within the game encouraged them to learn. They stated that they could undertake new identities, make choices and enter virtual worlds in which they could direct the protagonist. Most importantly, they were the decision makers and autonomy, which is hard to notice in traditional school environments. This result is in line with the results of Chik (2011) study, in which she conducted an exploratory study to investigate gamers autonomy during the game experience and learning a target language. The study reported that autonomy is a key factor to facilitate L2 learning in game enhanced learning approach.

Overall, participants came up with a number of advantages and potentials of game integration for improving their language abilities and acquiring knowledge since they held a positive attitude toward the game, games in general and game integration.

5.2. Implications for Practice

Preparatory school is considered to be important for students as it is the shift from the high school to university and most importantly it helps students create a foundation for English language and enhance their language abilities, which will be beneficial for their all academic and social lives. Considering that English is necessary throughout their lives, the foundation should be solid. In this respect, the study provided some pedagogical implications for various stakeholders including teachers, curriculum developers, administrators and policy makers to create such learning environments that students' language learning is ensured and reinforced.

The first implication is that considering that the new generations are growing with technology and technological devices such as smart phones, computers, tablets, game consoles are indispensable parts of their lives, while planning instructional objectives and materials, curriculum developers should understand the place and importance of technology in learners' lives and find ways to integrate it as reinforcement to the regular instructional plan. In the interviews, participants constantly stressed the significance of technology for them. Teachers should focus on effective technology integration and use it to meet the interests and needs of students. Additionally, all the participants in the interviews expressed positive attitudes toward the use of commercial games for language learning and highlighted that commercial games contribute to their language abilities in certain ways. To this end, it can be said that it is important for teachers, administrators and curriculum designers to understand students' needs and profiles to look for ways to utilize commercial games for enhancing instruction.

Another issues regarding language learning is the lack of motivation in learners and this problem gets even worse towards the end of semesters as it is all English in preparatory school and learners mostly find lessons dull and uninteresting. This has always been an important issue for teachers. During the present study, the participants stated that how much they liked the idea of game integration and how it made learning more fun and interesting. Hence, it is a good idea for teachers and curriculum developers to keep students motivated and focused while teaching English by integrating commercial games into their curricula or finding ways to make lessons more interesting and desired.

On the other hand, game integration and designing activities related to games can be challenging for teachers in terms of technological training, equipment and lack of planning. In this respect, in-service training or pre-service teacher education can be beneficial in equipping teachers with the necessary knowledge on how to integrate technology with the content. The planning phase can be prepared with the help of curriculum developers. Also, if possible, school administration should provide teachers with the necessary technological equipment and make sure that students also have necessary tools to play games or even connect to the internet.

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5.3. Implications for Further Research

The research was carried out over a ten-week period and the activities were implemented just one hour a week because of the heavy schedule of the programme. Because of this hectic schedule during the semester and the anxiety of TOEFL ITP, students kept complaining about the programme and they could not reflect their true performance and feelings especially in L2 motivational self-system questionnaire. Hence, to get a deeper understanding regarding both the game intervention and how it impacted students' language learning and L2 motivation, a longitudinal study may be carried out.

Additively, the game was an episode making up around 15 hours of game play in total. In order to reach more comprehensive results, the game play can be extended with more episodes and hours, and more activities bringing together the game and curriculum may be integrated into lessons.

The study was carried out at a private study in Ankara with a sample of 76 students. The sample may be increased, and it may be administered with various samples in order to get a comprehensive understanding regarding game integration and its effects. Therefore, it will be easier to generalize the findings to other contexts.

One of the aims of the study was to investigate game integration's effect on English language skills. In line with this purpose, TOEFL ITP (comprising listening, structure, reading) was administered at the beginning and end of the semester, yet students' speaking and writing capabilities were not assessed. Their productive language skills may also be evaluated as students suggested that the game play contributed to their speaking and daily language skills to a great extent.

The researcher hopes that the present study offers a glimpse of how teachers can integrate a commercial game into curricula and design curricular activities combining the game and instruction. Moreover, the researcher illustrated what might expect teachers when they integrate a commercial game. Further studies are needed to shed light on game-enhanced language learning and its effects on L2 learning and motivation to enrich the literature and provide insights for researchers and practitioners.

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APPENDICES

A. QUESTIONNAIRE

THE L2 MOTIVATIONAL SELF SYSTEM

Scales for statement-type items:

1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree)

Criterion measures

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
If an English course was offered at university or somewhere else in the future, I would like to take it.						
If an English course was offered in the future, I would like to take it.						
I am working hard at learning English.						
I am prepared to expend a lot of effort in learning English.						
I think that I am doing my best to learn English.						
I would like to spend lots of time studying English.						
I would like to concentrate on studying English more than any other topic.						
Compared to my classmates, I think I study English relatively hard.						
If my teacher would give the class an optional assignment, I would certainly volunteer to do it.						
I would like to study English even if I were not required.						

Ideal L2 self

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
I can imagine myself living abroad and having a discussion in English.						
I can imagine myself living abroad and using English effectively for communicating with the locals.						
I can imagine a situation where I am speaking English with foreigners.						
I can imagine myself speaking English with international friends or colleagues.						
I imagine myself as someone who is able to speak English.						
I can imagine myself speaking English as if I were a native speaker of English.						
Whenever I think of my future career, I imagine myself using English.						
The things I want to do in the future require me to use English.						
I can imagine myself studying in a university where all my courses are taught in English.						
I can imagine myself writing English e-mails fluently.						

Ought-to L2 self

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
I study English because close friends of mine think it is important.						
I have to study English, because, if I do not study it, I think my parents will be disappointed with me.						
Learning English is necessary because people surrounding me expect me to do so.						

My parents believe that I must study English to be an educated person.						
I consider learning English important because the people I respect think that I should do it.						
Studying English is important to me in order to gain the approval of my peers/teachers/family/boss.						
It will have a negative impact on my life if I don't learn English.						
Studying English is important to me because an educated person is supposed to be able to speak English.						
Studying English is important to me because other people will respect me more if I have a knowledge of English.						
If I fail to learn English, I'll be letting other people down.						

Family influence

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
My parents encourage me to study English.						
My parents encourage me to take every opportunity to use my English (e.g. speaking and reading).						
My parents encourage me to study English in my free time.						
My parents encourage me to attend extra English classes after class (e.g. at English conversation schools).						
My parents encourage me to practice my English as much as possible.						
My parents/family believe that I must study English to be an educated person.						
Studying English is important to me in order to bring honors to my family.						
I must study English to avoid being punished by my parents/relatives.						

Being successful in English is important to me so that I can please my parents/relatives.						
My family put a lot of pressure on me to study English.						
I have to study English, because, if I don't do it, my parents will be disappointed with me.						

Instrumentality (*promotion*)

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
Studying English can be important to me because I think it will some day be useful in getting a good job.						
Studying English is important because with a high level of English proficiency I will be able to make a lot of money.						
Studying English can be important to me because I think it will some day be useful in getting a good job and/or making money.						
Studying English is important to me because English proficiency is necessary for promotion in the future.						
Studying English is important to me because I would like to spend a longer period living abroad (e.g. studying and working).						
Studying English is important to me because I am planning to study abroad.						
Studying English can be important for me because I think I'll need it for further studies on my major.						
Studying English can be important to me because I think I'll need it for further studies.						
Studying English is important to me because						

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
with English I can work globally.						
The things I want to do in the future require me to use English.						
Studying English is important to me because it offers a new challenge in my life.						
Studying English is important to me in order to achieve a special goal (e.g. to get a degree or scholarship).						
Studying English is important to me in order to attain a higher social respect.						
I study English in order to keep updated and informed of recent news of the world.						

Instrumentality (prevention)

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
I have to learn English because without passing the English course I cannot graduate.						
I have to learn English because without passing the English course I cannot get my degree.						
I have to learn English because I don't want to fail the English course.						
I have to study English because I don't want to get bad marks in it at university.						
I have to study English because I don't want to get bad marks in it.						
I have to study English; otherwise, I think I cannot be successful in my future career.						
Studying English is necessary for me because I don't want to get a poor score or a fail mark in English proficiency tests.						
Studying English is necessary for me because I don't want to get a poor score or a fail mark in						

English proficiency tests (TOEFL, IELTS,...).						
Studying English is important to me because, if I don't have knowledge of English, I'll be considered a weak student.						
Studying English is important to me, because I would feel ashamed if I got bad grades in English.						
Studying English is important to me because I don't like to be considered a poorly educated person.						

Attitudes to learning English

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
I like the atmosphere of my English classes.						
Do you like the atmosphere of your English classes?						
I find learning English really interesting.						
Do you find learning English really interesting?						
I always look forward to English classes.						
Do you always look forward to English classes?						
I really enjoy learning English.						
Do you really enjoy learning English?						
Would you like to have more English lessons at school?						
Do you think time passes faster while studying English?						

Cultural interest

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
Do you like the music of English-speaking countries (e.g. pop music)?						
Do you like English films?						
Do you like English magazines, newspapers, or books?						
Do you like TV programmes made in English-speaking countries?						

Attitudes to L2 community

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
Do you like to travel to English-speaking countries?						
Do you like the people who live in English-speaking countries?						
Do you like meeting people from English-speaking countries?						
Would you like to know more about people from English-speaking countries?						

Integrativeness

	Strongly agree	*Agree*	*Slightly agree*	*Slightly disagree*	*Disagree*	*Strongly disagree*
How important do you think learning English is in order to learn more about the culture and art of its speakers?						
How much would you like to become similar to the people who speak English?						
How much do you like English?						

B. INTERVIEW QUESTIONS

INTERVIEW PROTOCOL FOR STUDENTS

Intro script

Thank you very much for taking the time to talk with me today. I am exploring the effects of game-based learning on students' language abilities and L2 motivational self-system. Your insights into this issue will help me to better understand the factors effecting the implementation of game-based learning in language classrooms. For the questions I'm about to ask you, please answer in as much detail as possible, and share any associations or connections that may occur to you while you are speaking. I would like you to feel comfortable saying what you really think and how you really feel. If it's okay with you, I will be tape-recording our conversation since it is hard for me to write down everything while simultaneously carrying an attentive conversation with you. Everything you say will remain confidential, meaning that only myself and my adviser will be aware of your answers the purpose of that is only so we know whom to contact should we have further follow-up questions after this interview.

General questions

1. What are your experiences with gaming in general (video games, table-top games, card games, etc.)? How often do you play games of any kind?
2. Do you think playing games affect your knowledge of English? How?
3. What are your goals about English language learning?
4. How do you imagine yourself in the future in terms of your English language ability?
5. Tell me about your experience with game-based learning with 'Life is strange'?
    a. Probe. What did you like about it?
    b. Probe. What did you like least about it?

6. Did you find game-based learning beneficial for your language learning?

7. How did this game-based learning experience affect the way you imagine yourself in terms of your English language ability?

    a. Probe. Does it contribute to your future goals? How?

8. How, if at all, has learning with "life is strange" changed your interest in learning English?

    a. Probe. What areas of language (listening, speaking, reading, grammar, vocabulary) has playing the computer game contributed to? Could you detail your learning experiences?

Do you have any additional points you'd like to make about any of the questions I've asked?

Thank you very much for your time

C. CURRICULAR ACTIVITIES

ACTIVITY 1

PART A: Complete the sentences with a/an/the or nothing (-).

Max: I just saw Nathan Prescott waving ___ gun around… in ___ girls' room.

Principle: Nathan Prescott. You sure?

Max: Yes. He was in ___ bathroom talking to himself with a gun. I saw ___ everything.

He was babbling like crazy…

Principle: Okay, slow down, slow down. So now you saw this…

Without him seeing you?

Max: I was hiding behind ___ stall. I have ___ right to be there. It is ___ girls' room…

Principle: I know, I know. I just want to be completely clear what happened.

Mr. Prescott happens to be from ___ town's most distinguished family. And one of Blackwell's most honored ___ students. So it is hard for me to see him brandishing ___ weapon in the girls' bathroom. So what happened next?

Max: Then… then he left. I ran out here wondering what to do. Are you going to bust him?

Principle: This is ___ serious charge. I'll look into ___ matter personally. Thank you for bringing it to ___ my attention.

Max: That's it? After what I told you…

Principle: We'll continue this discussion, later, in my office.

