

**EFFECT OF GAMIFIED GAME-BASED LEARNING ON L2
VOCABULARY RETENTION BY YOUNG LEARNERS**

Pelin BİRSEN

MAY 2017

**EFFECT OF GAMIFIED GAME-BASED LEARNING ON L2
VOCABULARY RETENTION BY YOUNG LEARNERS**

**A THESIS SUBMITTED TO THE
GRADUATE SCHOOL OF EDUCATIONAL SCIENCES
OF
BAHÇEŞEHİR UNIVERSITY**

BY

Pelin BİRSEN

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN THE DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

MAY 2017

Approval of the Graduate School of Educational Sciences



Assoc. Prof. Sinem VATANARTIRAN

Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Arts.



Assist. Prof. Aylin TEKİNER TOLU

Coordinator

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts.



Dr. Hatime ÇİFTÇİ

Supervisor

Examining Committee Members

Dr. Hatime ÇİFTÇİ

(BAU, ELT)



Assist. Prof. Yavuz SAMUR

(BAU, CEIT)



Dr. Aslı SAĞLAM

(OZU, SCOLA)



I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name : Pelin BİRSEN

Signature



ABSTRACT

EFFECT OF GAMIFIED GAME-BASED LEARNING ON L2 VOCABULARY RETENTION BY YOUNG LEARNERS

Birsen, Pelin

Master's Thesis, Master's Program in English Language Education

Supervisor: Dr. Hatime ÇİFTÇİ

May 2017, 72 pages

The main purpose of this study is to examine the effect of gamified game-based L2 vocabulary instruction on young learners' vocabulary retention and their perceptions. This quasi-experimental study was conducted in Spring 2017 for 6 weeks at a private primary school in the northwest of Turkey. The participants were 36 beginner level first grade Turkish EFL young learners aged between 5 and 7. The data was collected through L2 vocabulary pre-test and post-test from experimental group with 18 students and a control group with 18 students; and a Pictionary Game was the treatment applied to the experimental group. Additionally, a questionnaire was utilized to explore the students' perceptions of their gamified game-based lessons and interviews were conducted with 6 students from the experimental group. The data from the pre-test and post-test was analyzed using the SPSS. The results indicated that all the students performed better in their post-tests. However, students in the experimental group outperformed those in the control group in their post-tests. Moreover, the students' perceptions towards gamified game-based L2 vocabulary instruction were positive. Finally, this study suggests that gamified game-based L2 vocabulary teaching can be implemented to young learners' EFL lessons as an effective method to enhance their performance as well as enthusiasm.

Keywords: Gamification, Game-based Teaching, Pictionary Game, Young Learners,
Game Elements

ÖZ

OYUNLAŞTIRILMIŞ OYUN TEMELLİ ÖĞRETİM YOLUYLA ÇOCUK ÖĞRENCİLERE YABANCI DİL ÖĞRETİMİNİN KELİME ÖĞRENME VE HATIRLAMAYA ETKİSİ

Birsen, Pelin

Yüksek Lisans, İngiliz Dili Eğitimi Yüksek Lisans Programı

Tez Yöneticisi: Dr. Hatime ÇİFTÇİ

Mayıs 2017, 72 sayfa

Bu çalışmanın temel amacı, oyunlaştırılmış oyun temelli kelime öğreniminin çocukların kelime hazinesinde kalıcılığına etkisini ve çocukların algılarını incelemektir. Bu yarı deneysel çalışma, 2017 yılının bahar döneminde 6 hafta boyunca Türkiye'nin kuzeybatısında özel bir ilköğretim okulunda gerçekleştirildi. Katılımcılar, 5 - 7 yaş arasında olan İngilizce dilini yabancı dil olarak öğrenen 36 adet başlangıç seviyesinde ilköğretim birinci sınıf Türk öğrencilerdi. Veriler, 18 öğrenciden oluşan deney grubundan ve 18 öğrenciden oluşan kontrol grubundan, kelime ön test ve son test sonuçlarından toplandı. Pictionary oyunu, deney grubuna uygulanan müdahale olmuştur. Ek olarak, öğrencilerin oyunlaştırılmış oyun temelli derslerine ilişkin algılarını keşfetmek için bir anket kullanıldı ve deney grubundan 6 öğrenci ile röportaj yapıldı. Ön test ve son testten toplanan veriler, SPSS kullanılarak analiz edilmiştir. Sonuçlar, tüm öğrencilerin son testlerinde daha iyi performansların gösterdiklerini ortaya koydu. Bununla birlikte, deney grubundaki öğrenciler, son testlerinde kontrol grubuna göre daha başarılıydı. Ayrıca, öğrencilerin oyun temelli sözcük eğitimine yönelik algıları olumludur. Ayrıca, öğrencilerin oyunlaştırılmış oyun temelli kelime öğrenimine yönelik algıları olumlu olmuştur. Son olarak, bu çalışma, oyun temelli kelime öğretiminin, küçük yaş grubu

öğrencilerin İngilizce derslerine, hedeflenen kelimeleri öğrenirken performanslarını ve ilgisini arttırmak için etkin bir yöntem olarak uygulanabileceğini önermektedir.

Anahtar Kelimeler: Oyunlaştırma, Oyun Temelli Öğretim, Pictionary Oyunu, Çocuk Öğrenci, Oyun Öğeleri

To My Mum

ACKNOWLEDGEMENTS

First of all, I would like to express my deepest gratitude to my advisor Dr. Hatime ÇİFTÇİ for her ever-lasting support to my never-ending questions, encouragement and guidance during every step of this process. This thesis would not have been possible without her guidance.

Aside from my advisor, I would like to thank to the rest of my thesis committee, Assist. Prof. Yavuz SAMUR and Dr. Aslı SAĞLAM for their valuable feedback in forming my thesis.

Furthermore, I want to thank my friends and colleagues in Sarıyer Doğa primary school, for their support and motivation, and also to Kirsten HARROD for editing, contributing and proofreading my thesis.

Also, I would like to express my heartfelt gratitude to my dear friends Beril DİNÇERDEN, Buse Gizem ERGİNAL, Ezgi ÖNOL and Cansu BİLSEL for their encouragement when I needed support both in my personal life and throughout the master's degree process.

My special thanks to my beloved significant other Semih YILMAZ, for his contributions in my thesis as well as the permanent understanding, love and support he has given me throughout the master's program and in life.

And lastly, I would like to thank my family for their patience and understanding during the whole process of this study and for enduring all my madness. I would like to thank my aunt Türkan GÜRBÜZ for always being there for me and my cousins who are more sisters to me than cousins, Cansu GÜRBÜZ and Aysu GÜRBÜZ.

I am indebted especially to my mother Tünay BİRSEN and my father Güray BİRSEN, for their unbelievable support, constant understanding, deepest love and endless patience throughout this thesis. Their loving support and understanding have made all things possible.

TABLE OF CONTENTS

ETHICAL CONDUCT	iii
ABSTRACT	iv
ÖZ	vi
DEDICATION	vii
ACKNOWLEDGEMENTS	ix
TABLE OF CONTENTS	x
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
Chapter 1: Introduction	1
1.1 Theoretical Framework	3
<i>1.1.1.1 Theoretical Perspectives on Gamification.</i>	5
1.1.2 Game - Design Elements.	6
1.1.3 Game – Based Learning.....	8
1.2 Statement of the Problem	9
1.3 Purpose of the Study.....	10
1.4 Research Questions	10
1.5 Significance of the Study	10
Chapter 2: Literature Review	12
2.1. Gamification in Education.....	12
2.2. Gamification and Vocabulary Learning	15
2.3. Students Perceptions of Learning through Games	17
Chapter 3: Methodology	19
3.1. Philosophical Paradigm	19
3.2. Research Design	20
3.3 Target Population and Participants.....	20
3.4 Procedures	21
3.4.1 Data Collection Procedures..	23

3.4.1.3 Post-test.....	25
3.4.1.4 Questionnaire.....	25
3.4.1.5 Interviews.....	25
3.4.2 Data Analysis Procedures..	26
3.4.3 Reliability and Validity.....	26
3.5 Limitations.....	27
Chapter 4: Results	29
4.1 Results Pertaining to the Research Question 1	29
4.1.1 Comparison of the Pre-Test Scores between the Groups.	29
4.1.2 Comparison of the Pre-test and Post-test Scores within the Groups.	30
4.1.3 Comparison of Post-test scores between Groups.....	31
4.2 Results Pertaining to the Research Question 2.....	32
Chapter 5: Discussion and Conclusion	43
5.1 Overview of the Study.....	43
5.2 Discussions of Results for Research Questions	44
5.2.1 Discussions of Results for RQ1: What is the effect of gamified game-based L2 vocabulary teaching on young learners' vocabulary retention?	44
5.2.2 Discussions of Results for RQ 2: What are the learners' perceptions of gamified game-based L2 vocabulary instruction?	44
5.3 Pedagogical Implications	46
5.4 Conclusions	46
5.5 Recommendations for Further Research	47
References	49
CURRICULUM VITA	57

LIST OF TABLES

Table 1 One-way ANOVA for between the Groups	30
Table 2 Descriptive Statistics for Pre-test and Post-test Scores.....	30
Table 3 Paired Samples t-test for the Comparison of Mean Scores within the Groups	31
Table 4 Comparison of Post-test Scores between Groups	31
Table 5 Overall Means of the Items in the Questionnaire	34

LIST OF FIGURES

Figure 1 Pyramid of Game Elements (Werbach & Hunter 2012).....	7
Figure 2 Overall Results of the Questionnaire	32
Figure 3 Students’ responses to item 10: Points that I earn in Pictionary game makes me feel excited	35
Figure 4 Students’ responses to item 9: When I learn subject through vocabulary games, I remember it more easily.	36
Figure 5 Students’ responses to item 1: I like the classes in which we play Pictionary more.....	36
Figure 6 Students’ responses to item 8: I enjoy learning through Pictionary game because I do not get bored.....	37
Figure 7 Students’ responses to item 7: I enjoy learning through Pictionary games..	38
Figure 8 Students’ response to item 2: I like practicing extra activities outside of the English course book	39
Figure 9 Students’ responses to item 5: I enjoy succeeding and winning	39
Figure 10 Students’ responses to item 6: I enjoy cooperating	40
Figure 11 Students’ responses to item 4: Competition is one of my favourite features	41
Figure 12 Students’ response to item 3: I feel bored when we play Pictionary game in class	42

LIST OF ABBREVIATIONS

EFL	English as a Foreign Language
L2	Second Language
SDT	Self-determination Theory
UD	Universal Design

Chapter 1

Introduction

Raising fluent language speakers who are competent in a second language is a crucial issue in English language teaching in Turkey. In his writings, Karahan (2007) addressed the concerns of Turkish people who believe that they cannot achieve their preferred level of proficiency in English despite their hard work. Over the years in Turkey's foreign language education system, one can frequently hear the comment of being able to understand but not able to speak in English. Not too long ago, foreign language education was seen as teaching a set of grammar rules, grammar formulas, and some necessary vocabulary lists that needed to be memorized. This is directly related to the grammar-translation method, in which lists of vocabulary are learned to illustrate the rules of grammar according to Richards and Renandya (2002).

Vocabulary acquisition in a foreign language is a lengthy and strenuous process, which includes, but is not limited to, textbooks, word lists, flash cards, and repetition. This process becomes further prolonged and challenging with young learners because of their generally short attention spans and lack of motivation. However, vocabulary development is an ongoing process, in which learners should be exposed to words as many times as possible in order to be able to use them. Specifically for young learners, Cameron (2001) explained that they actively try to make sense in everything that they are asked for, including in the learning environment. Since there are various sets of rules young learners must learn to follow, which sometimes do not make sense to them, they initially struggle with the idea of going to school because they are required to sit and listen to lessons for extended periods of time, which inherently goes against their energetic and playful attitudes.

Young learners learn the language holistically, Elorza and Muñoa (2008) state that teachers should take this into consideration while implementing and integrating the yearly curriculum. As long as they enjoy the activities and feel comfortable in the learning environment, they are open and willing to learn. Children aged between seven and twelve prefer their daily lives to be full of games to play in a fun and enjoyable environment. However, realistically they are attending school for

the sole purpose of learning, whether it is English, math, science, or history. Rose and Nicholl (1998), stated that “when we enjoy learning, we learn better” (p.30). Therefore, the role of a teacher of young learners is to link these two seemingly contradictory desires of fun and learning to create an environment where learning is effective as well as entertaining for students.

Creating a comfortable English-learning atmosphere is imperative, and students must feel like English is more than just a subject in the class. By this way, students are given opportunities for active engagement and meaningful learning tasks which motivate them significantly. Motivation and engagement are widely accepted as the first steps of starting and completing a task. Dörnyei (2014) states that lack of motivation is proven to cause stress and unhappiness. Motivation has two further subcategories of extrinsic and intrinsic motivation. In a traditional education setting, the teacher conducts the lesson and students have little to no role other than listening to the teacher. Ames (1992) summarized this type of education model focusing solely on the outcome, which is usually the grade that students will receive at the end. However, to make language classes more appealing to young learners, these lessons should be designed focusing on satisfaction or pleasure. It is the underlying assumption in this study that gamification as an instructional method is a means by which teachers can strongly benefit to have learner-centered language classes with active student involvement. Kapp (2012) defines gamification as an approach by which applying game mechanics, aesthetics, and techniques to engage in non-game contexts. Gamification in education means deciding the best game elements for educational purposes and using them for designing more engaging and motivating lesson plans. Gamification in language education and foreign language learning has gained interest and recently being experienced in classroom environments as a teaching style. However, gamification in education lacks research with young learners, and thus the purpose of this study is to find out the effects of gamification on vocabulary teaching to first graders. Therefore, the major goal of this study is to examine the effect of gamified game-based learning on foreign/second (L2) vocabulary learning by young learners.