Please go outside with ___ rest of your class now, Miss Caulfield.

PART B: Try to guess the correct synonyms for the highlighted words.

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1. These pieces of time can **frame** us in our glory and our sorrow; from light to shadow; from color to chiaroscuro.

   a)capture   b)envision   c)reverse

2. You feel like totally **haunted** by the eyes of those sad mothers and children.

   a)discomforted   b)pleased   c)used

3. The point remains that the portraiture has always been a **vital** aspect of art, and photography, for as long as it's been around.

   a)significant   b)unimportant   c)various

4. I'll fly out with the winner to San Francisco where you'll be **feted** by the art world.

   a)frame   b)know   c)celebrate

5. I know it is a **drag** to hear some old dude lecture you but life won't wait for you to play catch-up.

   a)annoyance   b)fun   c)interest

6. You do have a gift, you have the fever to take images, to frame the world only the way you **envision** it.

   a)reverse   b)visualize   c)distract

7. Empty. Good. Nobody can see my **meltdown** except for me.

   a)amusement   b)fatigue   c)anxiety

8. I feel like the universe is **taunting** me everywhere I go today.

   a)adjust   b)joining   c)making fun of

9. It all started with that **bizarre** dream in class… Am I going crazy?

   a)enjoyable   b)strange   c)exhausting

10. Can I actually **reverse** the time?

   a)rewind   b)replay   c)redo

PART C: By using some of the words in exercise B, can you write a brief story about what may have happened to Rachel Amber who is missing?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

PART D: Answer the questions based on your English language learning experience.
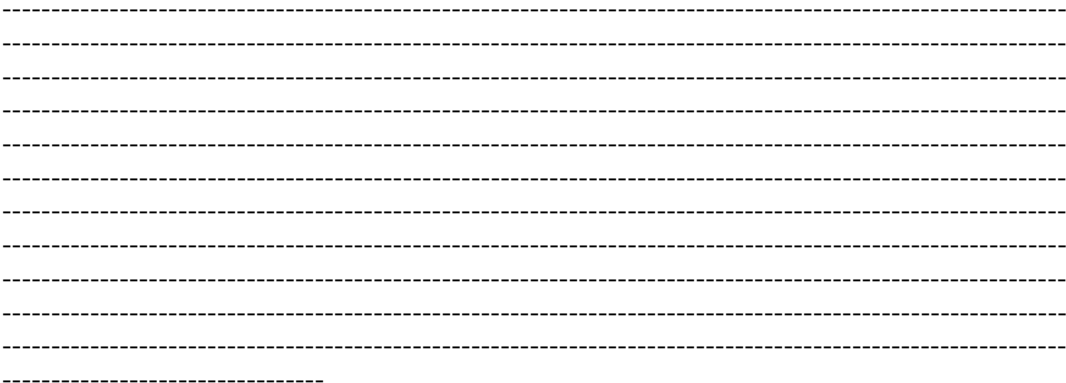
How do you perceive yourself as a language learner?	
How do people (teachers, friends, family etc.) around you perceive you as a language learner?	
Are you an ideal language learner? If not, what would make you an ideal language learner?	
Reflecting on the episode you play, - how self-identity influences life choices? - how choices and perspectives fluctuate (change) as priorities, experiences, decisions?	
Reflecting on your language learning experience, - how self-identity influences life choices? - how choices and perspectives fluctuate (change) as priorities, experiences, decisions?	

ACTIVITY 2

A| *Circle the correct word or phrase to complete each sentence.*

1. There are <u>many/ a great amount of</u> missing person posters all around the campus.
2. Hey, I know you. You are one of the <u>plenty/many</u> students in Jefferson's class. Isn't he incredible?
3. <u>A great deal of/ a great number</u> of girls in the class think that Jefferson is successful and charming.
4. Nathan Prescott's family is the oldest in Arcadia Bay and I heard <u>a couple of/ a number</u> stories about them when I was a kid.
5. Kate let me borrow "The October Country" by Ray Bradbury. I haven't read <u>much/several</u> by him but he nails the autumn atmosphere of small towns.
6. I should find a real Halloween party to crash so I can experience <u>few/some</u> social mingling.
7. At least I'm trying to climb out of my cocoon. I shouldn't expect my life to completely change after <u>a few/ a little</u> weeks of Blackwell Academy.
8. I wonder if <u>all/each</u> that bullying has worn Kate down. I can see how it would. I have to make an effort to talk to her more often, maybe invite her to tea or movie.
9. This day has been so insane. Everything is happening too fast and <u>one/none</u> of it makes <u>any/both</u> sense.
10. Only if you're not cool <u>enough/too</u> to get in. And it doesn't hurt your resume.
11. Since you know <u>all/ most of</u> answers, I guess you have to find another way into the dorm.
12. Chill Victoria it is just water. Yeah, water on my cashmere! Do you know how <u>much/ many</u> this outfit cost?

B| *Complete the blanks with the words you hear.*

https://www.youtube.com/watch?v=2phAO4TzSnE

Max: Hi, Ms. Grant

Ms. Grant: Excuse me, Max? I know everybody loves being asked to sign a _____, but would you do Ms. Grant a _____ and hear me out?

Max: Sure, I always have time for you. What's the petition?

Ms. Grant: David Madsen, our _____ of security, wants to put _____ all around the campus. Halls, classrooms, gyms, dorm rooms, etc. Blackwell Academy should be a high school, not a high security penitentiary.

Max: That's crazy. I guess why schools should be on high _____ these days, but cameras in the _____?

Ms. Grant: It's a slippery slope. And it's _____ you and your classmates to _____ here. Blackwell Academy has a noble heritage, from the _____ Americans who founded this land, to the pioneers who shared it in _____, not fear and violence.

Max: The native Americans?

Ms. Grant: The tribes who were here first, who welcomed the _____. Both cultures found a mutual symbiosis and thrived. Now before I _____ you homework with this lecture, will you please sign the petition to keep our campus from going back to 1984?

Max: _____. I don't mind security, but not pure surveillance.

Ms. Grant: I know you were my favorite new student at Blackwell for a good reason.

C| *At the end of the first episode Max told Chloe that she could rewind time and the town would be wiped out by a tornado. What may be some consequences of this?*

D| *Give examples of factors that have effects on your language learning story.*

Factors	Effects
e.g. I loved my English teacher.	Therefore, I was eager to study and learn more.

ACTIVITY 3

A| *Rewrite the statements in passive voice.*

1. Even meteorologists can't explain that snow.

   ----

2. You just spilled soda on Kate's book.

   ----

3. We need more proof of what happened.

   ----

4. I can hear your stomach rumbling from here, Max.

   ----

5. I can tell you every single thing you have in your pockets.

B| *Who said these? Write the name of the character next to the statements.*

No, no Kate. I just don't want you to get hurt any more. I think we should wait. There are other things going on that might help you._____

Max

Like I'm still a waitress at Two Whales after all these years…. Did you break another cup? Really? No refill for you! _____

Kate

Come on, before mom starts some more talking, Let's bail!... You don't call me once in five years and now you're all over some girl you see everyday at school? I see how you roll. So, go ahead, chat up Kate Marsh from Blackwell. _____

Joyce

Max, why did you step in between David and me yesterday? It is nice to see you care about me. _____

Chloe

I wanted to rap about that action yesterday. I was beaten by Nathan Prescott. I'm some personal hero. _____

Warren

C| *Answer the questions based on the conservation.*

Max: Hey Samuel, you're up early.

Samuel: Oh- hello young Max. I do love the early morning. Everything is so calm and quiet. I can feel the animals waking up with me.

Max: So what did you think about that freak snow shower yesterday?

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Samuel: Another message from the Earth to be cautious. I will say that Samuel hasn't seen anything like that before.

Max: That's one thing I truly love about Arcadia Bay, it's all those cool animals in the forest.

Samuel: The squirrels always come in the morning for food. I can hear them whisper. What animal do you see in the forest?

Max: Don't laugh, but I saw a doe that seemed to be looking right at me like it was trying to communicate.

Samuel: Oh, that's your spirit animal! Nothing weird there, except you saw yours. It could be a sign about your destiny. What do I know? My spirit animal is a squirrel.

Max: I so don't want to get in the way of your morning ritual. See you later.

Samuel: Of course you will.

1. Did you circle any vocabulary? Which words?

_____
___

2. What is the main idea of the conversation?

_____
_____
_____
_____

3. How would you summarize the conversation?

_____
_____
_____
_____
_____

D| *Give examples of factors that have effects on your language learning story.*

Factors	Effects
e.g. I loved my English teacher.	Therefore, I was eager to study and learn more.

ACTIVITY 4

PART A| *Choose the correct form of the verbs.*

1. This is a message to let you know attempts *to slander/slandering* and *to blackmail/ blackmailing* my son will be met with many lawyers and legal ramifications.
2. Sorry to have bothered you by *asking/to ask* for your advice.
3. Thank you for *answering/ to answer* my call this morning.
4. It's hard *to believe/believing* that the school bus was once on the road, filled with dozens of students.
5. I totally remember *going/to go* there when I was a kid. I loved the hushpuppies.
6. We're going to shoot all these bottles without *to waste/wasting* a single bullet!

PART B| *What were some spectacular events in this episode? Give examples and details.*

_____
_____
_____
_____
_____
_____
_____
_____

PART C| *Match the characters with the descriptions.*

a.	Taylor Christensen	Rich and arrogant, she is a typical snob who boasts about her expensive designer clothing and state-of-the-art electronic equipment for her classes.
b.	Nathan Prescott	He is head of security at Blackwell Academy and is also Chloe Price's stepdad.
c.	David Madsen	She is a rebellious and troubled teen who is out to discover the truth behind Rachael Amber's disappearance with her best-friend Max Caulfield.
d.	Max Caulfield	He is a student in Blackwell Academy. He is the troubled son of a rich man who makes donations to school and patriarch of the prestigious family that runs Arcadia Bay.
e.	Chloe Price	She is part of Victoria Chase's mean girls group and a member of the Vortex Club in Life is Strange.
f.	Victoria Chase	She is a timid, young photographer who discovers the ability to control and rewind time and finds herself drawn into a mystery by her best-friend Chloe.

D| Answer the questions below considering your future goals.

1. Who will you be in ten years' time? Everybody has an image of what we will be like and what we avoid being like in the future. Think about ten years' time and imagine what you'll be like and what you will be doing.

In ten years, I expect to be	Am I am doing something to be that way		If yes, What I am doing now to be that way
	NO	**YES**	

Think about ten years time and imagine what you avoid being or you would **not** to be in ten years.

In ten years, I want to avoid	Am I am doing something to avoid this		If yes, What I am doing now to avoid being that way
	NO	**YES**	

ACTIVITY 5

A| Choose the correct answer to complete each sentence.

1. I knew _____ Chloe would be all over this, so I better get moving.
   a)that   b)what   c)whether
2. I think _____we are all responsible for _____ happened to Kate.
   a)what/that   b)that/ what   c)whether/why
3. Do you think _____ this has something to do with Nathan being expelled?

   a) why   b)what   c)that

4. I don't even know _____ to deal with that, so I just act like an idiot.
   a) that   b) how   c) if
5. We should find out _____ really killed Kate.
   a)whose   b)whom   c)who
6. Didn't you say _____ it was all about "Chaos Theory"?

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a)what   b)why   c)that
7. We need to find out more about _____ Rachel was involved with around here.
   a)how   b)who   c)if
8. I just want to find my friend right now. It scares me to think _____ she could be.
   a)why   b)who   c)where
9. Let's see _____ I can find those items and open the door.
   a)if   b)that   c)when
10. We better find out _____ is in the principal's office first.
    a)whether   b) what   c)why

B| Choose the correct meaning for the metaphors.

1. Although Max felt very sad upon the death of Kate, she managed to overcome it.
   She is a rock.
   a) old and stubborn   b) strong and reliable
2. Max was always a good friend to Kate and she tried to help and protect her. **She has a heart of gold.**
   a) have a generous and good nature   b) have a serious heart disease
3. Some people support and do whatever Victoria and Vortex Club say. **They are sheep.**
   a)leader, not a follower   b) follower, not a leader
4. Max thinks "**This campus is like a prison**. I cannot go out and meet Chloe."
   a) difficult to escape or go out   b) full of criminals
5. Max asked Joyce to cook her eggs and bacon, and she accepted. **Her answer was music to her ears.**
   a) made her very happy   b) sounded awful

C| As you read the paragraph below, think about any place you would like to visit or be in the future and where you would like to acquire a different culture. What images come to your mind as you read the following imaginary script about studying abroad?