1.1 Theoretical Framework

In this section, the notions of gamification, game design elements, and vocabulary learning will be discussed as the underlying theoretical frameworks informing this study.

1.1.1. Gamification. Gamification is broadly the use of game-mechanics and game principles in contexts that are not in association with games, and implementing them into language education in our case. The concept of game-based learning has attracted much attention among many educators lately. The origin of this concept relies on the sentiment that games and play are inherently present in every culture in the world, and beginning to be accounted for as an important part of learning as well (Poulsen, 2011). While scholars try to explore the potential for education through games, the area of game-based learning is broad and includes the games of both digital and non-digital. Historically, the origins of games date back to ancient times. Egyptian hieroglyphs and ruins evidenced that people were playing even as far back as 5000 years ago. The ancient Egyptians, for example, were fond of a game called *Senet*, which was played with two people (Piccione, 1980). While at first, games were more appealing to men, now are almost as addictive to women and children. (Domínguez, Saenz-de-Navarrete, De-Marcos, Fernández-Sanz, Pagés, & Martínez-Herráiz, 2013)

A game is a complex system in which the player has to carry out some tasks within a set of rules (Domínguez et al., 2013). In a game, if a player is successful, he will have positive emotions, supported with badges, points and cups by the game, while if the player loses it will result in anxiety, which is accepted as normal to some extent because games should be designed according to players' level (Domínguez et al., 2013). Games date back to many years and the beginning of using games and game elements in education has also a history.

Gamification was first brought to attention by Nick Pelling in 2002 (Marczewski, 2013), but became popular in 2010 (Deterding, Dixon, Khaled & Nacke, 2011). Gamification has been used in marketing, sustainability, news and entertainment, health, and education areas. In gamification, the focus should be on

user experience, fun, and engagement (Deterding et al., 2011). In order to increase engagement, game elements are added to learning area (Birch, 2013).

It can be seen that game-based learning and gamification are interwoven. However, there is an important difference in the sense that game-based learning enables students to achieve success through games whereas in gamification there is no game environment, but learning continues in a gamified classroom setting; in fact, it helps learning to be more contributing and challenging (Codish & Ravid, 2014; Kim, Park & Baeg, 2009). Gamification could also provide students with choice in learning path while game-based learning might involve simulations to allow students to experience the learning.

The research of video game design elements in non-game contexts goes back to 1980's, and it was advised that fun should be considered as a part of educational software design (Carroll & Thomas, 1988). Kapp (2012) states that teachers generally use games in classrooms, but they have recently started to find out the possibility of turning the classroom into a game environment. Students of this era are growing up in a technological environment, with interactive media and video games, so gamification in classroom may be motivating (Glover, 2013). Gamification should require goals, and every task could be gamified taking the necessary elements into consideration. Gamification was used in many areas including business and marketing, and started to gain interest. Kastner (2013) states that Nike was one of the first users of gamification with their pedometer, Nike+ FuelBand. With the pedometer, users were incentivized to collect fuel-points with their physical activities and share with their friends and have their results displayed in leaderboard.

Deterding et al. (2011) emphasize the distinction between game and play since only behaviors related to gaming are acceptable to be applied to gamification. However, Huotari and Hamari (2012) argued that game design elements are special only to games and redefined gamification as a process of building up a service with affordances for gameful experiences in order to support the user's overall value creation. Werbach (2014) defined gamification as the process of making activities more game-like; however, Burke (2014b) emphasizes that the focus should be on the differences between gamification and game while one being only for entertainment

and the other focuses solely on motivation and emotions in different areas.

1.1.1.1 Theoretical Perspectives on Gamification. Gamification, generally defined as the use of game elements and mechanics in non-game contexts, has several theoretical foundations developed by several scholars. Gamification has emerged in the business sector and marketing at first, then gained the attention of the educators. In that sense, Deterding (2012) explains the reasons of gamification being brought up to the attention of the educators since it is a cheaper technology, and it has personal data tracking, having a greater success and the existence of the game medium.

One motivational theory used in gamification framework is the Self Determination Theory grounded by Ryan and Deci (2000). They stated that the self-determination theory is about getting students' interest in learning and gaining confidence in their own capacity. It was also explained by the same researchers that these processes cause a higher quality of learning and understanding. Ryan and Deci (2000) defined motivation as "...to be moved to do something" (p.54). This statement can be explained as when there is no enthusiasm towards doing something one is unmotivated. However, when one is motivated, he feels positive. Motivation is subjective because people have different levels and sources of motivation.

Another theory asserted by Ryan and Deci (2000) is the intrinsic and extrinsic motivation, which contributes directly to the self-determination theory. Intrinsic motivation refers to doing an activity for its inner satisfaction but not for other separate consequence. In other words, if someone is intrinsically motivated, he acts for the purpose of fun and challenge instead of an external urge. Extrinsic motivation, on the other hand, refers to doing an activity for reaching an outcome. While extrinsic motivation contrasts with intrinsic motivation, it can vary greatly, such as a student doing his homework because he fears from his parents, or someone doing something because she knows that it is important for her career not because it is interesting for her.

One other theory is the Universal Design for Learning (UDL) by Rose and Meyer (2002), which seeks to provide the best experience for different learners. They support the idea that the courses should be designed in a way that the students can express learning in a range of ways. For example, according to UDL, students should

have an option of selecting the assessment type that they can show themselves the best. There are three strategies to develop a content for a wide range of learner types; *what*, *how*, and *why*. The first strategy, *what*, is to think about different ways to present the content of learning, *how*, is the second strategy to think about sustaining different activities for the learner to explore and show the content, and *why*, is the third strategy to give learners different ways in order for them to internalize the content and become engaged and motivated. The concept of UDL applies to create meaningful gamification. Rose and Meyer (2002) explain that if the users are able to show their mastery of skills in only one way, the system will not be meaningful in gamification, simply because the system should allow different paths for users to achieve their goal, or should allow users to set their own goals and achievements.

1.1.2 Game - Design Elements. In their definition of gamification, Deterding et al. (2011) mention game elements (points, badges, level, leaderboards etc.) where game-design elements and game mechanics are being used in a similar context. Depending on the genre of the game, different game design elements are necessary to be used. Game mechanics are formulated by design elements involving rewards, challenges, points, leaderboards, virtual gifts, and more. According to Singh (2012);

- Rewards are crucial elements of any gamified design, since they are used to motivate people to complete specific tasks.
- Points are applied to give informal feedback and quantify the progress.
- The leaderboard is a list to show the places of players and used for immediate feedback.
- Badges can be unlocked by completing a specific task, or doing something more than once.

Korolov (2012) also considers a badge an honorific reward that the users of gamification are willing to earn. Badges generally have an image of a virtually

designed badge, reflecting the reward of the specific task. Points are earned each time the user accomplishes a given task to keep the score of the achievement. Through completing tasks and objectives, the user's levels increase and are shown in the leaderboard.

Another perspective on gamification is that games, according to Werbach and Hunter (2012), consist of different elements that are found in different categories used to identify specific feature of the games. They further explained gamification elements in their book *For the Win* by comparing them to building a house, which includes putting together necessary equipment and forming the house. In their example, they stated that the gamification has the same logic in which one needs to put together the correct elements and form the game. These elements are namely dynamics, mechanics and components. They are organized in a reducing order of construct in a way that each mechanic is tied to one or more dynamics, and each component is linked to one or more mechanics or dynamics. In a game design, not all elements should be benefitted from, but it is important to make the game fun.

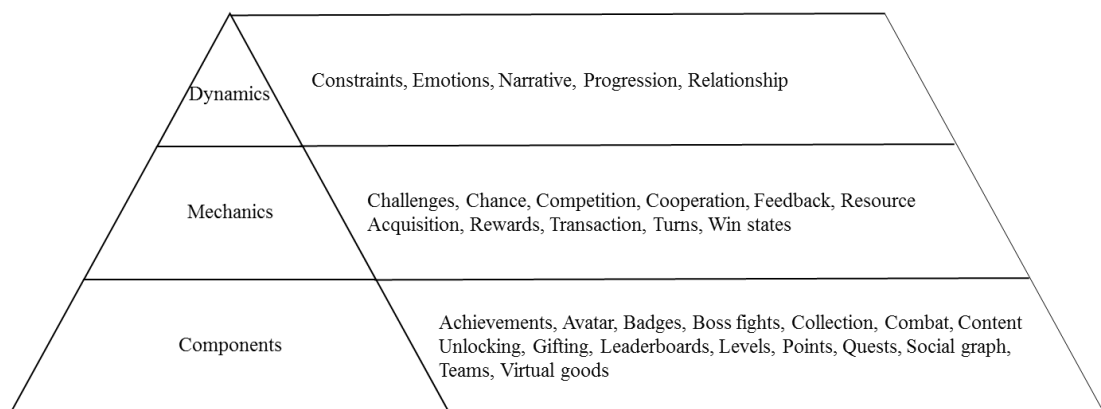


Figure 1. Pyramid of Game Elements (Werbach & Hunter 2012)

As shown in Figure 1, Werbach and Hunter (2012) view dynamics as the highest level in the pyramid. The most important game dynamics include constraints, such as limitations, emotions that are triggered through curiosity, competitiveness, frustration and happiness, narrative as an ongoing story, progression that is the player's growth and development, and relationships that occur from social interactions. Mechanics are the processes that drive players' attention, and that create

player engagement. The game mechanics include challenges in the form of puzzles that take some effort for the player to solve and also chance, competition, cooperation and feedback are the other features of mechanics. Game mechanics also include resource acquisition, which includes collecting the items, rewards, transactions, turns and win states. In the lowest level of the pyramid, there are the components that include achievements, avatar, badges, and collection, content unlocking, as well as gifting, leaderboards, levels, points, quests, teams and virtual goods. Werbach and Hunter (2012) also state that points, badges, and leaderboards are the uppermost elements that have been found in the implementation of gamification.

1.1.3 Game – Based Learning. Game - based learning is defined by Micheal and Chen (2006) as a type of learning which includes the use of games to support educational purposes. Poulsen (2011) stated that game – based learning is less interested in the nature of game but it is more interested in the facilitator of learning. Prensky (2011) stated that game – based learning is often considered as a motivational environment since in virtual environments, it is easier to fill the gap between the learning experience and real life work. The characteristics of an educational game can be listed as interactivity, rules, goal, challenge, curiosity and control.

Game – based learning is proven to have positive effects in terms of motivation and Becker (2006) stated that with the help of educational games, it is possible to keep players’ attention for a longer period of time. In a game – based learning environment, as opposed to what has been thought, is not an environment in which a teacher makes the students play a game, or they are not in a gamified room. However, an effective game – based classroom involve each of these components.

1.1.4 Vocabulary Learning. Acquiring a new language requires a lot of processes in which there are many elements and skills to be learned, and one of the most essential among them is acquiring the vocabulary as stated by the majority of

researchers. Cameron (2001) states that vocabulary development is an ongoing process, in which learners come across the words many times to increase and to expand their knowledge and use of words in the foreign language. One important aspect of learning vocabulary is then providing a meaningful context, as argued by Decarrico (2001). To be able to master in a language, one should be able to use the vocabulary in the right context.

Carter and Nunan (2001) also claimed that a language learner's main purpose is to learn the vocabulary of that language because it is the basis of that language. It is argued that the amount of vocabulary known in a foreign language by one person is directly linked to his success in the target language (Bromley, 2007). Without sufficient vocabulary, it is hard to convey the meaning in the target language; and vocabulary learning in a foreign language is generally what the students are afraid of and find boring since they are expected to memorize a list of words. As explained by Simpson (2009), games can help in learning vocabulary in a fun and useful way though.

1.2 Statement of the Problem

As today's learners are born to an environment in which almost everyone within their family or neighborhood are playing games, they also quickly and easily become adjusted to the gaming and feel the need to use it to motivate themselves and learn through it. Deterding et al. (2011) discussed that young learners learn a language as long as they are enjoying the activities and feel comfortable in the learning environment, as they are more willing to learn under these terms. They prefer their daily lives to be full of games, to play in a fun and enjoyable environment. However, realistically they are attending school for the sole purpose of learning whether it is a language lesson or a science. While it is normal for children of today to play games, they are expected to deal with serious assignments using pens and papers all the time at school, which leads them into feeling bored during the school day.

One such potentially beneficial method in order to address young learners' needs and interests in language classrooms is considered gamification or gamified

language classes. This study examines the effects of gamified game-based L2 instruction on young learners' vocabulary retention. As Hamari, Koivisto and Sarsa (2014) state, gamification is a relatively new subject within the education area especially with young learners, and effects of a gamified setting is lacking information. By taking into account the previous research, this study stands to contribute to the research strand on this topic since almost not any published study, to the researcher's knowledge, exists in Turkey. Thus examining the effect of gamified language learning with young learners with a specific emphasis on L2 vocabulary retention is important to better understand the outcomes.

1.3 Purpose of the Study

The purpose of this study was to investigate the effect of gamified game-based learning on vocabulary retention in English lessons for young learners. The most commonly utilized game elements were points, badges, and leaderboards, which were integrated along with the Pictionary game to the treatment so that the effects of its principles could be observed with regard to target vocabulary items. In this study, the data was gathered with a pre-test in the beginning and a posttest at the end of the treatment as well as a questionnaire of students' perceptions.

1.4 Research Questions

The following research questions were investigated in this study:

1. What is the effect of gamified game-based L2 vocabulary instruction on young learners' vocabulary retention?
2. What are the young learners' perceptions of gamified game-based L2 vocabulary instruction?

1.5 Significance of the Study

According to Abrahamsson and Hyltenstam (2009), learners who start a foreign language before the age of 12 can achieve higher proficiency levels than others who start this process after the age of 12. One of the main reasons for parents

to prefer private schools rather than public schools in Turkey is closely related to this statement. Parents want their children to be exposed to English as soon as possible. Even though there are minimum of 10 hours of English lessons per week, teachers usually do not tend to integrate game elements into their lesson plans to make lessons more appealing to the students. In that sense, gamified game-based L2 instruction can play an important role for facilitating an effective and meaningful learning environment. Connolly et al. (2012) stated that educators may be able to improve education by the use of gamification.

In alignment with aforementioned case, research in this line is scarce. In that sense, examining the effect of gamified game-based language instruction contributes to existing research and our understanding of how such treatment influences, or not, in L2 learning settings with young learners. Even though integration of gamification into L2 instruction has recently started to gain popularity, empirical studies are still needed in the area, especially with young learners. Finally, this study is important in the sense that it also provides insights into an understudied group of learners' mastery of target language forms through gamified game-based instruction.

Chapter 2

Literature Review

The goal of this chapter is to review literature related to each of the major components within the scope of the study. The studies included in this section are mainly categorized and presented under the subsections of gamification in education, games and vocabulary learning, and students' perceptions of learning through games.

2.1. Gamification in Education

In Huizenga, Admiraal, Akkerman and ten Dam's (2009) study, the effects of a mobile game called "Frequency 1550" were investigated. This study was conducted for three weeks with 458 students aged between 12 and 16 in the Netherlands. A quasi-experimental design was utilized. According to the results a significant difference in performance and engagement was found, but there was no significant difference in motivation.

Annetta, Mangrum, Holmes, Collazo and Cheng's (2009) study the purpose was to examine students' learning through a teacher-created application. This study was conducted with 74 fifth grade students aged between 10 and 11 in the USA. A mixed method was utilized with a pre-test and post-test before and after the treatment. According to the results, there was no difference found between genders after the treatment. However, there was a difference in the gain scores and the observational analysis suggested high student engagement within the process.

Moreover, Kebritchi, Hirumi and Bai (2010) examined the effects of a computer game on students' mathematic achievement and motivation as they played the game. 193 high school students and 10 teachers participated in the study in the USA. Quantitative method was used to conduct this study and a survey, test and interviews were used to collect data. According to the results, there was a significant difference in achievement but no difference were found in terms of motivation and prior mathematics knowledge, computer skill and English language skill.

In another study, Brom, Preuss, and Klement (2011) investigated the approach which exploits on using a game that was played in the teacher's guidance after a traditional lecture. The study was conducted with 5 high school classes from 4 schools in Czech Republic, the participants were 100 students aged between 15 and 18. A quasi-experimental study was conducted followed by an immediate post-test and a one month delayed retention test. According to the results, there was not a significant difference between traditional and game in terms of gaining knowledge but there was a significant difference in the retention test.

In Sylven and Sundqvist's study (2012), the purpose was to find out the correlation between the amount of time spent playing games and L2 proficiency. They collected their data from 86 L2 English learners aged between 11-12 utilizing a questionnaire, a language diary, and three proficiency tests. The results of the study indicated that the time spent playing games and foreign language proficiency is found to be highly correlational. In terms of their second research question, boys outperformed girls regarding L2 vocabulary through games.

Gözalın (2013) also aimed to investigate the effect of a training program on attention and language skills of young learners. The participants were 62 students who were 5-6 years old attending to a half-day program in kindergarten in Karaman. Game-based Attention Program was administered to only experimental group and the data was collected through a pre-test and a post-test and analyzed through SPSS. According to the findings, there was a difference between the attention and language skill levels of the children in both groups but the increase ratio in the experimental group was higher.

In a different study, Hong and Masood (2014) aimed to find if there is a difference between students' engagement level who attended to both a gamified lesson and a traditional lesson. There were a total of 60 students, and the data was collected through questionnaires after the lesson plans were implemented. The study demonstrated that gamification method showed better potential in raising student's engagement in the classroom compared to those who were in the traditional classes. The researchers argued that gamification method could be a solution for the motivational issues in the classroom.

Futhermore, Banfield and Wilkerson (2014) examined gamification as a method on student motivation to perform tasks. The study included 96 students and the data sources were collected qualitatively as the researcher interviewed them. The participants were divided into two groups and one group was taught using traditional methods while the other one was given a gamified course. The results of the study showed that the intrinsic motivation of the students increased with the use of gamification method. Additionally, the students reported that they were able to easily connect their current knowledge with the previous one through the gamification method.

More recently, Attali and Arieli-Attali's study (2014) examined the effects of one specific game-design element by observing the points students achieve while they complete their assessment. They conducted two studies; in the first one, the participants' age ranged between 18 and 74 and they were expected to answer simple mathematic problems. In the second study, 693 middle school students participated and the same data collection was used with the first study. According to the results of second study, where participants awarded with points for their accurate and speedy responses, they stated that there are no effects of awarded points on both participants groups. Middle school participants' reactions to the test revealed higher likability ratings for the test in terms of points. The findings of the both studies have similar results in terms of the effect of points on performance since no effects were figured out accuracy, with only speed of response was increased.

In Hanus and Fox's study (2014), the purpose was to create classroom environment integrating gamification elements (e.g. competitive context, badges, and learderboards) to assess how these elements affected student motivation, satisfaction, enjoyment, learning, and grades. With the attendance of eighty volunteer students to this study, they were asked to complete four questionnaires throughout 16 weeks. Twenty-two badges were designed for the gamified group, and students had the chance to earn coins for the tasks that are completed and see their progress in the leaderboard. According to the results, the specific elements that were used in this study were understood to have negative effects when used together because it was observed that the gamified group students' motivation decreased. It was explained by the researchers that their combination of the gamification elements does not improve

educational outcomes. It was also noted that this was one of the first studies to combine gamification elements, and future research should be conducted on specific elements.

Last but not least, Marin, Lopez and Maldonado (2015) were interested in the possibility that games can modulate learning behaviors of students and if they can be used as an effective tool for educational purposes. To collect data from 244 students aged 19-21, they used a questionnaire. The results revealed that construction and collaboration of knowledge could be developed through using videogames in classroom. Findings also showed that the participants of this study agreed that educational games help in the inductive learning.

2.2. Gamification and Vocabulary Learning

In order to address the boredom of students in vocabulary lessons, Huyen and Nga study (2003) aimed to find out if the games help Vietnamese students learn vocabulary, and if so, how it does so. They collected their data through perception of the students and observations in class. According to the results, it was concluded that games bring motivation and fun to the class, which facilitates learning and retaining vocabulary. Also, it was understood that games carry some components that bring competition among students, and this competition keeps the students focused in the learning environment. Overall, the study concluded that games are essential parts of vocabulary learning classes and the effects are undeniable. However, what is equally important is that the games should be chosen carefully by taking gender, age and proficiency levels of the students.

In Yip and Kwan's study (2006) of online vocabulary games as a tool for teaching and learning English vocabulary, the usefulness of online games in vocabulary learning was examined. Two educational websites were carefully chosen to be used in the study. All the subjects in the study were given pre-test and post-test while the experimental group had an adapted version of Groot's (2000) CAVOCA study, in which they implemented a design of pre-test, learning process, post-test, questionnaire questions, and interview in sequence. The results of the study showed that the learners who play online vocabulary games learn better and remember the

vocabulary that they learn for a longer time. The study also revealed that students prefer online games as a learning tool instead of a face-to-face lesson. To grasp interest of students and ensure the effective learning, more motivating games are needed in order to give students a sense of achievement was another interesting result of the study.

In Kalaycıoğlu's (2011) study, the aim was to investigate the effectiveness of educational games as a technique to four year-olds. Participants were 33 young learners who are all four year old. Experimental group students played the vocabulary games while the control group did not play games. The results did not find a significant difference in terms of gender of the students. It could be implied that picture vocabulary games should be developed for very young learners.

In a more recent study, Tuan (2012) examined the effects of games on the vocabulary recollection of young learners. The participants of the study consisted of 121 elementary school students separated as experimental and control group, who took a pre-test and a post-test. Experimental group was exposed to labeling games, while control group did exercises without games. According to the results, experimental group did significant better than the control group in both pre-test and post-test. Findings suggest that workbook exercises are helpful to recall vocabulary but it is clearly better for students to have games in class to boost motivation and lead to better performances. Another finding suggest that in order to benefit from games with young learners in foreign language learning, the games to be chosen are very important where teachers have a great role in the process of carefully choosing the games to be used in classrooms.

In the study conducted by Özkiraz (2015), the purpose was to examine the role of educational games in teaching vocabulary to 5th graders and to assess their attitudes. Participants of the study were 40 middle school students (20 of them were in experimental group and 20 of them were in control group) from Osmaniye who were 10-11 years old. 5 different games were selected by the researcher and played with experimental group only. Pre-test, post-test and attitude questionnaire were used to collect data. The results have specified that games are highly operative in teaching vocabulary.

2.3. Students Perceptions of Learning through Games

With regard to perceptions of learners, one such study was conducted by Chen and Yang (2013). The aim was to find out the effects of an English game called “Bone” on foreign language learning as well as students’ perspectives. Twenty-two college students formed two groups, one of which was able to take notes while playing the game before taking a vocabulary post-test. Both groups were seen to be able to acquire new vocabulary. Another experiment was conducted within this study with the same game with 35 students and their perceptions, which was concluded in them finding the game helpful in improving their language skills.

In Cheong, Filippou and Cheong's study (2014), the aim was to understand undergraduate students' perceptions of game elements. Two questionnaires were given to the participants, one of the questionnaires was about their gaming experience and the other one was about their attitudes towards gamification. From the results of the first questionnaire, it was understood that the participants were convenient since they all had computer game experience. In answering the research questions about gamification, it was concluded that only few of the students had known about the method but were willing to have a gamified experience since they expect it to make the lessons more motivating and engaging. The results revealed that the perceptions of the students towards gamification are positive.

Kaya (2016) attempted to investigate the benefits of using games in young learners’ classrooms when teaching English and to identify their attitudes towards vocabulary game implementation. The study was conducted with 20 pre-intermediate 6th grade students who were 10-12 years old. The study was conducted for six weeks and the data was collected through the researcher diary, structured interview and questionnaire. The findings of the study revealed that vocabulary games are beneficial to young learners’ vocabulary learning and their perceptions were positive towards the vocabulary games.

Overall, research on gamification has displayed various benefits as for the learning process, and such considerations are crucial in adopting gamification in education. The empirical studies that are mentioned above shed light on how to

improve vocabulary retention by using gamification. However, there is still research needed on the effects of gamification on young learners since the literature is lacking studies in that area. This study is intended to shed light on the effects of gamification on young learners' vocabulary retention.

Chapter 3

Methodology

In this chapter, the goal is to describe the methodology of the study by explaining the research design, setting, participants and procedure, reliability and validity, and finally limitations. The research questions in the study are as follows:

1. What is the effect of gamified game-based L2 vocabulary instruction on young learners' vocabulary retention?
2. What are the young learners' perceptions of gamified game-based L2 vocabulary instruction?

3.1. Philosophical Paradigm

Paradigm is defined as a set of underlying assumptions or philosophical underpinnings to understand the research problem under investigation. Major research paradigms include, but not limited to, positivism, constructivism, interpretivism, and critical theory (Crotty, 1998). Such overarching philosophical perspective on reality embraces certain ways of ontology, epistemology, theoretical framework as well as research design and methods.

Qualitative, quantitative, and mixed methods are the most common methods abiding to the broader categories of abovementioned paradigms. Quantitative methods, for instance, include objective measurements, statistical, mathematical or numerical analysis, which are mostly collected through tests, questionnaires, and questionnaires. The aim of the quantitative research is to gather numerical data and generalize it to the target population. Ary, Jacobs, Walker, and Sorensen (2014) stated that quantitative research can be descriptive in the sense that subjects are measured once and can be experimental in regards to the subjects are measured before and after the applied treatment. Similarly, this study embraces primarily a quantitative method involving a type of experimental design with intervention.

3.2. Research Design

The research design in this study involved a quasi-experimental design utilizing tests before and after the treatment and a questionnaire following the completion of the study. Non-equivalent groups designed as a basic type of quasi-experimental study was utilized by involving intact classrooms in this study. In other words, already existing classes at the research site were included with the assumption that the groups were as similar as possible to each other rather than random assignment. Yet, the assignment of experimental and control groups were random. In that sense, the study design included one control and experimental groups that are similar for a fair comparison among each other. That is, the experimental group was instructed through gamified game-based L2 vocabulary instruction whereas the control group was instructed through traditional methods. In that sense, the study implemented a set of pre-test – treatment – post-test procedures to examine the effect of provided intervention in the experimental group (Ary et al., 2014; O’Dwyer & Bernauer, 2013).