"I would like you to imagine that you are studying abroad. It does not necessarily have to be a place you know or that you have visited. Just go along with the first image that comes into your mind and as the image becomes more real to you, consider yourself studying and living in the foreign country surrounded with foreign people, a new culture, school, friends etc. Be in the country and look through your own eyes at what you can see around."

ACTIVITY 6

A| Correct the mistakes in the underlined words or phrases.

1. David bullied Kate <u>whom</u> already had a lot of trouble to overcome.
2. I need more clues <u>by that</u> I can turn on the computer.
3. David has a garage <u>the door of whose</u> can be entered from the house.
4. Rachel definitely hooked up with Frank, <u>that</u> surprised Max.
5. This was reported by David Madsen, <u>is </u>head of campus security, who witnessed her trying to hide or secure a suspicious medical bag.
6. Frank, <u>who</u> keys Max and Chloe need, is having food in the diner.
7. Arcadia Bay, <u>which</u> a lot of weird people live, faces a danger of being hit by a tornado.
8. She was not much of a friend. Just another person <u>which </u>do staff behind my back.

B| Max went back in time and saved Chloe's father, which changed a lot in people's lives. What may be some pros and cons of this action?

Pros	Cons

C| Match each description with the person it describes.

a) her files are found in David's computer.
b) was bullied by Nathan.
c) was expelled from Blackwell.
d) had an affair with Frank.
e) her dad had a terrible accident.
f) was a member of a church group.

Rachel   Kate

Chloe
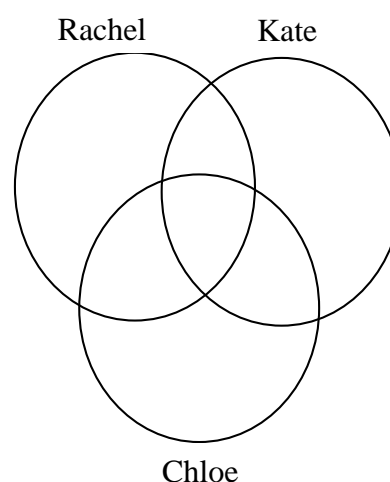
self-discrepancies questionnaire

In the 1st column list up to 5 qualities you believe you *actually* have – both "good" & "bad". In the 2nd, list up to 5 qualities you or others believe you *ought* to have. In the 3rd column list up to 5 qualities you or others would *ideally* like you to have.

actual self	ought to self	ideal self

Adapted from : Higgins E T et al   *Self-discrepancies and emotional vulnerability: how magnitude, accessibility, & type of discrepancy influence affect.*   Journal of Personality and Social Psychology 1986; 51(1): 5-15

ACTIVITY 7

A| Circle the letter of the one underlined word or phrase in each sentence that is not correct.

1. If Max <u>does not</u> talk Chloe about her <u>physical situation</u> will she <u>be happy</u>.
    A   B   C   D

2. When I <u>wake up</u> in <u>the</u> hospital, I <u>literally</u> couldn't move <u>a muscle</u>.
              A   B   C   D

3. <u>As long</u> we are <u>together</u>, I <u>don't</u> feel <u>afraid.</u>

    A   B   C   D

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4. Although Chloe <u>is really</u> upset <u>about</u> her situation, <u>but </u>she is <u>glad to see</u> Max again.

                    A   B   C   D

6. My parents <u>keep</u> <u>the</u> morphine injection upstairs <u>because of</u> they think I cannot get to <u>it</u>.

               A   B   C   D

6. William, I <u>just</u> want you <u>to know</u> that <u>whoever</u> happens, I will always <u>be</u> here for Chloe.

               A   B   C   D

7. <u>Unless</u> you <u>want</u> to talk, <u>my</u> door is <u>open</u>.

        A   B   C   D

8. I <u>know</u> Sean Prescott <u>won't</u> be happy until he <u>will</u> own everything <u>in</u> Arcadia Bay.

        A   B   C   D

9. <u>Even</u> she can't <u>move</u>, Chloe still <u>causes</u> <u>problems</u>.

      A   B   C   D

10. <u>There is</u> always someone who <u>stays</u> with Chloe <u>although </u>she needs <u>help</u>.

      A   B   C   D

B| Look at the following types of texts. Check the two in which you would probably use a T-chart to organize your notes.

1.☐ a list of tips for getting into the top college in the country.

2.☐ an article about problems caused by crime in a neighborhood and some possible solutions.

3.☐ a comparison of pursuing a science degree vs. pursuing an arts degree.

C| What are some of the unanswered questions (mysteries) in the episodes you have played so far? Have any of these questions been answered yet? If yes, which ones?

Unanswered questions	the clues found about answered questions

🎧 **D| Fill in the blanks with the words you hear.***Santa Monica Dream by Angus & Julia Stone*Goodbye to my Santa Monica dream

Fifteen kids in the _____ drinking wine

You tell me stories of the sea

And _____

Goodbye to the roses on your street

Goodbye to _____

Goodbye to the children we'll never meet

And the ones we left behind
I'm somewhere, you're somewhere
_____, you're nowhere
You're somewhere, you're somewhere
I could go there but I don't

Rob's _____
_____ in Battery Park

E| With your group members search the concepts of 'ideal L2 self', 'ought-to L2 self' and 'possible selves' and prepare a 5-minute poster presentation.

ACTIVITY 8

A| Rewrite the sentences by using the words/phrases given below.

1. David's behaviour is not acceptable in any way.
In no way _____.

2. Chloe started to feel happy only when David stopped chasing her.

Only when_____.

3. They collected clues about Nathan. They could find out what happened at the night of the party.

Only by _____

_____

4. Chloe believes that they should not trust not only the police but also everybody in the town.

Not only the police_____.

5. There is no way this rusty button will activate these ropes or pulleys.

Under no circumstances_____.

6. They could not open the door until they found the code.

Not until_____.

7. Chloe believes Rachel is not dead in any way.

In no way_____.

8. I never hit anybody like that before.

Never_____.

B| Choose the correct word to complete each phrasal verb. Check the words in a dictionary.

1. You saved us. Frank is lucky. We have to keep moving <u>forward/about</u>.
2. Thanks to David's own investigation, I should be able to find <u>out/in</u> what Nathan did during the party.
3. Does David know what's going <u>on/at</u> with Rachel or is he just paranoid about everybody?
4. Nathan cheered his guests <u>on/over</u> in the party by distributing them drugs.
5. Chloe carried <u>out/up</u> more research on the internet to find more clues about the party.
6. They have the power to deal <u>with/off</u> whatever is going on in the town.
7. If a zombie shows <u>up/in</u>, I have my weapon.
8. Who came <u>up/on</u> with the idea of building such a place?
9. After Kate passed <u>out/at</u>, Nathan took her to his secret place.
10. Sometimes, all the pain you go through makes you understand that you grew <u>up/down</u>.

D| How much do you agree with the statement below? Discuss them with a friend.

1. If my teacher wanted someone to do an extra English assignment, I would certainly volunteer.

2. I am prepared to expend a lot of effort in learning English.
3. If English were not taught in school, I would try to obtain lessons in English somewhere else.
4. When it comes to English homework, I work very carefully, making sure I understand everything.
5. Considering how I study English, I can honestly say that I really try to learn English.
6. After I get my English assignment, I always rewrite them, correcting my mistakes.
7. If I could have access to English-speaking TV stations, I would try to watch them often.
8. When I hear an English song on the radio, I listen carefully and try to understand all the words.
9. If I had the opportunity to speak English outside of school, I would do it as much as I can.
10. When I have a problem understanding something we are learning in English class, I immediately ask the teacher for help.

ACTIVITY 9

PART A| Choose the letter of the incorrect word or phrase.

1. God, I <u>don't remember</u> anything <u>who</u> happened. This must <u>be</u> the same drug Nathan <u>used</u>
on Kate.
              A   B   C   D
2. I promised I <u>will</u> never go back <u>in</u> time like this again, <u>but</u> this is <u>the only</u> way.
              A   B   C   D
3. He <u>tried</u> so hard, but you <u>can't</u> just throw <u>a little</u> subjects around and expect <u>a</u> cohesive style or
              A   B   C   D
theme.
4. <u>Although</u> Victoria <u>would kill</u> to be <u>in</u> your place, but she <u>doesn't</u> understand our connection.
              A   B   C   D
5. I'm obsessed <u>with</u> the idea of <u>capture</u> that moment <u>innocence</u> evolves <u>into corruption</u>.
                A   B   C   D
6. I know <u>that</u> Prescotts are going to have a major <u>scandal</u> when the town finds <u>on</u> what their elite
              A   B   C
son <u>has been doing</u>.
        D
7. <u>Who</u> do you think <u>paid for</u> this glorious <u>room dark</u> and <u>equipment</u>?
  A   B   C   D
8. How <u>else</u> could I get <u>all this</u> new drugs <u>for</u> my <u>subjects</u>?
        A   B   C   D
9. I should <u>to be</u> able to <u>track down</u> David's <u>number</u> from <u>this</u> school pamphlet.
            A   B   C   D
10. I <u>don't</u> know <u>what to say</u>. That <u>is</u> okay, neither <u>I do</u>.
    A   B   C   D
11. You're <u>enough smart</u> to know <u>how easy</u> it is <u>to hurt</u> somebody <u>and</u> to destroy their life.
            A   B   C   D

12. In <u>no</u> way <u>Chloe can</u> die. I <u>have to</u> save <u>her</u>.
      A   B   C   D

PART B| Match the words in the box with their definitions.

kidnap	grab	slightly	purity	spectacular
get away with	sane	inspire	modest	manipulate

1. to a small degree; not considerably _____

2. of sound mind; not mad or mentally ill _____

3. freedom from adulteration or contamination _____

4. fill (someone) with the urge or ability to do or feel something, especially to do something creative _____

5. escape blame, punishment, or undesirable consequences for (an act that is wrong or mistaken) _____

6. grasp or seize suddenly and roughly _____

7. abduct (someone) and hold them captive, typically to obtain a ransom _____

8. beautiful in a dramatic and eye-catching way _____

9. not large, elaborate, or expensive _____

10. control or influence (a person or situation) cleverly or unscrupulously _____

PART C| Write down as many ideas as you can reflecting how you think learning English is relevant or useful outside the classroom and the school context.

1.

2.

3.

4.

5.

ACTIVITY 10

PART A| Choose the letter of the incorrect word or phrase.

1. You <u>can</u> barely walk <u>on</u> the sidewalk outside <u>because</u> the extreme <u>weather conditions</u>.
        A   B   C   D

2. I <u>had been going</u> through <u>a lot</u> myself this year, <u>and</u> I am jealous that you have <u>all those cats</u>.
                 A   B   C   D

3. I wasn't sure <u>if or not</u> I could <u>face</u> you, <u>so</u> I wrote this note just <u>in case</u>.
                 A   B   C   D

4. I am <u>stuck</u> <u>here</u> unless I <u>don't put</u> out <u>this fire</u> first.
           A   B   C   D

5. Only if Max <u>stops</u> the fire <u>she can</u> save Warren and <u>take</u> the photo <u>from</u> him.
                A   B   C   D

6. <u>These</u> tornado <u>might</u> be <u>the</u> end of the world if I <u>do not</u> change it.
   A   B   C   D

7. <u>There</u> <u>isn't</u> nothing you <u>could</u> do <u>about</u> it.
   A   B   C   D

8. <u>Whenever</u> you reversed or <u>alter</u> time, maybe you caused <u>a</u> chain <u>reaction</u> even in the environment.
  A   B   C   D

9. I have <u>total</u> faith <u>whether</u> you'll do <u>the right thing</u> when the <u>time</u> comes. I'm so proud of you.
           A   B   C   D

10. You <u>are not</u> <u>pathetic</u>. You are one <u>of</u> my <u>hero</u>.
         A   B   C   D

11. If we <u>will tell</u> David, he <u>will believe</u> <u>us</u> and he <u>can actually stop</u> him.
          A   B   C   D

PART B| Number the episodes in the order in which they occurred (1-6).

— Max realizes that changing the past can lead to painful consequences and that time is not a great healer. Her investigation into the disappearance of Rachel Amber begins to reach a thrilling conclusion as she finds the Dark Room.

— Max Caulfield tries to convince Chloe Price that she can rewind time but starts to suspect that her power may not last forever. Meanwhile, Kate Marsh tries to deal with the public shame over a viral video that was leaked and shared around the students of Blackwell.

— Max Caulfield learns that time is impossible to control and that her power carries many consequences as she moves inexorably towards the most painful decision of her life. Arcadia Bay, meanwhile, is preparing to weather a huge storm as Life is Strange comes to a gripping and upsetting conclusion.

— Max Caulfield and her "partner in crime", Chloe Price, start an investigation into the mysteries surrounding Blackwell students Kate Marsh and Rachel Amber. As they make headway, Chloe discovers that even those close to her have secrets. A new rewind power presents itself to Max, and its use has devastating consequences.

— The episode revolves around her testing her power and reuniting with her old best friend, Chloe Price. The pair set out to find out more about the disappearance of Rachel Amber, the harassment of Kate Marsh and the drug schemes of Nathan Prescott. The friendship between Max and Chloe is put to the test as Max debates whether to reveal her rewind power.

PART C| Reflect on the question below.

Suppose that you graduated from university and started doing your dream job. And your old English language teacher invited you to give a talk in class for to motivate students. Write a short speech that you would give to motivate students to learn English, talk a little about your job and your career path and try to reflect how knowing English well affected your life positively.

D. A SCREENSHOT OF MAXQDA

E. THE CODEBOOK

CODE	DESCRIPTION	EXAMPLE
the game was effective	benefiting from the game in terms of English language learning and language skills.	The games actually proved to be very effective and useful for me. They have an impact on my learning.
agency	making your own choices and decisions on how to play in the game. Having a sense of control over what happens in the game.	As I said, I always see that if I have to give an example through Life is strange; we make choices, ask questions or it makes us think.
immersed learning	Being surrounded by the language and being exposed to enhanced language experience. Applies to active engagement in the construction of playing experiences.	While playing a game, you are immersed in it naturally. You internalize the character. It is as if you are the character.
thinking in English	Refers to the cases where participants do not translate from their mother tongue yet think and react in the target language.	The game was engrossing, so I was obsessed with it. I forgot Turkish; English, English, English..
situated learning	Learning takes place within the game and context. The intention is not learning, rather it happens unconsciously.	For example, while learning English at school, we learned to say apple to 'elma'. Yet while playing the game we cannot depict apple as a synonym for 'elma'. For example, we are seeing a picture of apple or we know that is an apple. Since that is an 'apple', since we learned it as if we have learned how to speak Turkish, I think it is much more solid.
repeated exposure	Exposure to the same words, structures and expressions repeatedly, thereby acquiring the language. Applies to the game and activities.	I looked at the words and as I saw them in the game repeatedly, they sticked to my mind and I never forgot them.
have to use	Urge to use and learn English. Applies when English is learnt both willingly and out of necessity.	Because for understanding these conversations, not just for this game. To understand the conversations in other games, what's going on in the game in general, something in another language, I think I would say, "I have to practice English." And the game triggered it. I think I have already seen it before and I saw it in the game I played, so I have to learn it.
self confidence	Applies when students state they have the knowledge and capability of something or they have awareness of having acquired certain skills thanks to the game.	For example, in the past, I thought I was speaking only academically, it was very formal. Now, in the game, I think I can adapt to everyday life.
the game was effective in terms of listening	Improvement in the listening skill as a result of the exposure in the game.	Certainly, listening. Because even if we read the subtitles, or we can see the menus, in the end, we hear that conversation. The game already has a clean English.
the game was effective in terms of pronunciation and intonation	Stating that thanks to the conversations of the characters in the game, the pronunciation and intonation of words or expressions are more familiar or acquired by the players.	.. Or the way they are pronounced. We learn the pronunciations of words. It was very helpful to me.
the game was effective in terms of vocabulary	Learning new words or phrases thanks to the game and activities.	As far as I can tell from my experiences, I have learned all the vocabulary from games.
the related activities were	Applies when in the activities, students recognize the grammar points they have	To be frank, there were parts I confused in grammar. Thanks to those activities, I

effective in terms of grammar	seen in the game and activities reinforce the grammar points encountered in the game.	improved my grammar skill, especially the scripts of the game helped.
game integration	the game's being integrated into curriculum benefited students' learning English and reinforcing their language learning.	…It is good to be integrated in. It might be beneficial for freeing the education system from the convention of memorization. For example, when I came to school, I was given a word and below the English or Turkish definition… Instead of this, words were present in the game… Taking the script from the game, separating the words and then asking them in the blanks would definitely make it more memorizable…
fun	Applies to the enjoyment while playing the game or doing the activities.	… We had a real fun, for me it was too much fun. The game was very absorbing. It was not boring like the normal games
engrossing	Factors that pull players into the story and hook them. Applies when the flow is gripping.	Life is Strange has an average length and you are not bored. A flow continues constantly in the game. There's always something happening.
reflection	The parts within the activities in which students reflected and discussed on their language identities.	In the end of the activities, when you ask more personal questions, you know that we had the opportunity to reflect on ourselves.
traditional teaching methods	Applies when students talk about traditional teaching in a positive or negative sense. Reasons which make traditional teaching boring or undesirable.	Now, our usual traditional English learning is always through books. Or there are cards to learn words. We always write. This starts in the fourth grade, now it starts even earlier. As far as I know, it continues until the end of high school. There is neither speaking nor listening. Even if there is listening, it is through the exercises in the book.
awareness	Being aware of or gaining awareness regarding the knowledge and ability of English.	When I was playing the game, I realized that I actually had a good command of English.
future self	Applies when students could imagine themselves and their capabilities in terms of English.	If I can comprehend those, then I can do this in the future as well. It wouldn't cause a great problem if I do not undergo something 'ultra'. I could imagine myself in terms of my English abilities beforehand. I can manage it; I can understand it and I will be able to do this unless I encounter something I do not know ahead of the game.
realizing the potential of games for learning English	some students noted that thanks to this experience with Life is Strange, they realized the potential of games for learning English.	As I said before, I didn't know that I could learn English with games. If they asked me, I'd say, "I don't know." It changed my mind about that.
motivation	Factors that motivate students to play the game. Plus, applies when the game itself motivates students.	Because if I don't play games, I definitely don't read English books. This motivates me to listen to and read something in English.
safe environment	the students asserted that the game is a safe environment to learn English.	In the other form of learning, as it is very oppressive, they make us memorize words. It is really bad. In games, it is comfortable. You feel better, but in conventional teaching you do not.
the game teaches daily language and expressions	Applies when students claim to have acquired and been exposed to daily usage, expressions, slang and idioms in the game.	Especially, in 'Life is Strange', there were young people and we were able to understand the language of those young people or how they communicate with each other. We will be a person who lives the language in this respect. It was useful for us not to learn and use the language but to live it.
the game was good	Applies when the game choice is said to be proper. Reasons why the game was a good choice.	… but you know Life is Strange was really good in terms of the story. It was quite nice in terms of length as well. There is something amusing… it has the length…
English is by product	the aim is not learning English. It is just the medium.	Because there is a purpose and the purpose is not actually English.

F. THEMES AND SUB-THEMES

Theme 1: The nature of game play

Sub-theme 1.1: Repeated exposure to the target language

1.1.1 Game experience afford exposure to the main language skills.

1.1.2 Games afford exposure to the daily language.

Sub-theme 1.2: Immersive language learning environment to support situated learning

1.2.1 Games engage students in authentic learning opportunities in meaningful, realistic situations.

1.2.2 Game experience provide opportunities for thinking in the target language.

1.2.3 Game experience provide opportunities for target language acquisition.

Sub-theme 1.3: Games experience makes learning fun and motivates students.

Sub-theme 1.4: Games provide safe environments to make mistakes

Theme 2: The nature of game enhanced language learning

Sub-theme 2.1: Creating a positive future self-image through reflection/ discussion

Sub-theme 2.2: Creating opportunities to learn structure through game related curricular activities

Theme 3: The nature of Life is Strange

Sub-theme 3.1: Life is Strange keeps students hooked.

Sub-theme 3.2: Life is Strange is a narrative, story based, quality game.

Sub-theme 3.3: Playing with choice in Life is Strange

G. INFORMATION ABOUT INTERVIEWEES

Information about interviewees' classes, ages, departments, gaming frequency and student statues defined as a result of TOEFL ITP (Passed/Failed)

Participants	Class	Age	Department	Gaming frequency	Status according to TOEFL ITP (Passed/Failed)
Participant 1	C2	18	Material Science and Nanotechnology Engineering	often	Passed
Participant 2	C5	18	Electrical and Electronics Engineering	frequently	Passed
Participant 3	C2	18	Psychology	sometimes	Passed
Participant 4	C2	18	Business Administration	frequently	Passed
Participant 5	C5	19	Interior Architecture	frequently	Passed
Participant 6	C5	19	Architecture	frequently	Passed
Participant 7	C2	18	Medicine	First time	Passed

Scope and Sequence

Unit	Theme	Reading	Reading Skill	Vocabulary Building	Video
1	Sport and Fitness	A: The World's Game B: What Makes an Olympic Champion?	A: Scanning for Specific Information B: Classifying Information	A: Word Link: uni- B: Word Link: -ic / -atic	Living at High Altitude
2	Skin Deep	A: What Is Beauty? B: Skin: The Body's Canvas	A: Using Examples to Support Claims B: Determining the Main Idea of Paragraphs	A: Usage: uniform B: Word Link: -al	Skin Mask
3	Animals in Danger	A: Dangerous Journey B: Tracking the Snow Leopard	A: Guessing the Meaning of Unfamiliar Words B: Understanding Conditional Relationships	A: Word Link: -ive B: Usage: conflict	Tree Climber
4	Violent Earth	A: Sacred Mountains B: Earthquake Zones	A: Being an Active Reader B: Understanding Cause and Effect Relationships	A: Word Link: ex- B: Word Partnership: schedule	Santorini Volcano
5	Islands and Beaches	A: The Perfect Beach B: Land of Fire and Ice	A: Summarizing a Writer's Point of View B: Labeling Details on a Map	A: Word Partnership: rank B: Thesaurus: spectacular	Pacific Paradise
6	Success and Failure	A: The Nature of Risk B: The Rewards of Failure	A: Recognizing Metaphors B: Understanding Transitions	A: Word Link: min- B: Word Partnership: reputation	Savage Mountain
7	Global Addictions	A: Caffeine: The World's Favorite Drug B: Powering the Future	A: Understanding Pros and Cons B: Using a Venn Diagram to Classify Information	A: Thesaurus: furthermore B: Word Partnership: steep	Wave Power
8	Epic Engineering	A: China's Grand Canal B: Peru's Highway of Dreams	A: Understanding Compound Words B: Organizing Notes in a T-chart	A: Word Link: nov B: Word Partnership: dense	Birth of a Rain Forest
9	Far Out	A: Defying Gravity B: The Ultimate Trip	A: Recognizing Phrasal Verbs B: Recognizing Appositives	A: Word Link: -ate B: Word Partnership: precious	Walking in Space
10	All in the Mind	A: What's on Your Mind? B: Inside Animal Minds	A: Identifying Definitions B: Identifying Lexical Cohesion	A: Word Link: -ible/-ibility B: Thesaurus: master	Chimp Memory
11	Art and Life	A: The Power of Color B: Van Gogh's World	A: Creating a Word Web B: Sequencing Information	A: Usage: stress (noun/verb) B: Word Link: sen(s)	Urban Art
12	Medical Challenges	A: A Cure for Cancer? B: Deadly Contact	A: Understanding an Author's Use of Quotes B: Inferring Information	A: Word Link: multi- B: Word Partnership: emergency	Paraguay Shaman

4 Scope and Sequence

Scope and Sequence 5

SCOPE AND SEQUENCE

UNIT	READING	WRITING	LISTENING	SPEAKING	PRONUNCIATION	VOCABULARY
1 page 2 **Grammar:** Present Time **Theme:** The Digital World	An article: *Connected!*	Two or three paragraphs about electronic devices in your life	A conversation about identity theft	*Group Discussion:* Electronic devices which are important in your life *Class Discussion:* The dangers of texting while driving	Two pronunciations of the letters *ng*	24/7 contemplating digitally do without	profile staying on top of telecommute tends
2 page 15 **Grammar:** Past Time **Theme:** Marriage	An article: *A Marriage Made on the Internet?*	Two or three paragraphs about a situation that turned out unexpectedly	A broadcast about an unusual wedding	*Information Gap:* A married couple who took risks and made changes *Picture Discussion:* A married couple's relationship *Group Discussion:* Changes in one another's lives	Contracting auxiliary verbs in past forms	came up with out of the blue pondered tie the knot	turned in turned out ultimately*
3 page 32 **Grammar:** Future Time **Theme:** Travel	An article: *Getting the Most Out of It!*	Two or three paragraphs about a world traveler's options or on your dream vacation	A family conversation about what to do on a trip	*Picture Discussion:* What you think will happen in the future *Group Discussion:* Opinions of a world traveler	Contracting auxiliary verbs in future forms	chart your own course excruciatingly hectic landmarks	maximize* mindset out of whack scrapbook

PART I From Grammar to Writing, page 45
The Sentence: Avoiding Sentence Fragments: Write a composition about a travel experience.