As stated previously, the purpose of this study is to examine the effect of the gamified game-based instruction on L2 vocabulary retention of young learners. Additionally, the study aimed to explore the perceptions of young learners on gamified game-based L2 vocabulary instruction. Accordingly, the first research question, the effect of gamified game-based L2 vocabulary instruction, was investigated through a statistical analysis of pretest and post-test of the target L2 vocabulary items. Therefore, the quantitative analysis relied on the within-groups and between-groups comparison of pretests and post-tests (Creswell, 2013). As for the second research question, descriptive statistics (e.g. mean score and standard deviation) of perception questionnaire was conducted. Additionally, one-to-one interviews 6 students were conducted after the treatment.

3.3 Target Population and Participants

This study was conducted in a private primary school in the northwest of Turkey. In this school, the students are exposed to ten hours of general English lessons per week. The aim is to develop the students’ listening, writing, speaking,

and reading skills as well as improving their knowledge of vocabulary. The instruction does not involve any examination at this level since the participants of this study are the first grade students, but they have weekly homework and speaking-based projects to follow their academic progress. They are Turkish L2 learners whose English level is A1 according to Common European Framework of References (CEFR) as stated on Council of Europe's website.

As of Spring 2017, which was the data collection period, there were two intact classes of first grades, and both classes participated in the study. The participants were 36 first grade students and they were 5-7 years old including 20 male and 16 female beginner level English learners. Eighteen students were in the experimental group and there were 18 students in the control group as well. The control group students were exposed to the traditional methods of teaching. Most of the students were from the similar socio-economic (e.g. middle and/or higher) and educational backgrounds, and shared the same L1 and cultural background.

3.4 Procedures

Sampling is the process of selecting a representative group of individuals from a larger population so that the results can be applied or generalized (Ary et al., 2014; Wiersma & Jurs, 2009). Two major sampling methods are traditionally implemented by researchers in educational and/or social sciences. These are namely probability sampling and non-probability sampling, which are also referred as random sampling and non-random sampling.

Probability sampling is mainly used in quantitative studies and involves selecting a large number of units from a population, or from specific subgroups of a population. Probability sampling has four types; which are simple random sampling, systematic random sampling, stratified random sampling, and cluster random sampling. Overall, it can also be stated as every subject or unit has an equal chance in being selected as a sample. Thus, it is important to have an equal chance because it eliminates the situation in which the researchers select the population to be used for their opinions and desires. However, as Guba and Lincoln (1985) state, all sampling is done with a purpose in researcher's mind even if it was a random sampling.

In non-probability sampling, sampling units are selected according to the specific purposes or criteria with regard to the research questions of the study. Non-probability sampling has five types, which are convenience sampling, consecutive sampling, quota sampling, judgmental sampling, and snowball sampling.

As stated earlier, this study embraces a quasi-experimental design by utilizing intact classrooms. This means that the inclusion of classroom in the study was not a random assignment but their group assignment (e.g. experimental or control) was conducted randomly. However, by specifically focusing on first graders, a purposive sampling was employed. In other words, in alignment with the purpose and research questions in this study, one condition was to include young learners as participants mainly because of the assumption that integration of games into language instruction is crucial specifically for that age group. Additionally, the researcher was quite familiar with that age group relying on her teaching experience with young learners. Finally, at the time of data collection, the researcher was also the teacher of all three groups in the study. In that sense, purposeful sampling in this study also included the considerations of feasibility and practicality as well.

This study involved two major data sources as in the form of a pre-test/post-test, and questionnaire. The data to answer the first research question, which was about the effect of gamified game-based L2 vocabulary instruction on vocabulary retention, was obtained through a pre-test and a post-test designed by the researcher. The treatment in the experimental groups involved creating a gamified lesson plan incorporating a Pictionary game as gamified game-based lesson plan for the target L2 vocabulary items. The pre-test/post-test was prepared using the PowerPoint with 40 slides; and in each slide, there were four animal pictures, one of which was the target L2 vocabulary item. Therefore, there were 40 target vocabulary items for the students in total. These L2 vocabulary items were prepared complying with the level of the students and the content of their main course book and reading materials. They are also in alignment with the first grade curriculum of the school.

As the second data source, a questionnaire was utilized to explore the overall perceptions of first graders on their experience with the gamified game-based lessons. The questionnaire that was used in this study was inspired from Şenergüç

(2007) and Gülsoy (2013). However, for the purpose of this study, major revisions were made in the statements in alignment with the scope and purpose of the study. Additionally, to gain more insights into the perceptions of first graders in this study, 6 individual interviews were conducted.

3.4.1 Data Collection Procedures. As stated earlier, the study employed a quasi-experimental design involving pre-test – treatment - post-test procedures followed up by a questionnaire of learner perceptions. The whole procedures of data collection took 6 weeks. These procedures are presented below respectively.

3.4.1.1 Pre-test. For the purposes of the study, a pre-test was prepared including the target L2 vocabulary. The researcher implemented the pre-test individually with all the participants in a private setting by the English teacher, who is also the researcher of this study. The pre-test was conducted in a one-week period in March 2017, lasting approximately 5 to 10 minutes per student. Before giving the pre-test, the students were informed that they would be given a test without being graded on it. In the application process of the pre-test, the researcher opened the pre-test using a Tablet PC and read aloud the desired animal vocabulary from the list so that the participants could point out the corresponding picture of that animal. The pre-test was conducted prior to the treatment and the teacher, and also the researcher, took the students individually in order to gauge the initial visual recognition of English vocabulary. Meanwhile, the researcher prepared a table (see Appendix 1) and took notes of the participants' answers to be used as scores in the SPSS later.

3.4.1.2 Treatment. For the treatment to be implemented in this study, a Pictionary game was designed. The treatment was implemented in the experimental group for three weeks on every Wednesday and Friday during one class hour of 40 minutes. Therefore, this study was conducted for two sessions of 80 minutes in total per week. As the researcher is the teacher of the participants, she formed the groups according to the students' overall academic and language abilities relying on her

familiarity with them. In each team, there were two excelling students, two average students, and two less motivated students. Each team chose a team name for their groups in order to be listed in the leaderboard. Before introducing the game to the participants, the researcher, prepared the word cards to be used in the game. The animal words were written on the cards, and each card was assigned points from 1-3 according to the length of the word. The step-by-step procedures for the implementation of Pictionary game are as follows:

Step 1. One student from each team comes to the board.

Step 2. The teacher shows a vocabulary card and waits 10 seconds for the student on the board to think and start drawing. The teacher then announces the value of that card that can be earned as *points* to the team members.

Step 3. The first team to guess the word correctly earns the *points* for that word written on the card. As stated above, each word is assigned a number from 1 – 3 in the vocabulary cards, which is explained by the teacher before the students start drawing. When a student guessed the word correctly, both the drawer and himself earn the *point* individually, and also their team gets the same *point* as well.

Step 4. The teacher announces the *points* for that session both individually and as a group. She also announces the winner team before hanging the *leaderboard* on the wall. There were *two leaderboards* in this study; one of them was *the individual leaderboard* and the other one was *the group leaderboard*.

Step 5. As stated previously, at the end of each game, the teacher counts the *points* earned in the game and announces them as both individually and as a group. The teacher also declares the students and the group that won the *badges* according to their points. At the end of each game day (e.g. Wednesdays and Fridays), the top three students earn the “Eat lunch with the teacher” ticket; and the winner group of that day earn the “Play in the garden in one break time” ticket since first graders are not allowed to go to the garden during break time.

These steps, except for introducing the game and forming the groups, were repeated in the same way during the remaining 5 sessions.

3.4.1.3 Post-test. At the end of the three-week implementation of the Pictionary game, the same test used as a pre-test was administered to the participants in the same way.

3.4.1.4 Questionnaire. As mentioned above, the questionnaire used in this study was originally developed by Şenergüç (2007) and later adapted and used by Gülsoy (2013). However, a number of modifications were made on the questionnaire for the purpose of this study. First, the expression of vocabulary games were replaced with ‘Pictionary game’ in items 1, 3, 7, 8 and 10 for students to understand the specific game that they played. Second, the statements in item 10 was modified to make them related to the game elements, such as points in item 10. Finally, item 3 was changed completely to find out the perceptions of the students’ from another angle. Thus, it was replaced by the statement of ‘I feel bored when we play Pictionary game in class’.

All in all, in its finalized version, the questionnaire included 15 statements based on a 5-point Likert scale ranging from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (5). However, in order make it age-appropriate, these points in the questionnaire were represented with smiley faces for the participants. Additionally, all of the questions were in Turkish (see Appendix 2) in order to help the students to understand and answer them accurately and the teacher explained in detail when necessary. Overall, the items in the questionnaire aimed to elicit the students’ perceptions about using games in their English language classes.

3.4.1.5 Interviews. As stated earlier, one-to-one interviews were conducted with 6 students at the end of the treatment. These were semi-structured interviews (Merriam, 2009; Patton, 2002), and each interview was first audio-recorded and then transcribed by the researcher. Finally, the interviews were conducted in Turkish as this is the native language of the students and the excerpts provided in the study were translated into English for the purpose of this study. The following questions were flexibly utilized during the interviews:

1. How did you feel when you were playing the Pictionary game? Why?
2. Can you compare playing Pictionary game with anything? Why?
3. What did you like the most in this game? Why?
4. What do you think about learning English with the Pictionary game? Why?
5. What did you think about the leaderboard? Why?
6. How did you feel when you earned points? Why?
7. Was earning badges important for you? Why?
8. In your opinion, did Pictionary game influenced the way you learn English? Why?

3.4.2 Data Analysis Procedures. In order to answer the first research question in the study, the data from pre-test and post-tests, SPSS (Statistical Package for the Social Sciences) program version 20.0 for Windows was used. The data was analyzed by running one-way ANOVA and paired samples t-test for pre-test and post-test scores. As for the second research question, the data from questionnaire was analyzed through calculating the mean scores and standard deviations together. Additionally, the transcripts of the interview were analyzed through content analysis by implementing open coding (Merriam, 2009; Patton, 2002).

3.4.3 Reliability and Validity. Reliability is the consistency of the research measurement, or to the extent in which the instruments' measurements are the same way each time it is being used under the same conditions. The reliability cannot be fully measured but it is estimated. According to Wilson (2010), reliability matters are most of the time closely linked with objectivity; and if a researcher adopts a subjective approach concerning the study, then the level of reliability of the work is going to be compromised.

First of all, a structured quasi-experimental design was implemented to sustain reliability in this study. The groups included in this study were intact

classrooms, and the experimental groups were randomly assigned. Second, for a balanced grouping for Pictionary game, the groups were formed heterogeneously according to the overall academic and language abilities of the students. Moreover, the tests and the questionnaire were prepared in an age appropriate way, such as the usage of visuals and smiley faces in the questionnaire instead of numbers.

Validity is defined as the extent to which a theory is precisely measured in a quantitative study. Oliver (2010) considers validity to be an obligatory requirement for all types of studies whether it is qualitative or quantitative. There are different forms of research validity. Cohen, Manion, Morrison and Morrison (2007) define the main ones as content validity, criterion-related validity, construct validity, internal validity, external validity, concurrent validity, and face validity. Additionally, Cook and Campbell (1979) define it as the “best available approximation to the truth or falsity of a given inference, proposition or conclusion” (p.33). Heale and Twycross (2015), for instance, exemplified reliability and validity in their study as an alarm clock being set to 6:30 but rings at 7:00 every morning. It is reliable because it rings at the same time every day, but not valid because it does not ring at the time that it is wanted to be. Thus, in order to provide validity in this study, the L2 target vocabulary was chosen from the curriculum that was being implemented in the school, and the treatment was conducted in the light of a set of well-designed lesson plans.

3.5 Limitations

The study was limited to the first graders in a private primary school in Turkey. Therefore, it is not possible to generalize the results for all students in the same age group, and further studies on different age group and grade level could shed light on this topic. However, the results provide preliminary insights into the effect of gamified game-based L2 vocabulary instruction on young learner.

Moreover, in order to keep up with the curriculum of the school where the study was conducted, the duration of the treatment is limited to only two hours a

week for 3 weeks. This study could have been done in a longer period of time, such as over a semester to investigate effect of treatment in various aspects as well as in-depth attitudes of the students towards gamification. Also, different games and different game elements could elicit different results and learning outcomes.

Finally, the study was carried out in one specific school context (e.g. private). More research on gamified game-based learning could be carried out in a public schools or diverse settings with the first grade students to compare the results. This study was conducted in the north west side of Turkey. Therefore, it needs to be replicated in other settings in Turkey with regard to young learners. To generalize the evidence, similar results would need to be gathered from other contexts of Turkey.

Chapter4

Results

This chapter presents the results of the study to examine the effect of gamified game-based learning on L2 vocabulary retention of first graders and their perceptions of gamified game-based L2 classes. The data were gathered through a pre-test, post-test, a questionnaire, and a set of semi-structured interviews as mentioned in the methodology section. The analysis was conducted using the SPSS in order to answer the first research question of the study. A second set of analysis was undertaken to examine the results of the questionnaire using descriptive statistics to answer the second research question of this study. Additionally, open coding was used to find out the emerging themes in the interviews in order to further explore the second research question. Thus, this chapter presents these results in order to be able to answer the research questions of the study.

4.1 Results Pertaining to the Research Question 1

4.1.1 Comparison of the Pre-Test Scores between the Groups. Before the treatment, a pre-test was conducted with all the participants in the two experimental and a control group. A one-way ANOVA was conducted to see if there is a statistically significant difference or not between the groups with regard to their proficiency of L2 vocabulary chosen for the study. Table 1 presents the mean score comparison of pre-tests by between the groups.