UNIT	READING	WRITING	LISTENING	SPEAKING	PRONUNCIATION	VOCABULARY
4 page 50 **Grammar:** Modals to Express Degrees of Necessity **Theme:** Cultural Differences	An article: *What We Should and Shouldn't Have Done*	Two or three paragraphs about a situation you should have handled differently	A conversation about a gift for a surprise party	*Information Gap:* Cultural differences and travel problems *Discussion:* Correct behavior in your culture	Reduction of modals and modal-like auxiliaries	chuckle decline* gracious have someone over	perplexed pointer praise rectify
5 page 69 **Grammar:** Modals to Express Degrees of Certainty **Theme:** Puzzles	An article: *Who Really Discovered America?*	Three or four paragraphs about a world mystery	A discussion about hearing one's recorded voice	*Pair Discussion:* Possible solutions to various puzzling events *Group Discussion:* Explanations to the mystery of Atlantis	Reductions of *to* and *have* in modal constructions	artifacts cohorts contenders debris	monasteries monks potential* stems from

PART II From Grammar to Writing, page 85
Topic Sentences: Write a composition about a cross-cultural experience.

UNIT	READING	WRITING	LISTENING	SPEAKING	PRONUNCIATION	VOCABULARY
6 page 90 **Grammar:** Count and Non-Count Nouns **Theme:** Health	A transcript of a TV program: *Concerned about Health? Ask the Expert*	Three or four paragraphs about health issues	A conversation between a doctor and a patient about health needs	*Discussion:* Statements about personal experiences *Personal Inventory:* Responses to a survey about health	Reduction of *of*	BMI brimmed champ devote* drag	in moderation obese side with sunblock telling

* = AWL (Academic Word List) items

J. SAMPLE QUESTIONS FROM TOEFL ITP

1 Listening Comprehension

This section tests your ability to comprehend spoken English. It is divided into three parts, each with its own directions. You are *not* permitted to turn the page during the reading of the directions or to take notes at any time.

Part A

Directions: Each item in this part consists of a brief conversation involving two speakers. Following each conversation, a third voice will ask a question. You will hear the conversations and questions only once, and they will *not* be written out.

When you have heard each conversation and question, read the four answer choices and select the one—(A), (B), (C), or (D)—that best answers the question based on what is directly stated or on what can be inferred. Then fill in the space on your answer sheet that matches the letter of the answer that you have selected.

Here is an example.

You will hear:

You will read: (A) Open the window.
　　　　　　　(B) Move the chair.
　　　　　　　(C) Leave the room.
　　　　　　　(D) Take a seat.

Sample Answer

Ⓐ ● Ⓒ Ⓓ

From the conversation you find out that the woman thinks the man should put the chair over by the window. The best answer to the question, "What does the woman think the man should do?" is (B), "Move the chair." You should fill in (B) on your answer sheet.

(Wait)

1 1 1 1 1 1 1 1 1 1 1 1 1 1

1. (A) She doesn't have an appointment.
   (B) Her problem is complicated.
   (C) She must live somewhere else.
   (D) Her apartment isn't far away.

2. (A) She can use his phone if she wants.
   (B) There's no charge for phone calls.
   (C) His phone is out of order too.
   (D) She can call him later if she likes.

3. (A) He couldn't find it.
   (B) It was too hard to solve.
   (C) It was simpler than he'd thought.
   (D) He solved it even though it was hard.

4. (A) He cleaned up after cooking.
   (B) He forgot to put the pots and pans away.
   (C) He was out in a terrible storm.
   (D) He put some plants in the kitchen.

5. (A) He studied forestry in school.
   (B) He worked in a forest.
   (C) He read a lot of books about trees.
   (D) His father taught him.

6. (A) How many pages he must write.
   (B) What Professor Barclay discussed.
   (C) How long the class lasted.
   (D) When the paper is due.

7. (A) She doesn't like any music except classical.
   (B) There is some classical music she doesn't like.
   (C) She likes classical music, but she can't play it.
   (D) Classical music doesn't interest her at all.

8. (A) He was too busy to take it.
   (B) He did well on it.
   (C) He left some questions unanswered on it.
   (D) He took it two times.

9. (A) Breaking the glass.
   (B) Warming the lid.
   (C) Hitting the lid.
   (D) Filling the jar.

10. (A) It was too expensive.
    (B) She bought it at the shop next door.
    (C) It was given to her as a gift.
    (D) She paid very little for it.

11. (A) She doesn't want to discuss the traffic.
    (B) She didn't have to go downtown today.
    (C) She was in the traffic herself.
    (D) She thinks the traffic was better today.

12. (A) The classes aren't interesting.
    (B) Classes have been canceled.
    (C) The weather is pleasant.
    (D) It isn't very sunny today.

13. (A) Gary doesn't need a audio player.
    (B) She wants her audio player back.
    (C) She's glad Gary is finally here.
    (D) Gary can keep her audio player.

14. (A) Stay inside and read it.
    (B) Look in it for advertisements for umbrellas.
    (C) Cover her head with it.
    (D) Throw it away.

15. (A) She originally supported Margaret.
    (B) She can no longer support Ed.
    (C) Ed has dropped out of the race.
    (D) She's not interested in the election.

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2 Structure and Written Expression

Time: 25 minutes

This section tests your ability to recognize grammar and usage suitable for standard written English. This section is divided into two parts, each with its own directions.

Structure

Directions: Items in this part are incomplete sentences. Following each of these sentences, there are four words or phrases. You should select the one word or phrase—(A), (B), (C), or (D)—that best completes the sentence. Then fill in the space on your answer sheet that matches the letter of the answer that you have selected.

Example I

Pepsin ——— an enzyme used
in digestion.

(A) that
(B) is
(C) of
(D) being

Sample Answer

Ⓐ ● Ⓒ Ⓓ

This sentence should properly read "Pepsin is an enzyme used in digestion." You should fill in (B) on your answer sheet.

Example II

——— large natural lakes are found
in the state of South Carolina.

(A) There are no
(B) Not the
(C) It is not
(D) No

Sample Answer

Ⓐ Ⓑ ● Ⓓ

This sentence should properly read "No large natural lakes are found in the state of South Carolina." You should fill in (D) on your answer sheet.

As soon as you understand the directions, begin work on this part.

② ② ② ② ② ② ② ② ② ②

1. ——— team sports require cooperation.
   (A) Of all
   (B) They are all
   (C) All
   (D) Why are all

2. Anyone who has ever pulled weeds from a garden ——— roots firmly anchor plants to the soil.
   (A) is well aware of
   (B) is well aware that
   (C) well aware
   (D) well aware that

3. Centuries of erosion have exposed ——— rock surfaces in the Painted Desert of northern Arizona.
   (A) in colors of the rainbow
   (B) colored like a rainbow
   (C) rainbow-colored
   (D) a rainbow's coloring

4. The higher the temperature of a molecule, ———
   (A) the more energy it has
   (B) than it has more energy
   (C) more energy has it
   (D) it has more energy

5. Frontier surgeon Ephraim MacDonald had to perform operations ——— anesthesia.
   (A) no
   (B) not having
   (C) without
   (D) there wasn't

6. ——— young, chimpanzees are easily trained.
   (A) When are
   (B) When
   (C) They are
   (D) When they

7. A person of ——— age may suffer from defects of vision.
   (A) every
   (B) some
   (C) certain
   (D) any

8. ——— have settled, one of their first concerns has been to locate an adequate water supply.
   (A) Wherever people
   (B) There are people who
   (C) Whether people
   (D) People

9. If a bar magnet is ———, the two pieces form two complete magnets, each with a north and south pole.
   (A) broken
   (B) broke
   (C) breaking
   (D) break

10. The type of plant and animal life living in and around a pond depends on the soil of the pond, ———, and the pond's location.
    (A) what the quality of the water is
    (B) how is the water quality
    (C) the quality of the water
    (D) what is the water quality

11. Clifford Holland, ——— civil engineer, was in charge of the construction of the first tunnel under the Hudson River.
    (A) he was a
    (B) a
    (C) being a
    (D) who, as a

Questions 1–11

The Sun today is a yellow dwarf star. It is fueled by thermonuclear reactions near its center that convert hydrogen to helium. The Sun has existed in its present state for about 4 billion, 600 million years and is thousands of times larger than the Earth.

(line)
(5)

By studying other stars, astronomers can predict what the rest of the Sun's life will be like. About 5 billion years from now, the core of the Sun will shrink and become hotter. The surface temperature will fall. The higher temperature of the center will increase the rate of thermonuclear reactions. The outer regions of the Sun will expand approximately 35 million miles, about the distance to Mercury, which is the closest planet to the Sun. The Sun will then be a red giant star. Temperatures on the Earth will become too hot for life to exist.

(10)

Once the Sun has used up its thermonuclear energy as a red giant, it will begin to shrink. After it shrinks to the size of the Earth, it will become a white dwarf star. The Sun may throw off huge amounts of gases in violent eruptions called nova explosions as it changes from a red giant to a white dwarf.

(15)

After billions of years as a white dwarf, the Sun will have used up all its fuel and will have lost its heat. Such a star is called a black dwarf. After the Sun has become a black dwarf, the Earth will be dark and cold. If any atmosphere remains there, it will have frozen onto the Earth's surface.

(20)

1. What is the primary purpose of this passage?
(A) To alert people to the dangers posed by the Sun
(B) To discuss conditions on Earth in the far future
(C) To present a theory about red giant stars
(D) To describe changes that the Sun will go through

2. The word "fueled" in line 1 is closest in meaning to
(A) powered
(B) bombarded
(C) created
(D) propelled

3. The word "state" in line 3 is closest in meaning to
(A) shape
(B) condition
(C) location
(D) size

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4. It can be inferred from the passage that the Sun
(A) is approximately halfway through its life as a yellow dwarf
(B) has been in existence for 10 billion years
(C) is rapidly changing in size and brightness
(D) will continue as a yellow dwarf for another 10 billion years

5. What will probably be the first stage of change as the Sun becomes a red giant?
(A) Its core will cool off and use less fuel.
(B) Its surface will become hotter and shrink.
(C) It will throw off huge amounts of gases.
(D) Its center will grow smaller and hotter.

6. When the Sun becomes a red giant, what will conditions be like on Earth?
(A) Its atmosphere will freeze and become solid.
(B) It will be enveloped in the expanding surface of the Sun.
(C) It will become too hot for life to exist.
(D) It will be nearly destroyed by nova explosions.

7. As a white dwarf, the Sun will be
(A) the same size as the planet Mercury
(B) thousands of times smaller than it is today
(C) around 35 million miles in diameter
(D) cold and dark

8. According to the passage, which of the following best describes the sequence of stages that the Sun will probably pass through?
(A) Yellow dwarf, white dwarf, red giant, black giant
(B) Red giant, white dwarf, red dwarf, nova explosion
(C) Yellow dwarf, red giant, white dwarf, black dwarf
(D) White dwarf, red giant, black dwarf, yellow dwarf

9. The phrase "throw off" in line 17 is closest in meaning to
(A) eject
(B) burn up
(C) convert
(D) let in

10. The word "there" in line 23 refers to
(A) our own planet
(B) the outer surface of the Sun
(C) the core of a black dwarf
(D) the planet Mercury

11. Which of the following best describes the tone of the passage?
(A) Alarmed
(B) Pessimistic
(C) Comic
(D) Objective

Go on to the next page

K. INFORMED CONSENT FORM

Bu çalışma, Orta Doğu Teknik Üniversitesi, Eğitim Programları ve Öğretim yüksek lisans programı öğrencisi Seda Musaoğlu Aydın tarafından yüksek lisans tezi kapsamında yürütülmekte ve Yrd. Doç. Dr. Nur Akkuş Çakır tarafından denetlenmektedir. Çalışma, bir rol yapma oyununun dil öğrenimi ve ikinci dil motivasyonsal benlik sistemi (L2 motivational self system) üzerine etkisini araştırmak amacıyla yürütülmektedir.

Çalışmaya katılım tamamıyla gönüllülük temelinde olmalıdır. Bu çalışma kapsamında haftalık bir saat bir rol yapma oyunu oynamanız beklenmektedir. Ayrıca haftada bir kere sınıf içinde bir ders süresince bu oyunla ilgili bir saatlik bir aktivite yapılacaktır. Yapılacak sözlü görüşmeler ve aktivitelerde verdiğiniz cevaplarda sizden kimlik belirleyici hiçbir bilgi istenmemektedir ve cevaplarınız tamamıyla gizli tutulup sadece araştırmacı tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Sözlü görüşmeler kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda görüşmeyi yapan kişiye, görüşmeyi tamamlamadığınızı söylemek yeterli olacaktır. Kayıtlar ve görüşmeler sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederim. Çalışma hakkında daha fazla bilgi almak için Seda Musaoğlu Aydın E-posta: smusaoglu@etu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman çalışmadan çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Adı Soyadı   Tarih   İmza

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L. HUMAN SUBJECTS ETHICS COMMITTEE APPROVAL FORM

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Sayın Dr.Öğretim Üyesi Nur AKKUŞ ÇAKIR

Danışmanlığını yaptığınız yüksek lisans öğrencisi Seda Musaoğlu AYDIN'ın **"The effects of game-based learning on students' second language learning and the L2 Motivational Self System"** başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2018-EGT-134** protokol numarası ile **08.10.2018 - 31.08.2019** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

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OYUN TABANLI DİL ÖĞRENMENİN ÖĞRENCİLERİN DİL ÖĞRENİMİ VE İKİNCİ DİL MOTİVASYONAL BENLİK SİSTEMİ ÜZERİNE OLAN ETKİLERİ

GİRİŞ

İngilizce, kitle iletişim araçları, ticari ve endüstriyel topluluklar, çeşitli toplumlar, ekonomik alanlar ve eğitim gibi çeşitli alanlarda en çok kullanılan dil haline geldiği için, iyi derecede İngilizce bilmek dil topluluğunun entegre bir üyesi olmak için gereklidir. Bu, çağdaş topluma ayak uydurmak için gerekli teknik, eğitimsel ve bilgi kaynaklarına erişim için gerekli olan etkili İngilizce öğretimi ve öğrenimi ile gerçekleştirilebilir (Richards & Burns, 2012). Etkili İngilizce öğretim ve öğrenimine yönelik artan talebin bir sonucu olarak, uygulayıcılar dil öğrenme deneyimini daha etkili ve kalıcı hale getirmenin yollarını arıyor. Çağdaş eğitim felsefelerine, teknolojik ilerlemelere ve araştırmalara dayanarak, farklı uygulamalara geçiş vardır (Richards & Burns, 2012) çünkü dil öğrenimi ve algılarımız dijital yükselişle birlikte değişmiştir. Bu, dil eğitimi alanındaki bazı kavramların yeniden tanımlanmasını gerektirmektedir ve çevrimiçi öğrenme ortamları oluşturmak için yenilikler kullanılabilir (Wang & Winstead, 2016).

Oyun şirketleri her yıl yeni oyunlar üretiyor ve piyasaya sürüyor. İnsanlar bilgisayarlara, cep telefonlarına, konsollara, TV'lere ve tabletlere oyunlara daha fazla erişebildikleri için, oyun artık bir azınlık faaliyeti değil, tüm dünyada milyonlarca oyuncu tarafından oynanan oldukça yaygın bir aktivitedir. Oyunlar çeşitli ülkelerde üretilip geliştirildiğinden, dil öğrenmesini etkileyebilecek çok dilli ve kültürlerarası oyun gerçekliği eğitimciler tarafından kabul edilmelidir. "Çalışma", "öğrenme" ve "çalışma" kavramlarının geleneksel tanımları, post-endüstriyel ve uluslararası ekonominin gerçekliği göz önüne alınarak yeniden ele alınmalıdır. Aslında, dil öğrenme yüz yüze etkileşim yerine sohbet odaları, video

oyunları ve çevrimiçi ağlar gibi sanal ortamlarda gelişmektedir (Reinhardt, 2013). Bu nedenle eğitimciler, geleneksel yöntemlerin endüstriyel ve teknoloji ağırlıklı bir gelecek için dil öğretiminde artık etkili olamayabileceğinin farkında olmalıdır, çünkü gerekli olan bilgi geleneksel olmaktan ziyade dijitaldir (Lankshear & Knobel, 2006).

Araştırmacılar dijital oyunların nihai bir çözüm olmadığını vurgulasa da (Sykes, 2018), dijital oyunlar ve eğitim potansiyelleri, teknoloji ve bilgisayarların ilerlemesi ile araştırmacıların ve uygulayıcıların dikkatini çekti ve yenilikçi bir eğitim yaklaşımı olarak görüldü (Gee, 2003; Shaffer, Squire, Halverson & Gee, 2005; Foster, 2009; Squire, 2006, 2008; Gros, 2007; Prushotma, Thorne & Wheatley, 2008; Skyes, Reinhardt & Thorne, 2010). Araştırmacılar, iyi tasarlanmış dijital oyunların, kendilerine meydan okuyabilecekleri ve diğer insanlarla iletişim kurarak ve kendilerini sosyal olarak gelişebilecekleri zengin, ilgi çekici, motive edici ve ödüllendirici ortamlar olduğunu iddia ediyorlar.

Dil öğrenimi ve öğretimi için kullanılabilecek oyunlar ikiye ayrılır; eğitim amaçlı ciddi oyunlar ve eğlence için tasarlanmış oyunlar. Eğitim amaçlı ciddi oyunlar eğitim ya da dil öğrenimi amacıyla özel olarak tasarlanmıştır. Ticari oyunlar ise eğlence amacıyla tasarlanmıştır (Reinhardt & Sykes, 2012). Sadece eğlence için kullanılmasının dışında, ticari kullanıma hazır video oyunları dil öğretimi için de bir araç olarak kullanılabilir (Purushotma, 2005). Oyuncular doğal bağlamlarda oyun oynamak için çok fazla zaman harcıyorlar ve bu deneyimlerden kazandıkları şeyler eğitim açısından önem taşıyor. Çoğu zaman oyunlar merak uyandırıcı, işbirliği gerektiren, fantezi ya da rekabet gibi unsurları içerdiğinden özünde motive edicidirler (Malone, 1981; Malone & Lepper, 1987). Araştırmalar, öğrencilerin yabancı dil öğreniminde ticari oyunların kullanımından yararlandığını göstermektedir (Bryant, 2006; Franciosi, 2017; Hitosugi, Schmidt & Hayashi, 2014; Reinhardt, 2013; Reinders & Wattana, 2015; Reinhardt & Sykes, 2012; Sundqvist & Wikström , 2015; Sykes, 2018).

Motivasyon ikinci / yabancı dil başarısı için çok önemli bir faktördür ve ikinci dil motivasyonunun doğası ve rolü ile ilgili birçok araştırma yapılmaktadır (Dörnyei,

1994). Hem araştırmacılar hem de öğretmenler, motivasyonu hem dil öğreniminin oranını hem de başarısını etkileyen önemli bir faktör olarak kabul etmektedir. Öğrenciler motive olduğunda, dil öğrenmeyi daha çok isteyebilirler ve bazen uzun ve sıkıcı olabilen öğrenmeyi sürdürme dürtüleri artar. Derin öğrenmenin motivasyon ve katılım olmadan gerçekleşemeyeceği söylenebilir (diSessa, 2000).

Çalışmanın Amacı ve Soruları

Bu araştırmayla oyun tabanlı dil öğrenmenin İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil öğrenmelerine ve dil öğrenmeye yönelik motivasyonlarına etkilerinin incelenmesi amaçlanmıştır. Bu amaçla, İngilizce hazırlık okulunda okuyan C seviyesindeki öğrencilerle bir çalışma yapılmış ve bu bağlamda aşağıdaki araştırma sorularına cevap aranmıştır;

1. Oyuna dayalı öğrenme tasarımına katılan öğrenciler ile geleneksel öğrenme tasarımına katılan öğrenciler arasında dil başarısı açısından anlamlı bir fark var mı?
2. Oyuna dayalı öğrenmeye katılan öğrenciler ile geleneksel öğrenme tasarımına katılan öğrenciler arasında L2 motivasyonel benlik sistemi açısından önemli bir fark var mı?
3. Öğrencilerin, PCaRD çerçevesinde tasarlanan oyun destekli öğrenme müdahalesinin dil başarısı ve L2 motivasyonel benlik sistemi açısından etkinliği konusundaki algıları nelerdir?

ARAŞTIRMANIN YÖNTEMİ

Araştırmayla oyun tabanlı dil öğrenmenin İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil öğrenmelerine ve dil öğrenmeye yönelik motivasyonlarına etkilerinin incelenmesi amaçlanmıştır. Özel bir üniversite hazırlık sınıfından seçilen yaklaşık 76 öğrenciyle çalışmanın ana aşaması için yarı deneysel bir çalışma deseni benimsenmiştir. Yarı deneysel desende, deney ve kontrol grupları rastgele atama olmadan seçilir. Hem kontrol hem de deneysel gruplar dönem başında ve sonunda testler yapar, ancak sadece deney grubu müdahaleye maruz kalır (Creswell, 2009).

Tasarım genellikle katılımcıları rastgele atamanın mümkün olmadığı veya pratik olmadığı durumlarda uygulanır (Gribbons & Herman, 1997).

Araştırmanın Katılımcıları

Araştırmanın katılımcılarını üniversite hazırlık sınıfındaki 76 öğrenci oluşturmaktadır. Tüm öğrenciler C seviyesinden seçilmiştir (Avrupa ortak dil kriterleri ile tanımlanmıştır). Çalışmada 2 deney, 2 kontrol grubu vardı. Deney grubunda 38 ve kontrol grubunda 38 öğrenci bulunmaktadır. Yarı yapılandırılmış görüşmelere gelince, deney grubundan 4 kadın ve 3 erkek öğrenci katılmaya gönüllü olmuştur. Tüm öğrenciler, TOEFL ITP puanlarına göre (450-499 arasında) C seviyesine yerleştirildikleri için benzer dil yeterlilik düzeylerine sahiptir.

Oyun Seçimi

Oyunu seçimi bu çalışmadaki en önemli adımlardan biriydi ve dikkatli değerlendirme ve ayrıntılı analizlere dayanılarak Life is Strange araştırma için kullanılacak oyun olarak belirlendi. Araştırma konusuna karar verdikten sonra, aynı üniversiteden bilgisayar oyunları oynayan 5 gönüllü öğrenciyle oyun türleri, oyunların İngilizce öğrenimi üzerine etkisi üzerine konuştu ve son olarak da oyun seçimi için fikir alındı. Bu öğrencilerle birlikte seçilecek oyun için belli kriterlere karar verildi;

a. Oyun hem bilgisayardan hem de akıllı telefondan oynanabilmeliydi. Böylece bilgisayarı olmayan öğrenciler telefon aracılığıyla oyun oynayabileceklerdi.
b. Oyun İngilizce'ye daha fazla maruz kalmayı arttırmak için hikaye tabanlı bir oyun olmalıydı.
c. Oyunun içeriği müfredatın içeriğiyle paralel olmalıydı, böylece müfredat için etkinliklerin hazırlanması daha kolay olurdu.