Table 1

One-way ANOVA for between the Groups

	N	M	SD	F	p
Control	18	10.06	1.731	2.117	0.072
Experimental	18	10.94	1.056		

As can be seen in Table 1, the results indicated that there was not a statistically significant difference at the $p < .05$ level for the three groups [F(2.117), $p = 0.072$] Therefore, the results show that the groups were not different at the beginning of the study in terms of their knowledge of target L2 vocabulary items included in this study.

4.1.2 Comparison of the Pre-test and Post-test Scores within the Groups.

A paired-samples t-test was conducted to compare the mean scores of pre-tests and post-tests in each group in order to evaluate if the students showed significant improvement in their post-tests. Table 2 presents the descriptive statistics for pre-test and post-test scores, and Table 3 presents the results of paired samples t-test for the comparison of mean scores within the groups.

Table 2

Descriptive Statistics for Pre-test and Post-test Scores

		M	SD	SE
Control	Pre-test	10.06	1.73	0.41
	Post-test	26.00	2.83	0.67
Experimental	Pre-test	10.94	1.06	0.25
	Post-test	37.61	2.17	0.51

Table 3

Paired Samples t-test for the Comparison of Mean Scores within the Groups

	M	SD	df	t	p
Control	15.94	3.02	17	22.40	0.00
Experimental	26.67	2.45	17	46.19	0.00

The results showed that the mean score for post-tests of the Control group (M=26.00, SD=2.83), and Experimental group (M=37.61, SD=2.17) was significantly higher than the mean score for pre-tests of the Control group (M=10.06, SD= 1.73), $t(17)=22.40$, $p<.05$, Experimental (M=10.94, SD= 1.06). Consequently, the first grade students in the control and experimental groups showed a significantly higher performance in their L2 vocabulary retention regardless of the types of instruction.

4.1.3 Comparison of Post-test scores between Groups. In addition to pre-test and post-test comparison within the groups, one-way ANOVA was conducted to examine if there is a statistically significant difference or not between the post-test scores of the groups. Table 4 demonstrates the results of comparison of post-test scores between the groups.

Table 4

Comparison of Post-test Scores between Groups

	N	M	SD	F	df	p
Control	18	26.00	2.83	125.08	2	0.000
Experimental	18	37.61	2.173	125.08	2	

As can be seen in Table 4, the results indicated that there was a statistically significant difference at the $p<.05$ level for the post-test scores between the groups [F(125.08), $p = 0$] Therefore, the results show that the groups were significantly

different in terms of their performance of target L2 vocabulary items in the post-test.

However, the mean score for the Experimental group (M=37,61, SD=2,17) was significantly different than the Control group (M=26,00, SD=2,91). Therefore, it can be seen that both groups performed better in the post-test scores; however, experimental group performed significantly higher scores in the post-test after the treatment.

4.2 Results Pertaining to the Research Question 2

As stated previously, the questionnaire included 15 items based on a 5- point Likert scale from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (5); and the items in the questionnaire aimed to find out the perceptions of the students’ in using Pictionary games. Eighteen students in both experimental group participated in the questionnaire, and this sections presents first the overall results and then item-by-item results of the questionnaire for these students. Figure 2 below presents the overall results of the questionnaire.

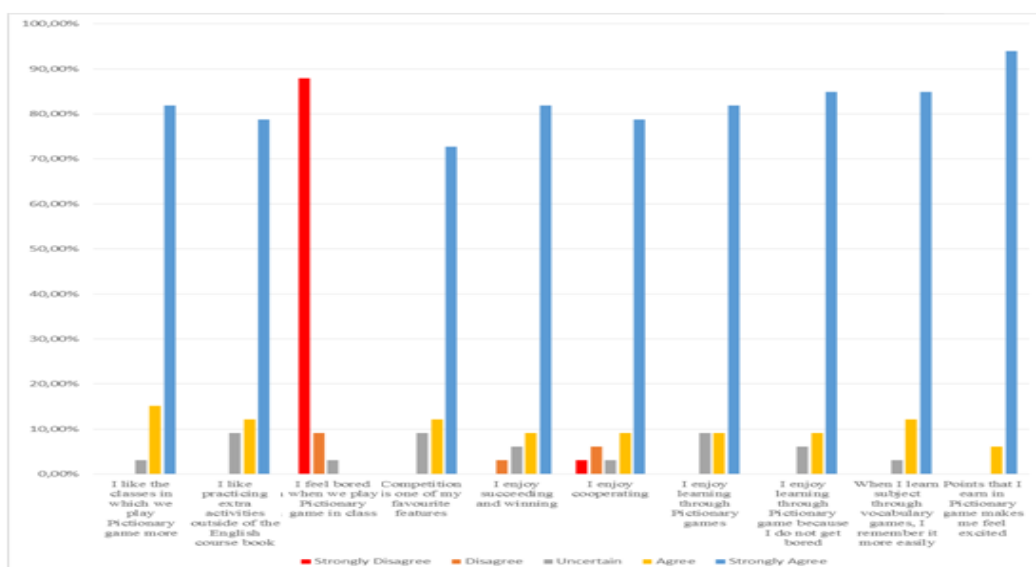


Figure 2. Overall Results of the Questionnaire

As seen in Figure 2, the highest percentages belong to ‘Strongly Agree’ for all items except for the reverse item, which is Item 4. More specifically, as the responses to Item 1 ‘I like the classes in which we play Pictionary game more’ show,

81,82% of the students stated that they 'Strongly Agree'. Similarly, 81,82% of the students expressed that they 'Strongly Agree' with Item 10 'I enjoy learning through Pictionary games'. Finally, as for Item 12 'I enjoy learning through Pictionary game because I do not get bored', 84,85% of the students chose 'Strongly Agree'. The overall results of the questionnaire show us that the majority of the students have positive perceptions towards treatment and the Pictionary game.

In a similar vein, the analysis of the semi-structured interviews indicated that the students enjoyed the Pictionary game very much. In 6 interviews, the students used the expression of 'it was great' or the adjective 'great' to describe their experience over 15 times. In addition, they linked such feelings with their learning experience. The following excerpts exemplify how they did so during the interviews.

.... it was great... we reviewed what we learned... we learned something from there..... I feel something great because we review with our friends...

(Student 1, Interview data)

... it was great... for example, it was like the game... we put the cards onside and find the English word, and then find the object... (Student 4, Interview data).

... it was great... because there were English scripts and expressions

(Student 6, Interview data)

In addition to overall visual representation of results pertaining to the second research question through percentages in Figure 2, the mean scores and standard deviations for each item were calculated. Table 5 presents these results.

Table 5*Overall Means of the Items in the Questionnaire*

Items	M	SD	N
1. I like the classes in which we play Pictionary game more	4,79	11,59	18
2. I like practicing extra activities outside of the English course book	4,70	10,99	18
3. I feel bored when we play Pictionary game in class	1,15	12,58	18
4. Competition is one of my favorite features	4,39	10,11	18
5. I enjoy succeeding and winning	4,70	11,46	18
6. I enjoy cooperating	4,55	10,88	18
7. I enjoy learning through Pictionary games	4,73	11,50	18
8. Seeing my name on the leaderboard makes me feel excited.	4,79	12,03	18
9. When I learn subject through vocabulary games, I remember it more easily	4,82	12,07	18
10. Points that I earn in Pictionary game makes me feel excited	4,94	13,67	18

As can be seen in Table 5, the highest mean score belongs to Item 10, which is ‘Points that I earn in Pictionary game makes me feel excited’ (M=4,94, SD=13,67). Additionally, Figure 3 shows the distribution of percentages for this item. None of the students responded to this item as ‘Strongly Disagree’, ‘Disagree’ and ‘Uncertain’. Indeed, 93,94% of the students responded ‘Strongly Agree’ and only 6,06% of the students chose to say ‘Agree’. The results indicated that earning points, which is one of the main features of gamification is highly appreciated by the young learners since they feel excited about it.

This finding has also received support from the interview data and all 6 students expressed that they got excited while playing the Pictionary game. The following excerpts show their perceptions in that line:

... I got very excited about what is next (Student 3, Interview data).

... it was like.. it made me feel great. Then, it made me excited about what I

will learn.. (Student 5, Interview data).

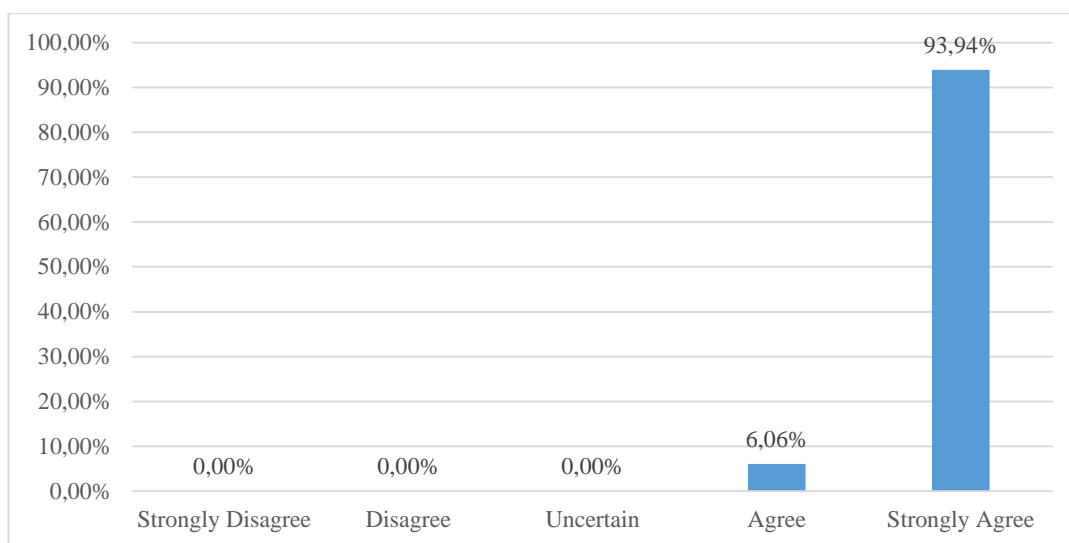


Figure 3. Students' responses to item 10: Points that I earn in Pictionary game makes me feel excited

The second highest mean score is the item 9 'When I learn subject through vocabulary games, I remember it more easily' ($M=4,82$, $SD=12,07$). Figure 4 shows the responses of this item. None of the students responded to this item as 'Strongly Disagree', 'Disagree' and 'Uncertain'. 12,12% of the students responded 'Agree' and 84,85% of the students responded 'Strongly Agree' to this statement. As a result, it could be concluded that all students remember the subjects more easily when they learn it with vocabulary games.

As for winning points, the students also made several comments in the interviews and the following excerpts exemplify how student felt about gaining points during the Pictionary game in the following way:

... I felt great when I gained points because I moved up to the second level. Then, I play with that... (Student 2, Interview data).

... I felt great because I won (Student 6, Interview data).

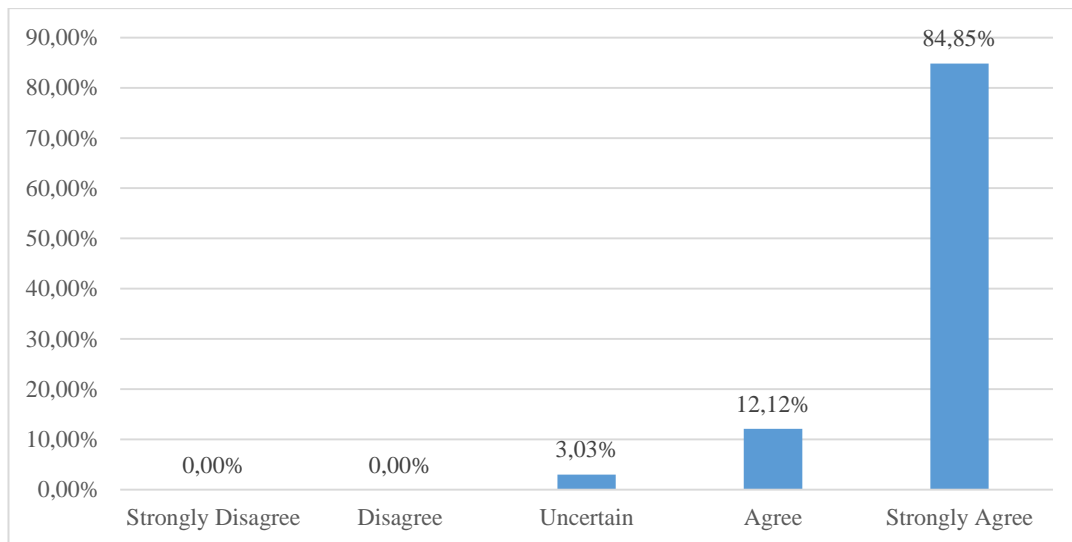


Figure 4. Students' responses to item 9: When I learn subject through vocabulary games, I remember it more easily.

Item 1 in the questionnaire was asked students to rate 'I like the classes in which we play Pictionary game more ($M=4,79$, $SD= 11,59$)', and Figure 5 presents the results of this item. For this item, the options of 'Strongly Disagree' and 'Disagree' were not chosen by the students. The 3,03% of the students responded 'Uncertain' and 15,15% preferred to say 'Agree'. For this item, 81,82% of the students stated that they 'Strongly Agree' with this statement. It can be deduced that most of the students enjoy playing the Pictionary game in their classes.

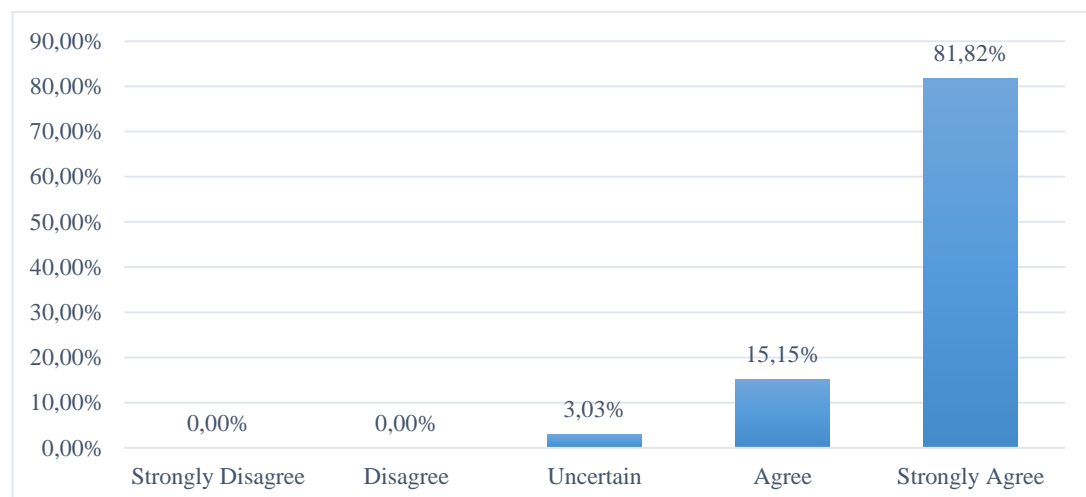


Figure 5. Students' responses to item 1: I like the classes in which we play Pictionary more.

Item 8 got the same mean score with item 1, asked students to rate ‘I enjoy learning through Pictionary game because I do not get bored’ (M=4,79, SD= 12,03) Figure 14 shows the responses of this item. ‘Strongly Disagree’ and ‘Disagree’ were not preferred by any of the students and 6,06% of the students were ‘Uncertain’ about this statement. 9,09% of the students responded ‘Agree’ and 84,85% of the students responded ‘Strongly Agree’. According to the results, it was understood that students enjoy Pictionary game because it is a fun game that hinders the students from getting bored.

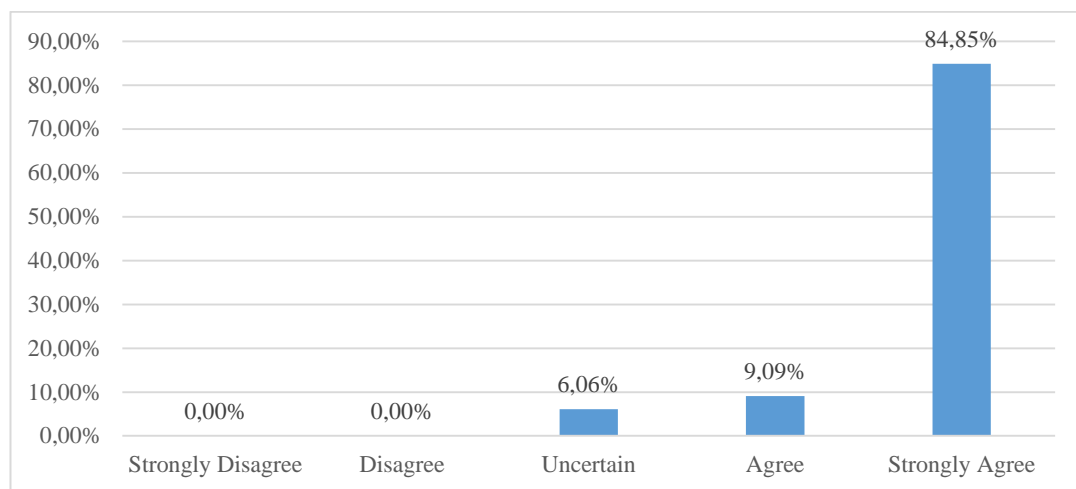


Figure 6. Students’ responses to item 8: I enjoy learning through Pictionary game because I do not get bored

Item 8 asked students to rate ‘I enjoy learning through Pictionary games’ (M=4,73, SD=11,50). Figure 7 shows the responses of this item. For this statement, none of the students rated ‘Strongly Disagree’ and ‘Disagree’. 9,09% of the students responded as ‘Uncertain’ while 9,09% of the students responded ‘Agree’ and 81,82% ‘Strongly Agree’. This showed that the majority of the students enjoyed the game and they liked learning with the help of this game.

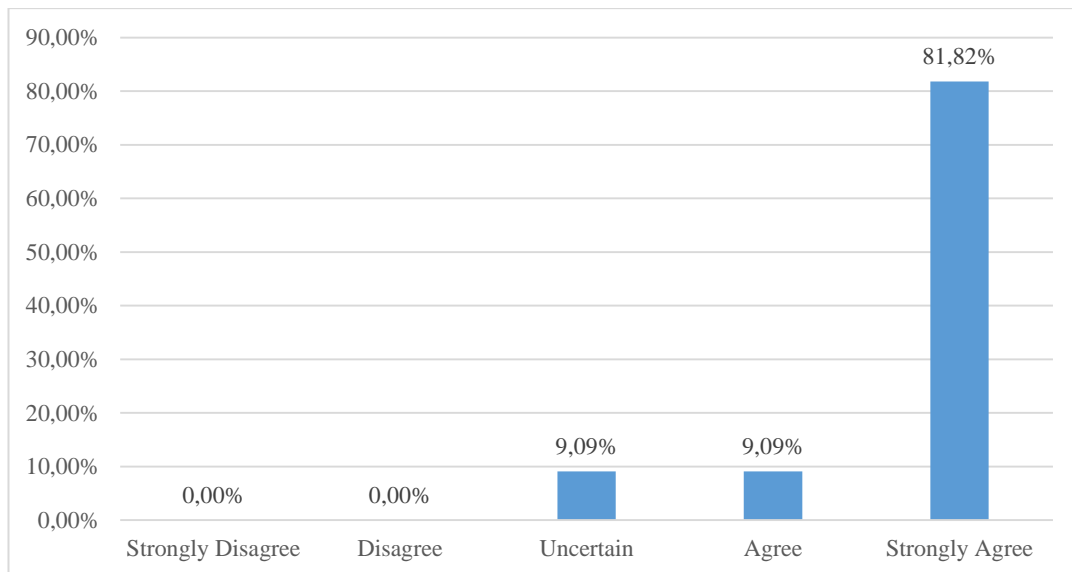


Figure 7. Students' responses to item 7: I enjoy learning through Pictionary games

The second item asked students to rate the statement of 'I like practicing extra activities outside of the English course book' ($M=4,70$, $SD=10,99$), and Figure 8 shows the responses of the students. For this item, 'Strongly Disagree' and 'Disagree' were not chosen by any of the students but 9,09% of the students responded 'Uncertain' and 12,12% did 'Agree' while 78,79% responded 'Strongly Agree' for this statement. It can be understood from the results that a great deal of students preferred having extra activities rather than solely using the coursebook. Additionally, one student expressed similar ideas in the interview by saying "I love those puzzles and I love them more than the coursebook" (Student 4, Interview data).

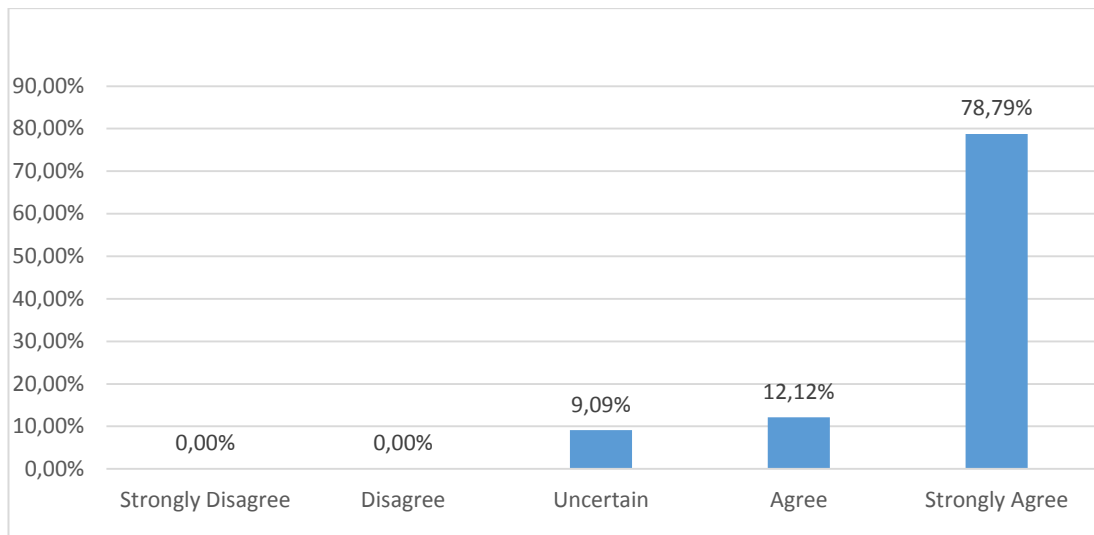


Figure 8. Students' response to item 2: I like practicing extra activities outside of the English course book

Item 5 asked students to rate 'I enjoy succeeding and winning' ($M=4,70$, $SD=11,46$) and Figure 10 demonstrates the responses of the students. None of the students responded as 'Strongly Disagree' but 'Disagree' was chosen by 3,03% and 'Uncertain' was chosen by 6,06% of the students. 9,09% of the students preferred 'Agree' and 81,82% of the students preferred 'Strongly Agree'. It could be understood from the responses of this item that a great number of the students enjoy being successful and wants to win.

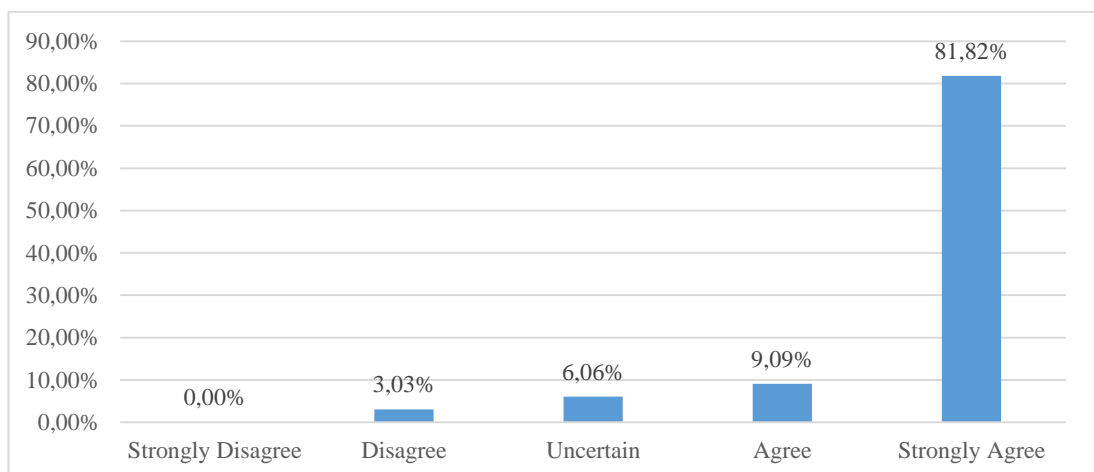


Figure 9. Students' responses to item 5: I enjoy succeeding and winning

Similarly, the analysis of interviews demonstrated that all 6 students

expressed their feelings on the aspects of competition and winning. The following excerpts exemplify such feelings of students:

.. it was great to win. I was becoming happy. I was becoming happy when my friends won too (Student 1, Interview data).

... it was a lot of fun... when I won (Student 2, Interview data).

... I felt great... because I won something (Student 4, Interview data).

Item 6 asked students to rate 'I enjoy cooperating' ($M=4,55$, $SD=10,88$) and Figure 10 shows the responses of the students related to this item. 3,03% of the students answered this item as 'Strongly Disagree' and 6,06% of the students answered 'Disagree' while 3,03% responded as 'Uncertain' representing only one student. 9,09% of the students rated this item as 'Agree' and 78,79% 'Strongly Agree'. The responses to the showed that most of the students enjoy working together to achieve a success. In a similar vein, one student expressed this as follows in the interview:

...it is not important to win and it is not important not to win. The important thing is to have fun (Student 3, Interview data).