Oyun Betimlemesi

Life is Strange ödüllü ve eleştirmenlerce beğenilen bir oyundur. Üçüncü şahıs bakış açısıyla oynanan bir grafik macera oyunudur ve 5 bölüm içerir. Baş oyuncu zamanı

geri alabilir ve yapılan herhangi bir işlemi yeniden yapabilir. Oyuncular, görevlerine devam etmek için nesneleri inceleyebilir ve onları kullanarak bulmacaları çözebilirler. Ayrıca karakterler geri sarılabilen konuşma seçeneklerini kullanarak iletişim kurabilirler. Bazı durumlarda, bir diyalog geri sarıldığında veya bir bulmaca çözüldüğünde geçmiş, şimdi veya gelecek değiştirilebilir ve oyunun hikayesi kısa veya uzun vadeli olarak etkilenebilir. Bu nedenle, oyuncu hikayeyi farklı bir yoldan yönlendirebilir ve hikaye tamamen farklı bir sona sahip olabilir. Oyuncular, Arcadia Bay'in kurgusal ortamında kolayca dolaşabilirler. Oyun hikaye tabanlı olduğundan, oyuncuları talimatlar, sürekli diyaloglar, ana karakterin tuttuğu günlük, oyuncular arasındaki kısa mesajlar ve oyun içindeki metinler gibi çok sayıda yazılı dile maruz bırakır.

Süreç

Hem deney hem de kontrol gurubundaki öğrenciler, sonuçları dönem sonunda girecekleri TOEFL ITP sınavı ile karşılaştırılmak üzere, dönem başında TOEFL ITP testine girdiler. Aynı zamanda, her iki guruba da ikinci dil motivasyonel benlik sistemi anketi uygulandı. Dil motivasyonlarında bir artış olup olmadığını saptamak için, bu uygulamanın sonuçları dönem sonunda yapılacak aynı uygulamanın sonuçlarıyla karşılaştırılacaktı. Çalışma 13 haftalık dönemin 3. haftası başlamış ve 10 hafta sürmüştür. Deney gruplarındaki katılımcılara araştırma hakkında bilgi verildi ve katılmayı kabul ettikten sonra süreç ve oyun hakkında bilgilendirildiler. Oyun araştırmacı tarafından satın alındı ve öğrencilere verildi. Bazıları bilgisayarlarında oynadı, birkaç katılımcı da telefonlarında oynamayı tercih etti.

Öğrencilerden oyuna başlamaları istendi, oyun 5 bölümden oluşuyordu ve öğrencilerin her iki haftada bir bölüm oynamaları istendi. Bölümün bir kısmını bir hafta ikinci kısmını da diğer hafta oynuyorlardı. Haftada bir de araştırmacı tarafından tasarlanan aktiviteler deney gurubuyla yapılıyordu. Bu aktiviteler öğrencilerin oyun deneyimleri ile motivasyon ve dil öğrenimini bir araya getiriyordu.

Oyun tabanlı öğrenmenin etkili olup olmadığını görmek için tekrar TOEFL ITP sınavı yapıldı ve ikinci dil motivasyonel benlik sistemi anketi uygulandı. Dönem başı ve sonu sonuçları karşılaştırıldı. Ayrıca 7 tane öğrenciyle oyun deneyimleri ile ilgili görüşme yapıldı.

Veri Toplama Araçları

Çalışmada üç farklı veri toplama aracı kullanılmıştır. İlk olarak Dörnyei ve Csizér (2006) tarafından geliştirilen ikinci dil motivasyonel benlik sistemi kullanılmıştır. Bu anketin amacı öğrencilerin dil öğrenimleriyle ilgili motivasyon ve duygularını öğrenmektir. Bu amaçla hem dönem başında hem de dönem sonunda uygulanmıştır ve dönem başı ve dönem sonu puanları açısından deney be kontrol gurupları arasında bir fark olup olmadığına bakılmıştır. İkinci veri toplama aracı olarak da TOEFL ITP sınavı kullanılmıştır. Yine dönem başı ve dönem sonu puanları göz önüne alınarak deney ve kontrol gurupları arasında bir fark olup olmadığına bakılmıştır. Üçüncü veri aracı olarak da yarı yapılandırılmış görüşmeler kullanılmıştır. Deney gurubundan yedi öğrenci ile oyun ve oyun tabanlı öğrenmenin dil öğrenimi ve dil motivasyonu üzerine etkileri üzerine görüşmeler yapılmıştır.

Veri Analizi

Nicel veri analizi için, hem ikinci dil motivasyonel benlik sistemi anketinin hem de TOEFL ITP'nin ön ve son test sonuçları SPSS kullanılarak analiz edildi. Anket ve TOEFL için frekanslar ve ortalama puanlar elde edildi. İki faktörlü karışık ANOVA kullanılarak da farkların önemli olup olmadığını saptamak amaçlandı. Nitel kısım için, müdahalenin etkinliği ile ilgili veriler mülakat yoluyla yedi öğrenciden elde edildi. Veriler ses kaydı yapıldı, yazıya döküldü ve nitel içerik analizine tabi tutuldu. Çevriyazı MAXQDA'e yükledikten sonra, tüm veriler tekrar tekrar analiz edildi ve kodlar, kategoriler ve temalar oluşturuldu. Ayrıca literatürden de kodlar kullanıldı. Mülakatlardan örnek alıntılar içeren bir kod listesi oluşturuldu. Analiz prosedürü tamamlanmadan önce ara güvenilirliği kontrol edildi. Kod listesi ikinci bir kodlayıcıya açıklandı ve kodlayıcılar arasında kalibrasyonu sağlamak için bir örnek kodlama oturumu yapıldı ve tutarsızlıklar tartışmalar yoluyla çözüldü. İki kodlayıcı,

ana temaları tanımlamak için transkriptleri tek tek inceledi ve verilerin % 20'si ayrı ayrı kodlandı. Daha sonra Krippendorff's alpha hesaplandı ve güvenirlilik .84 ($\alpha > 0.7$) olarak bulundu.

Etik Hususlar

Çalışma öncesinde ve sırasında bazı etik konular ele alındı. Birincisi, araştırmacı araştırmanın yapılacağı kuruma bir dilekçe yazdı. Dilekçede çalışmanın amacı ve prosedürü ile kullanılacak veri toplama yöntemleri yer alıyordu. Daha sonra bu talep üniversitenin kurumsal inceleme kurulunda görüşüldü ve araştırmanın kurum içinde uygulanmasına izin verildi. Bu arada çalışma ODTÜ Etik Kuruluna sunuldu ve izin alındı. Ayrıca öğrencilere onay formları dağıtıldı. Çalışmanın amacı, öğrencilerin çalışmaya katılırlarsa izleyecekleri prosedürler, öğrencilerin cevaplarının gizli tutulacaklarına ve istedikleri zaman çalışmayı durdurabileceklerine dair bilgi verildiler. Ayrıca, öğrencilere çalışmanın prosedürü ve dönem boyunca ne yapmaları beklendiği hakkında sözlü olarak bilgi verildi. Prosedür ayrıntılı ve açık bir şekilde açıklanmıştır. Deney grubundan 2 öğrenci katılmak istemediklerini bildirdiler ve çalışmaya dahil edilmediler. Gizliliği sağlamak için, öğrencilerin kimlikleri korundu ve görüşmeye katılan öğrenciler bir numara ve sınıf adları ile temsil edildi.

Araştırmanın Sınırlılıkları

Bu çalışmada çeşitli sınırlılıklar gözlemlenmiştir. İlk olarak, katılımcıların araştırmacıya yakın olması nedeniyle öğrencileri seçmek için uygun örnekleme yöntemi kullanılmıştır. Bu nedenle, veriler sadece belirli bir grup insandan toplanmıştır. Bu nedenle, sonuçları tüm popülasyona genellemek zor olabilir ve bir grubun çok veya yetersiz temsil edilme olasılığı vardır.

Ayrıca, çalışmanın kapsamı, Türkiye'nin başkentinde bulunan özel bir üniversitenin hazırlık okuludur. Katılımcıların sosyo-ekonomik geçmişi ve oyun deneyimine aşina olmaları sonuçları etkilemiş olabilir. Ayrıca, çalışma on haftalık bir dönemde gerçekleştirilmiştir. Uygulama daha uzun olsaydı, çalışma süreci ve sonuçlar

hakkında daha iyi bir anlayış elde edilebilirdi. Ayrıca uygulama için sadece bir tane oyun seçildi. Bu oyunda sonuçları etkileyebilecek bazı özel özellikler olabilir. Farklı oyunlarla benzer çalışmalar yürütmek, oyunları müfredata entegre etme süreci hakkında daha iyi bir anlayış geliştirmek için yararlı olacaktır.

BULGULAR

Bu çalışmanın amacı, oyun tabanlı bir müdahalenin öğrencilerin İngilizce dil öğrenmesini ve dil öğrenme motivasyonlarını etkileyip etkilemediğini araştırmaktır. Bu amaçla, bu çalışmada karma yöntem araştırması kullanılmıştır. Farklı veri toplama araçları kullanılmış ve bu araçlar araştırma sorularını cevaplamak için veri sağlamıştır. Bu çalışmanın bulguları nicel ve nitel diye ikiye ayrılır. Nicel çalışmanın sonuçları dönem başında ve sonunda yapılan TOEFL ITP ve ikinci dil motivasyonel benlik sistemi anketleri analiz ederek elde edilirken; nicel bilgiler ise yarı yapılandırılmış görüşmelerde elde edilen veriler analiz edilerek elde edilmiştir.

Dönem başında ve sonunda uygulanan TOEFL ITP sonuçları karşılaştırılmış ve ortalamalara bakıldığı zaman, deneysel gurubun ortalamasında kontrol gurubunun ortalamasına göre daha fazla bir artış olduğu gözlemlenmiştir. TOELF ITP skorları üzerinde gurup (kontrol ve deney) ve test süresinin (ilk test ile son test) etkilerini test etmek için iki faktörlü karışık ANOVA uygulanmıştır. Analiz, ön test ve son test puanları arasında anlamlı bir fark olduğunu ortaya koymuştur, $F(1,86)=475.01$, $p<.05$, kısmi $\eta^2=.85$. Bununla birlikte, kontrol ve uygulama grupları arasında anlamlı bir fark gözlenmemiştir, $F(1,86) =. 11$, $p> .05$. Etkileşimin de önemli olmadığı görüldü, $F (1,86) =. 12$, $p> .05$. Sonuçlar, her iki grubun dil becerilerini önemli ölçüde arttığını gösterse de, uygulama grubu lehine olan ortalamadaki artış anlamlı bulunmamıştır. Yani, dönem başında ve sonunda yapılan TOEFL ITP sonuçları karşılaştırıldığı zaman deney gurubu lehine istatistiksel olarak anlamlı bir fark bulunmamıştır. Aynı işlem sınavın üç kısmı (dinleme, gramer ve okuma) için de ayrı ayrı gerçekleştirilmiştir ama anlamlı bir etkileşim gözlemlenmemiştir.

Aynı işlem önem başında ve sonunda uygulanan ikinci dil motivasyonel benlik sistemi anketi üzerinde de yapılmıştır. Dönem başında ve sonunda yapılan anketlere

bakıldığında deneysel gurubun aritmetik ortalaması kontrol gurubun aritmetik ortalamasından fazla bulunmuştur. Bu farkın anlamlı olup olmadığını görmek için, İkinci dil motivasyonel benlik sistemi üzerinde zaman (ön test ve son test) ve gurup (kontrol ve deneysel) etkilerini test etmek için iki faktörlü karışık bir ANOVA uygulanılmıştır. Zaman ve grup arasında istatistiksel olarak anlamlı bir etkileşim bulunmamıştır, $F(1,74) =. 21, p> .05$. Ayrıca, sonuçlar zaman ve grup, $F (1,74) = 1.13, p> .05$ için anlamlı bir fark göstermemiştir, Bu nedenle, zaman ve grup arasındaki etkileşimin L2 motivasyonu üzerinde anlamlı bir etkisi olmadığı görülmektedir. Aynı istatistiksel işlem tüm alt on faktör için de gerçekleştirilmiştir ama hiçbiri için anlamlı bir etkileşim gözlemlenmemiştir.

Öğrencilerle yapılan görüşmelerin analizi sonucu üç ana tema elde edilmiştir: dijital oyunların doğası, oyun tabanlı öğrenmenin doğası ve Life is Strange'in doğası. Dokuz tane de alt tema elde edilmiştir. Dijital oyunların doğasına bakıldığı zaman öğrenciler oyunların dil öğrenimi açısından oldukça faydalı olduğunu belirtmiştir. Katılımcılar oyunlar sayesinde hedef dile sürekli maruz kaldıklarını ve bunun sonucu olarak da dil becerilerinin geliştiğini vurgulamışlardır. Özellikle kelime öğrenimi, dinleme becerisi, telaffuz ve günlük dilde kullanılan ifadelerin öğrenilmesi açısından faydalı olduğunu vurguladılar.

Öğrenciler oyunun İngilizce bilgisine nasıl katkıda bulunduğunu yorumladığında, oyun ortamının bağlamlarıyla etkileşim içine girerek bilgi edinmenin önemini vurguladılar ve mevcut bilgilerini yeni öğrenme deneyimleriyle pekiştirebileceklerini belirttiler. Öğrenciler oyun deneyimini çok ilgi çekici bulduklarını ve zamanın nasıl geçtiğini fark etmediklerinden bahsettiler. Sürükleyici oyun oynamanın en önemli özelliklerinden biri, 'hedef dilde düşünme' ye başlamak olarak görülebilir. Öğrenciler, bir süre sonra anadillerinden uzaklaşmaya ve İngilizce düşünmeye başladıklarını iddia etmişlerdir. Ayrıca, sanal ortamlar öğrencilerin bir karakterin veya avatarın rolünü üstlenerek ve korkularıyla yüzleşerek kendilerini ifade edebildikleri konforlu ve güvenli yerlerdir. Bu ortamlarda öğrencilerin yanlış yapma korkularının olduğu okul ortamlarından farklıdır ve öğrenciler bu ortamlarda daha rahat ve güvende hissederek dil öğrendikleri söylediler.

Ayrıca, mülakatların analizi oyun entegrasyonunun gelecekteki benliklerini dil yeteneklerine göre hayal etme fırsatları sunduğunu gösterdi. Öğrencilerin yorumlarından dan da görülebileceği gibi, hedef dilde işlev görebilen olumlu bir benlik imajı oluşturmaya başladılar. Gerçekçi ortamlarda oyun oynadıkça ve dili kullanabildiklerini gördükçe, arzu edilen benliklerine ulaşma şanslarını gördüler. Eğer oyun oynarken insanlarla İngilizce konuşabiliyorlarsa ve okuduklarını anlayabiliyorlarsa gelecekte de dili istedikleri gibi kullanabilirlerdi. Oyunu müfredata entegre etmek için tasarlanan yansıtma ve tartışma faaliyetleri, İngilizce dil öğrenmeleri, yetenekleri ve gelecekteki dil kullanımları hakkındaki bilinçlerini arttırdı.

Öğrenciler Life is Strange' i çok sevdiklerini ve oynarken hem eğlendiklerini hem de dil öğrendiklerini dile getirdiler. Life is Strange oynarken katılımcılar oyunu çok ilginç buldu ve oyunun uzunluğunun tatmin edici olduğunu ifade ettiler. Oyunun akışının içinde dili farkında olmadan öğrendiler. Ayrıca oyun hikâye tabanlı olduğu için öğrenciler dile çok fazla maruz kaldılar ve böylece yeni şeyler öğrendiler ya da var olan bilgilerini pekiştirme fırsatları oldu. Life is Strange, oyuncuların çok sayıda seçim yapma fırsatına sahip olduğu bir oyundur. Oyuncunun seçimleri ve sonuçları olayların tüm akışını etkiler. Öğrenciler, kahramanın rolünü üstlenerek oyun içinde seçimler yaptılar ve karakterlerin kaderlerine ve tüm hikâyeyi yönlendirdiler.

TARTIŞMA

Dönem başında ve sonunda uygulanan TOEFL ITP sonuçları karşılaştırıldığında kontrol ve deney gurupları arasında anlamlı bir fark bulunmamıştır. Bu bulgular, kelime dağarcığı (Ranalli, 2008; Mazaji & Tatabaei, 2016), dinleme, okuma (Chen & Yang, 2011) ve dilbilgisi (Kongmee et al., 2012) gibi dil becerileri için önemli kazanımlar bulan önceki araştırmaların bazılarıyla çelişmektedir. Mevcut literatür, özellikle oyun entegrasyonu sonucu oluşan sözcüksel kazanımları vurgular (deHaan, Reed & Kuwada, 2010; Hitosugi & Sundqvist, 2009; Miller & Hegelheimer, 2006; Schmidt & Hayashi, 2014; Purushotma, 2005; Rankin ve ark. , 2006; Ranalli; 2008; Sylvén, LK & Sundqvist, 2012). Bununla birlikte, oyunların dil öğrenmede her zaman amaçlanan kazanımları sağlamadığının altını çizen bazı

araştırmalar da bulunmaktadır (Chen & Yang, 2013; Vandercruysse ve ark., 2013). Örneğin, Salehi (2018), video oyununun kelime dağarcığı üzerindeki etkileri hakkında bir çalışma yürüttü ve oyunun kelime öğrenimi üzerinde önemli bir etkisini bulamadı. Literatürün de belirttiği gibi bu bulguların birçok nedeni olabilir. Bireysel farklılıklar (All, Castellar, & Van Looy, 2016; Hitosugi, Schmidt, & Hayashi, 2014) veya öğrencilerin dijital oyunlarla öğrenmeye yönelik tutumları, öğrencilerin dil kazanımlarını etkilemiş olabilir (Hitosugi, Schmidt & Hayashi, 2014). Önemli bulgular edilememiş olmasının bir nedeni de TOEFL ITP'nin sadece alımlayıcı becerileri (dinleme, gramer, okuma) ölçtüğü göz önüne alındığında, öğrencilerin konuşma ve yazma becerilerini geliştirip geliştirmediği önerilemez. Ayrıca, görüşmeler incelendiğinde, katılımcılar oyun uygulaması sayesinde en çok gelişen dil becerilerinin kelime ve günlük dil olduğunu belirtmiştir. Ancak sınavda bu iki beceriyi doğrudan ölçen kısımlar bulunmamaktadır. Ayrıca, sınav puanları arasında anlamlı bir fark olmamakla birlikte, deney gruplarında sadece 2 öğrenci (38 öğrenciden) sınavda başarısız olmuş ve tekrar C seviyesini tekrarlamak zorunda kalmıştır, ama kontrol grubunda tekrar eden öğrenci sayısı 4'tür (38 üzerinden). Ek bir neden de oyuna ve aktivitelere ayrılan zamanın tatmin edici olmaması olabilir. Oyunun kabaca 15 saatlik olduğu ve aktivitelerin haftada sadece bir saat uygulandığı düşünüldüğünde, bunların hem dil motivasyonu hem de dil öğrenimi üzerindeki etkisi yeterince güçlü olmayabilir. Bu nedenle, eğer oyun daha uzun sürebilir ve etkinlikler daha fazla yapılırsa, katılımcılar daha fazla dil girdisi ile karşılaşma şansına sahip olacaklardır ve böylece daha iyi bir oyun sonrası performansı sergileyebilirler.

Dönem başında ve sonunda uygulanan ikinci dil motivasyonel benlik sistemi anketi sonuçları karşılaştırıldığında kontrol ve deney gurupları arasında anlamlı bir fark bulunmamıştır. Her ne kadar öğrenciler görüşmelerde oyun oynama deneyiminin dil öğrenme motivasyonlarını arttırdığını söylese de, sonuçlar anlamlı bir fark olmadığını göstermiştir. Oyun oynamanın motivasyon üzerine etkisi ile ilgili literatürde olumlu bir eğilim vardır (Dalton & Devitt, 2016; Hamari et al., 2016; Peterson, 2010; Squire, 2002, 2008; Shahriarpour & Kafi, 2014; Wilkinson, 2016; Wehner, Gump & Downey, 2011) ama bu çalışmada böyle bir sonuç elde

edilmemiştir. Buna benzer sonuçlar başka çalışmalarda da elde edilmiştir (Chen & Huang, 2014).

Kontrol ve deney grupları arasında başarı testi sonuçları açısından anlamlı bir fark bulunmasa da, öğrenciler oyunlara ve oyunu geliştiren öğrenme fırsatlarına karşı olumlu bir tutum sergiledi. Dil becerileri ve dil öğrenme süreçleri için oyunların ve oyun tabanlı öğrenmenin birçok avantajından bahsettiler. Başlangıç olarak, tüm katılımcılar, oyunlara derslere entegrasyonun dijital çağın doğal sonucu olduğunu ve oyun entegrasyonunun son derece etkili ve ilginç olduğu görüşündeydiler. Ranalli (2008)'nin de çalışmasında bulduğu gibi, yardımcı materyallerin faydalarını ve dil öğrenme süreçlerine ve motivasyonlarına nasıl katkıda bulunduklarını vurguladılar. Ayrıca, hem mevcut çalışmada hem de Ranalli (2008)'nin çalışmasında öğrenciler, ek materyallerden ne kadar keyif aldıklarını belirtmişlerdir. Bu da PCaRD'ın oyun entegrasyonu için iyi bir teorik çerçeve olduğunun bir göstergesi olabilir. Ayrıca, öğrenciler oyunun (Life is Strange) çeşitli nedenlerden dolayı oyun entegrasyonu için iyi bir seçim olduğunu belirtti. Literatür, dil öğrenimini desteklemek için oyun kullanılmasında oyun seçiminin önemine işaret etmektedir (deHaan, 2011; Klimova & Kacet, 2017). Dahası, tüm katılımcılar oyun destekli öğrenmenin dil becerilerine ve gelişimlerine katkıda bulunduğunu belirtti. Katılımcılar bu dil becerilerini kelime bilgisi (Miller & Hegelheimer, 2006), dinleme ve okuma (Chen & Yang, 2011), dilbilgisi (Knogmee et al., 2012) ve iletişim becerileri (Peterson, 2010) olarak belirlediler.

Öneriler

Yeni nesillerin teknoloji ile büyüdüğünü ve akıllı telefonlar, bilgisayarlar, tabletler, oyun konsolları gibi teknolojik cihazların hayatlarının vazgeçilmez parçaları olduğunu düşünürsek, öğretim hedeflerini ve materyalleri planlarken, müfredat geliştiricileri teknolojinin öğrencilerin hayatlarındaki yerini ve önemini anlamalıdır. Öğretmenler etkili teknoloji entegrasyonuna odaklanmalı ve öğrencilerin ilgi ve ihtiyaçlarını karşılamak için teknolojiyi kullanmalıdır.

Dil öğrenmeyle ilgili bir diğer konu ise, öğrencilerin motivasyon eksikliğidir ve bu sorun, hazırlık okullarında sadece İngilizce öğretildiği için, öğrenciler genelde dersleri sıkıcı bulur ve derse karşı ilgisizdirler. Bu durum dönem sonlarına doğru daha da kötüleşir. Bu öğretmenler için her zaman önemli bir konudur. Bu çalışma sırasında katılımcılar, oyun entegrasyonu fikrini ne kadar sevdiklerini ve öğrenmeyi nasıl daha eğlenceli ve ilginç hale getirdiğini belirttiler. Bu nedenle, öğretmenlerin ve müfredat geliştiricilerinin oyunları müfredatlarına entegre ederek veya dersleri daha ilginç hale getirmenin yollarını bularak İngilizce öğretirken öğrencilerin motive ve odaklanmış olmalarını sağlamak önemlidir. Oyun entegrasyonu ve oyunlarla ilgili etkinliklerin tasarlanması, teknolojik eğitim, ekipman ve planlama eksikliği açısından öğretmenler için zor olabilir. Bu yüzden öğretmenlere teknoloji ve teknoloji kullanımıyla ilgili gerekli eğitim verilmelidir.

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<u>TEZİN TÜRÜ</u>/ <u>DEGREE:</u> **Yüksek Lisans**/ Master ■   **Doktora** / PhD ☐

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