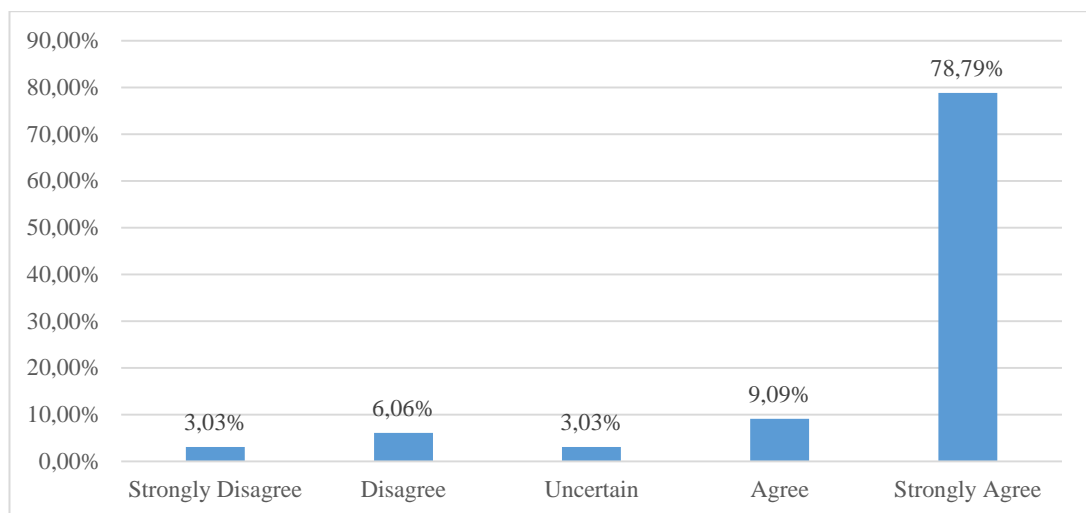


Figure 10. Students' responses to item 6: I enjoy cooperating

Item 4 asked the students to respond ‘Competition is one of my favorite features’ ($M=4,39$, $SD=10,11$), and Figure 11 displays the responses of the students. None of the students rated the ‘Strongly Disagree’ and ‘Disagree’. 9,09 % of the students responded ‘Uncertain’ while ‘Agree’ was preferred by 12,12% of the students and ‘Strongly Agree’ was preferred by 72,73% of the students. These results showed that competition, which is one of the game elements, was a favorite feature of the majority of the students.

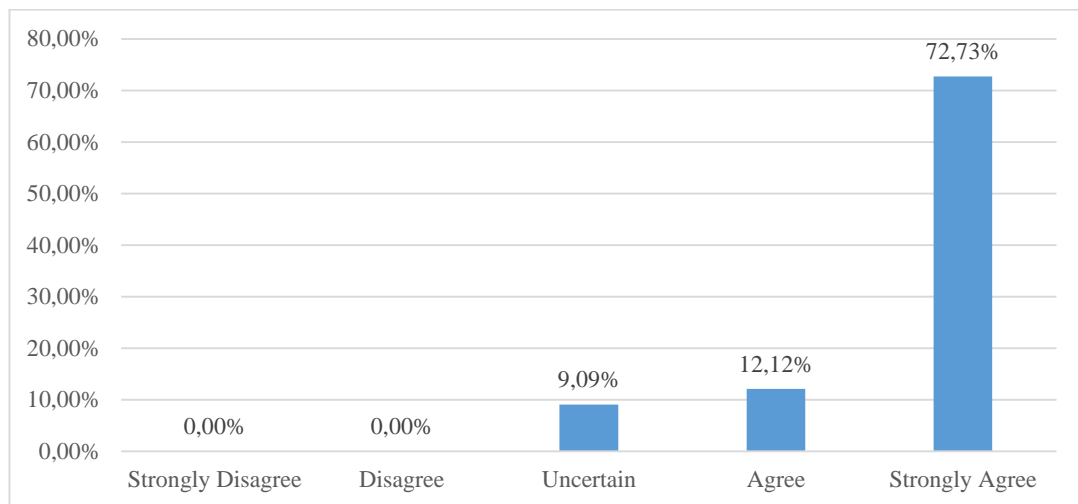


Figure 11. Students’ responses to item 4: Competition is one of my favorite features

As for the reverse-scale item in the questionnaire, the third item was ‘I feel bored when we play Pictionary game in class’ ($M=1,15$, $SD= 12,58$), and Figure 12 shows the responses of the students for this item. As for this reverse item, 87,88% of the students responded ‘Strongly Disagree’ and 9,09% ‘Disagree’, and also 3,03% were ‘Uncertain’. None of the students responded ‘Agree’ and ‘Disagree’. The findings displayed that almost all the students do not feel bored when they play the Pictionary game.

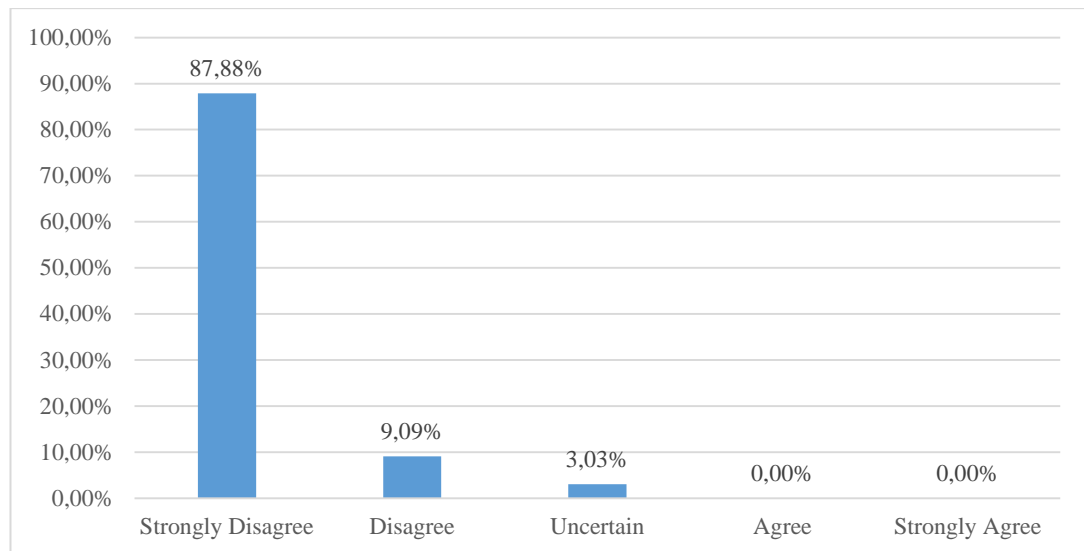


Figure 12. Students' response to item 3: I feel bored when we play Pictionary game in class

Finally, the analysis of the interviews also revealed the students' perceptions of leaderboard and badges. Almost all 6 students expressed their positive feelings of these as follows:

... for example.. uhh.. I was happy when you wrote my name (Student 2, Interview data)

... it was important to get badges (Student 2, Interview data)

... it was good. It was good to see my friends' names in the leaderboard too (Student 3, Interview data)

... I felt great when I was in the leaderboard because I wanted to win more (Student 4, Interview data)

... it was great to be in the leaderboard because it means I always won (Student 6, Interview data)

Chapter 5

Discussion and Conclusion

In this chapter, the overview of the study along with a relevant discussion is presented relying on the results of the analysis of the pre-test, post-test, and questionnaire. Pedagogical implications are also articulated to contribute to L2 instruction in EFL context. Finally, conclusions and recommendations for the future research are presented.

5.1 Overview of the Study

The purpose of this study was to investigate the effect of gamified game-based L2 vocabulary instruction on vocabulary retention of young learners and their perceptions of such lessons. The study was conducted at a private primary school in Turkey with the first grade students, and it was important because this age group is an understudied group in terms of empirical research.

The study was conducted with 51 students, consisted of two experimental groups with 33 students and one Control group with 18 students. Both groups were given a pre-test, treatment (Pictionary game), and a post-test; and a questionnaire was implemented only in the experimental groups as a follow-up. The data gathered from the pre-test and post-test were used to answer the first question and they were analyzed through SPSS (version 20.0). In addition, the data gathered from the questionnaire was used to answer the second research question.

This study showed that gamified game-based L2 vocabulary teaching had influence on vocabulary retention positively and also resulted in increased student enthusiasm according to their perceptions. Research questions were answered within the results of the study. The literature review discussed above presented a variety of results, but mostly it was understood that the gamification method was effective in both motivation and retaining vocabulary and results of this study also showed parallel results.

5.2 Discussions of Results for Research Questions

5.2.1 Discussions of Results for RQ1: What is the effect of gamified game-based L2 vocabulary teaching on young learners' vocabulary retention?

The first research question aimed at investigating the effect of gamified game-based L2 vocabulary teaching on young learners' vocabulary retention. The data was analyzed through the vocabulary pre-test and post-test scores, in accordance with Tuan's (2012) study in which experimental group was reported as being better than the control group. This study resulted with a significant difference between the experimental group and the control group, which meant that using Pictionary game as a vocabulary teaching technique was significantly effective in teaching English vocabulary to young learners in a private primary school.

Gamified game-based L2 vocabulary teaching resulted with a significant difference on students' success on retaining vocabulary compared to traditional vocabulary teaching which was also parallel to Yip and Kwan's (2006) findings. This study has confirmed that games are considerably effective in teaching L2 vocabulary to young learners. In accordance with this argument, Sylvén and Sundqvist (2012) found that language proficiency and games are highly correlational. The results of this study showed parallel results in terms of the effectiveness of games in retaining L2 vocabulary. In Turkey with young learners, gamification is still in its early development as a tool for education. This study, and those similar, are very vital for the future of school curriculums and how teachers can better convey language concepts and vocabulary to students, who may be disenchanted with or disinterested while using more traditional methods.

5.2.2 Discussions of Results for RQ 2: What are the learners' perceptions of gamified game-based L2 vocabulary instruction?

The second question aimed to seek students' perceptions of learning L2 vocabulary with the gamified game-based method. To answer this question, questionnaire was used. According to the data gathered from the questionnaire, Pictionary game was perceived as a beneficial, fun, and enjoyable method to learn the target vocabulary by the students.

As explained earlier, game elements are usually able to affect motivation positively. When game elements are applied into the classroom environment, the

motivation generally increases. According to the questionnaire results, game elements, such as competition, points, and leaderboards were reported to have impact on students' perceptions of the students positively, which contradict with Attali and Arieli-Attali's (2015) study since they stated that points have no effect on the participants. The rewards that were given at the end of each Pictionary game hour to the winner team and individual winner have also influenced the students' enthusiasm to the learning.

The responses of the experimental group participants to the questionnaire items have showed that young learners appreciate the game-furnished classes. The insertion of games into the lessons during the study, inspired students to take active parts in the learning practice. Moreover, games helped students in this study improve their social relationships and respect other feelings and thoughts since they all have to obey the same rules of the game. A common goal encouraged learners to act collaboratively to reach it, and concentrated them on the target, which was another feature in the questionnaire that was highly rated by the students because they enjoy cooperating with each other to reach the target. The cooperation of students within the groups, supports both cooperative and competitive learning.

Children can acquire better with games than any additional teaching technique or instrument since they already spend most of their out-of-school time playing games. Memorization-based traditional teaching approaches often get young learners uninterested to the class. However, teachers may gain higher potential effects by the help of educational games in teaching vocabulary items to young learners, as was the case in this study. The Pictionary game was significantly helpful in retaining the vocabulary that students learned recently. Therefore, the use of games in lessons can increase productivity. Children want their teachers to use games in their classes as much as possible since they usually feel more safe and comfortable in game-based lessons than traditional teaching.

It can be concluded that while implementing the Pictionary game, students from the same groups tried to help each other to remember the word in order for their team to win. As most of the students rated 'Strongly Agree' to the item about collaboration in the questionnaire, it can be assumed that students enjoyed working

together to achieve a common goal. At the end of the game, it was observed that they found these lessons fun, especially with the pictures they drew and also the names of the animals stuck in their mind which showed parallel results to Huyen and Nga's (2003) study as they also stated that games bring motivation and fun to the class. According to the questionnaire results, the students' level of motivation and desire to participate was higher than usual.

5.3 Pedagogical Implications

This study has several pedagogical implications for the effect of gamified game-based L2 vocabulary teaching in young learners. In the light of the results, it could be argued that tasks involving gamified game-based activities tend to increase learners' interest and attention, and therefore should be adapted more often in EFL classes. EFL teachers of especially young learners can benefit from games to teach L2 vocabulary to make most out of their lesson.

Games as a tool of teaching L2 vocabulary may not be enough solely in the classroom environment; however, a set of relevant game elements to the instructional goals should be included to enhance active student involvement because it keeps students engaged. That is, since learners should be actively involved in the learning process for a student-centered language instruction, games provide a better-facilitated L2 vocabulary retention as well as increased participation.

Overall, the results of this study are significant and crucial for implementation of gamified game-based vocabulary teaching in EFL classrooms as a method.

5.4 Conclusions

In the present study, the effects of using gamified game-based L2 vocabulary teaching to young learners were examined, and the perceptions of young learners on Pictionary game were investigated. The results of the study showed that the Pictionary game as a treatment concluded in the experimental groups' significantly enhanced vocabulary test performance, as well as positive perceptions of the students

of the gamified game-based learning activities. It was also observed that the use of the gamified game-based teaching in classroom increased students' level of motivation and classroom participation.

5.5 Recommendations for Further Research

This study sought to investigate the effects of gamified game-based teaching on retaining the vocabulary by young learners. However, there still remain many elements of the gamified game-based classroom to be explored. This study was conducted with 51 EFL young learners at a private primary school in Turkey. More research could be conducted with students from various levels as well, and with more classes to compare the different age groups in learning a foreign language with gamified game-based L2 vocabulary games. Other contexts and different sociocultural settings could also be studied so as to find out outcomes and reach conclusive empirical conclusions.

Another recommendation for the future research would be to taking different variables into consideration. This study did not focus on the different variables such as gender, parental status, the education level of parents, presence of another language, IQ (intelligence quotient) level, and the presence of mental or developmental problems, teacher's age, and disability status. That is why, further studies focusing on these variables as well as examining the relationships between them would also provide valuable contribution to the area.

One more recommendation is that Pictionary game treatment should be continued for more than two months mainly because a longitudinal study would provide more in-depth insights into the effect of any game-based applications for one in many aspects. Such longitudinal studies, which would continue for a full school year, might be conducted to see the effects of educational games in the long term. If the study would be conducted for a longer period of time, game elements, such as the leaderboard, might be refreshed periodically in order to motivate the students that might be at the bottom part of the leaderboard and win them back.

Last but not least, another recommendation for further research would be to

seek answers for the effect of gamification being or not being effective not only on one skill, which is L2 vocabulary in the case of this study, but also other language skills or abilities. The contribution of gamified game-based teaching on L2 pronunciation, reading, writing, grammar, listening, and/or speaking may be observed to see whether or not games have other effects on such language skills.

References

- Abrahamsson, N., & Hyltenstam, K. (2009). Age of onset and nativelikeness in a second language: Listener perception versus linguistic scrutiny. *Language learning, 59*(2), 249-306.
- Annetta, L., Mangrum, J., Holmes, S., Collazo, K., & Cheng, M. T. (2009). Bridging reality to virtual reality: Investigating gender effect and student engagement on learning through video game play in an elementary school classroom. *International Journal of Science Education, 31*(8), 1091-1113.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of educational psychology, 84*(3), 261.
- Attali, Y., & Arieli-Attali, M. (2015). Gamification in assessment: Do points affect test performance?. *Computers & Education, 83*, 57-63
- Ary, D., Jacobs, L., Sorensen, C., & Walker, D. (2014). *Introduction to research in education* (9th ed.). Belmont, CA: Wadsworth Cengage Learning
- Banfield, J., & Wilkerson, B. (2014). Increasing student intrinsic motivation and self-efficacy through gamification pedagogy. *Contemporary Issues in Education Research (Online), 7*(4), 291
- Becker, K. (2006). Pedagogy in commercial video games. In D. Gibson, C. Aldrich & M. Prensky (Eds.). *Games and simulations in online learning: Research and development Frameworks*. Hershey: Idea Group Reference.
- Birch, H. (2013). *Motivational Effects of Gamification of Piano Instruction and Practice*. Master of Arts Graduate Department of Curriculum, Teaching and Learning. University of Toronto. Yayınlanmamış Yüksek Lisans Tezi.
- Brom, C., Preuss, M., & Klement, D. (2011). Are educational computer micro-games engaging and effective for knowledge acquisition at high-schools? A quasi-experimental study. *Computers & Education, 57*(3), 1971-1988.
- Bromley, K. (2007). Nine things every teacher should know about words and vocabulary instruction. *Journal of adolescent & adult literacy, 50*(7), 528-537.
- Burke, B. (2014b, May 6). Why Gamification's Not a Game. Retrieved from <http://blogs.wsj.com/cio/2014/05/06/why-gamifications-not-a-game/>
- Cameron, L. (2001). *Teaching languages to young learners*. Ernst Klett Sprachen.
- Carroll, J. M., & Thomas, J. M. (1988). Fun. *ACM*SIGCHI*Bulletin, 19*(3), 21-

- Chen, H. J. H., & Yang, T. Y. C. (2013). The impact of adventure video games on foreign language learning and the perceptions of learners. *Interactive Learning Environments*, 21(2), 129-141.
- Cheong, C., Filippou, J., & Cheong, F. (2014). Towards the gamification of learning: Investigating student perceptions of game elements. *Journal of Information Systems Education*, 25(3), 233
- Codish, D., & Ravid, G. (2014). Personality Based Gamification – Educational Gamification for Extroverts and Introverts. *Proceedings of the 9th Chais Conference for the Study of Innovation and Learning Technologies: Learning in the Technological Era*, Israel.
- Cohen, L., Manion, L., Morrison, K., & Morrison, R.B. (2007) “Research methods in education” Routledge
- Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education*, 59(2), 661-686.
- Council of Europe. (n.d.). Retrieved May 16, 2017, from http://www.coe.int/t/dg4/linguistic/cadre1_en.asp
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Crotty, M. 1998. *The Foundations of Social Research: Meaning and Perspective in the Research Process*. Thousands Oaks, Calif.: Sage Publications.
- Decarrico, J. S. (2001). Vocabulary learning and teaching. *Teaching English as a second or foreign language*, 3, 285-299.
- Deterding, S. (2012). Gamification: designing for motivation. *interactions*, 19(4), 14-17.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9–15). Tampere: ACM.
- Domínguez, A., Saenz-de-Navarrete, J., De-Marcos, L., Fernández-Sanz, L., Pagés, C., & Martínez-Herráiz, J. J. (2013). Gamifying learning experiences: Practical implications and outcomes. *Computers & Education*, 63, 380-392.
- Dörnyei, Z. (2014). Motivation in second language learning. In M. Celce-Murcia, D. M. Brinton & M. A. Snow (Eds.), *Teaching English as a second or foreign language* (4th ed., pp. 518-531). Boston, MA: National Geographic

Learning/Cengage Learning.

- Elorza, I., & Muñoa, I. (2008). Promoting the minority language through integrated plurilingual language planning: The case of the Ikastolas. *Language, Culture and Curriculum*, 21(1), 85-101.
- Glover, I. (2013). Play As You Learn: Gamification as a Technique for Motivating Learners. *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications*. Chesapeake: AACE.
- Gözalán, E. (2013). *Effect of "Game-Based Attention Training Program", prepared by the researcher, on attention and language skills of 5 and 6 year old children* (Masters Dissertation). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/> (331841)
- Gülsoy, H. (2013). Teaching Vocabulary to Sixth Graders Through Games, Master thesis, Mersin: ÇAĞ University.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does Gamification Work? – A Literature Review of Empirical Studies on Gamification. In *2014 47th Hawaii International Conference on System Sciences (HICSS)* (pp. 3025–3034). IEEE.
- Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education*, 80, 152-161
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3), 66-67.
- Huizenga, J., Admiraal, W., Akkerman, S., & Dam, G. T. (2009). Mobile game-based learning in secondary education: engagement, motivation and learning in a mobile city game. *Journal of Computer Assisted Learning*, 25(4), 332-344.
- Hong, G. Y., & Masood, M. (2014). Effects of Gamification on Lower Secondary School Students' Motivation and Engagement. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 8(12), 3733-3740
- Huotari, K., & Hamari, J. (2012). Defining Gamification: A Service Marketing Perspective. In *Proceeding of the 16th International Academic MindTrek Conference* (pp. 17–22). New York, NY: ACM.
- Huyen, N. T. T., & Nga, K. T. T. (2003). Learning vocabulary through games. *Asian EFL Journal*, 5(4), 90-105
- Jurs, S., & Wiersma, W. (2009). Research methods in education: An introduction.

- Kalaycıoğlu, H. E. (2011). *The Effect Of Picture Vocabulary Games And Gender On Four Year-Old Children's English Vocabulary Performance: An Experimental Investigation* (Masters Dissertation) Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/> (300739)
- Kapp, K. M. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. San Francisco, CA: John Wiley & Sons.
- Karahan, F. (2007). Language attitudes of Turkish students towards the English language and its use in Turkish context. *Journal of arts and sciences*, 7(1), 73-87.
- Kastner, N. (2013). Gamification: from the arcade to the bank: a new marketing trend is to add video game elements to online customer interaction with financial institutions. *ABA Bank Marketing*, 45(10), 20.
- Kaya, K. (2016). *Impact Of Games On Teaching Vocabulary: A Case Study With Sixth Grade Turkish Students* (Masters Dissertation). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/> (429757)
- Kebritchi, M., Hirumi, A., & Bai, H. (2010). The effects of modern mathematics computer games on mathematics achievement and class motivation. *Computers & education*, 55(2), 427-443.
- Kim, B., Park, H., & Baek, Y. (2009). Not just fun, but serious strategies: Using meta-cognitive strategies in game-based learning. *Computers & Education*, 52(4), 800-810.
- Korolov, M. Gamification of the enterprise. *Network World*, 9 (2012), 31-33.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Sage.
- Marczewski, A. (2013). The Intrinsic Motivation RAMP.
- Marín-Díaz, V., López-Pérez, M., & Maldonado-Berea, G. A. (2015). Can Gamification be introduced within primary classes?. *Digital Education Review*, (27), 55-68
- Michael, D. & Chen, S. (2006) *Serious games: Games that educate, train, and inform*. Boston, MA: Thomson Course Technology.
- Nunan, D., & Carter, R. (Eds.). (2001). *The Cambridge guide to teaching English to speakers of other languages*. Ernst Klett Sprachen.
- O'Dwyer, L. M., & Bernauer, J. A. (2013). *Quantitative research for the qualitative*

researcher. Sage Publications.

Oliver, P. (2010). *The student's guide to research ethics*. McGraw-Hill Education (UK).

Özkiraz, K. (2015). *The Role Of Games In Teaching Vocabulary To Fifth Graders* (Masters Dissertation). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/> (415837)

Piccione, P. A. (1980). In search of the meaning of Senet. Archaeological Institute of America.

Poulsen, M. (2011). Introduction to game based learning. In P. M. & E. Køber (Eds.), *The GAMEiT handbook* (pp. 15-33). Oslo, Norway.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1-6.

Richards, J. C. & Renandya A. W. (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press.

Rose, C. P., & Nicholl, M. J. (1998). *Accelerated learning for the 21st century: The six-step plan to unlock your master-mind*. Dell Books.

Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning*. Association for Supervision and Curriculum Development, 1703 N. Beauregard St., Alexandria, VA 22311-1714 (Product no. 101042: \$22.95 ASCD members; \$26.95 nonmembers).

Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54–67. <http://doi.org/10.1006/ceps.1999.1020>

Simpson, A. W., & Kaussler, B. (2009). IR teaching reloaded: Using films and simulations in the teaching of international relations. *International Studies Perspectives*, 10(4), 413-427.

Singh, S.P.: Gamification: A strategic tool for organizational effectiveness. *International Journal of Management*, 1(1), pp.108-113 (2012)

Şenergüç, G. (2007). How games work on adults in teaching vocabulary, Master thesis, Konya: Selçuk University.

Sylvén, L. K., & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCALL*, 24(03), 302-321

Tuan, L. T. (2012). Vocabulary recollection through games. *Theory and Practice in Language Studies*, 2(2), 257

- Varni, J. W., Limbers, C. A., Bryant, W. P., & Wilson, D. P. (2010). The PedsQL™ Multidimensional Fatigue Scale in pediatric obesity: Feasibility, reliability and validity. *International Journal of Pediatric Obesity*, 5(1), 34-42.
- Yip, F. W., & Kwan, A. C. (2006). Online vocabulary games as a tool for teaching *and learning English vocabulary. *Educational media international*, 43(3), 233-249.
- Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Wharton Digital Press.
- Werbach, K. (2014). (Re) Defining Gamification: A Process Approach. In *Persuasive Technology* (pp. 266–272). Springer.

APPENDICIES

Appendix 1. Vocabulary Pre-test and Post-test Check List

The child pointed to the bird.		
The child pointed to the hamster.		
The child pointed to the turtle.		
The child pointed to the rabbit.		
The child pointed to the lizard.		
The child pointed to the fish.		
The child pointed to the crocodile.		
The child pointed to the elephant.		
The child pointed to the frog.		
The child pointed to the giraffe.		
The child pointed to the monkey.		
The child pointed to the mouse.		
The child pointed to the parrot.		
The child pointed to the snake.		
The child pointed to the zebra.		
The child pointed to the deer.		
The child pointed to the koala.		
The child pointed to the panda.		
The child pointed to the flamingo.		
The child pointed to the pelican.		
The child pointed to the toucan.		
The child pointed to the shark.		
The child pointed to the dophin.		
The child pointed to the whale.		
The child pointed to the hippo.		
The child pointed to the rhino.		
The child pointed to the wolf.		
The child pointed to the lion.		
The child pointed to the fox.		
The child pointed to the bear.		
The child pointed to the raccoon.		
The child pointed to the chipmunk.		
The child pointed to the kangaroo.		
The child pointed to the meerkat.		
The child pointed to the dog.		
The child pointed to the cat.		
The child pointed to the duck.		
The child pointed to the chicken.		
The child pointed to the pig.		
The child pointed to the sheep.		

Appendix 2. The Perception Questionnaire in Turkish

1. Pictionary oynadığımız dersleri daha çok seviyorum.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Ders kitabı dışında ekstra aktiviteler hoşuma gider.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3. Pictionary oyununu oynadığımız dersler benim için sıkıcı geçiyor.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4. Yarışmak özelliklerimden biridir.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Başarmaktan ve kazanmaktan keyif alırım.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. Grup arkadaşlarımla iş birliği yapmaktan zevk alırım.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Pictionary oyunuyla öğrenmekten keyif alırım.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8. Liderlik tablosunda adıma görmek beni heyecanlandırıyor.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9. Pictionary oyunuyla öğrendiğim kelimeleri daha kolay hatırlıyorum.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10. Pictionary oyununda kazandığım puanlar beni heveslendiriyor.	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

CURRICULUM VITA

PERSONAL INFORMATION

Surname, Name: Birsen, Pelin

Nationality: Turkish (T.C.)

Date and Place of Birth: 22 September 1991, İstanbul

Marital Status: Single

Phone: +90 537 733 23 49

email: pelin.birsen@hotmail.com

EDUCATION

Degree	Institution	Year of Graduation
BS	Yeditepe University	2013
High School	Ata College	2009

WORK EXPERIENCE

Year	Place	Enrollment
2013-2017	Doga College	English Teacher

FOREIGN LANGUAGES

Advanced English, Intermediate Spanish

CERTIFICATES

Microsoft Teacher Trainer	MICROSOFT	2016
Spanish Language Certificate	ENFOREX	2012
Effective Usage of Body Language	CLH	2010

HOBBIES

Puzzle, Pilates