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**EXPLORING THE ROLE OF GAMIFICATION IN LEARNING  
VOCABULARY**

**THESIS BY  
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**DEDICATION**

*To Fikret and Mehmet Ali GÜNDOĞAN*

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Vocabulary

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19/01/2023

İlker GÜNDOĞAN

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**ABSTRACT****EXPLORING THE ROLE OF GAMIFICATION IN LEARNING  
VOCABULARY****İlker GÜNDOĞAN****Master of Arts, Department of English Language Education****Supervisor: Dr. Aysun YURDAIŞIK DAĞTAŞ****January, 2023, 78 Pages**

Throughout humanity's civilization, games have attempted to fill essential gaps in daily life. Games have been used as a tool for increasing communication between people, teaching life norms, and solving difficulties since ancient times. Through games, both children and adults learn their duties and begin to build their own tactics to attempt to overcome the challenges they encounter. Children learn to speak and engage through games during their early years. Play may be viewed as a form of self-expression for children throughout this time period. Games are important instruments for supporting physical, mental, cognitive, and psychological development throughout childhood (Deterding et al., pp. 9–15, 2011).

Due to the important role of gamification in education, in this study, it is aimed to explore students' achievements, attitudes and perspectives on gamification in vocabulary learning. The research was carried out with the participation of 23 students aged 10 years. In the study, which lasted for six weeks in total, students were given vocabulary lessons with applications such as 'Kahoot, Wordwall, Taboo and Pictionary'. At the beginning and end of the practice, a questionnaire was administered to the students to measure their attitudes, 'the Word Test' to measure their success, and a reflective journal to learn their perspectives.

According to the Questionnaire and the Word test results, a significant difference was observed in both achievement and attitude of the students in the pre- and post-test comparisons. The data collected with the reflective journal were categorized and it was examined that students' perspectives on gamification were positive.

*Key words:* Gamification, attitude, perception, achievement

**ÖZ****KELİME ÖĞRENMEDE OYUNLAŞTIRMANIN ROLÜNÜN  
KEŞFEDİLMESİ****İlker GÜNDOĞAN**

**Yüksek Lisans Tezi, İngiliz Dili Eğitimi Anabilim Dalı**  
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İnsanlığın uygarlığı boyunca oyunlar, günlük yaşamdaki temel boşlukları doldurmaya çalıştı. Oyunlar, eski çağlardan beri insanlar arasındaki iletişimi artırmak, yaşam normlarını öğretmek ve zorlukları çözmek için bir araç olarak kullanılmıştır. Oyunlar aracılığıyla hem çocuklar hem de yetişkinler görevlerini öğrenirler ve karşılaştıkları zorlukların üstesinden gelmek için kendi taktiklerini oluşturmaya başlarlar. Çocuklar, ilk yıllarında oyunlarla konuşmayı ve etkileşim kurmayı öğrenirler. Oyun, bu süre boyunca çocuklar için bir kendini ifade biçimi olarak görülebilir. Oyunlar, çocukluk boyunca fiziksel, zihinsel, bilişsel ve psikolojik gelişimi desteklemek için önemli araçlardır (Deterding ve diğerleri, s. 9–15, 2011).

Oyunlaştırmanın eğitimdeki önemli rolünden dolayı bu çalışmada, öğrencilerin kelime öğreniminde oyunlaştırmaya ilişkin başarılarının, tutumlarının ve bakış açılarının keşfedilmesi amaçlanmaktadır. Araştırma 10 yaşındaki 23 öğrencinin katılımıyla gerçekleştirilmiştir. Toplam altı hafta süren çalışmada öğrencilere 'Kahoot, Wordwall, Taboo ve Pictionary' gibi uygulamalarla kelime dersi verildi. Uygulamanın başında ve sonunda öğrencilere tutumlarını ölçmek için anket, başarılarını ölçmek için 'Kelime Testi' ve bakış açılarını öğrenmek için yansıtıcı günlük uygulandı.

Anket ve Kelime testi sonuçlarına göre ön test ve son test karşılaştırmalarında öğrencilerin hem başarılarında hem de tutumlarında anlamlı bir fark gözlenmiştir. Yansıtıcı günlük ile toplanan veriler kategorize edilmiş ve öğrencilerin oyunlaştırmaya bakış açılarının olumlu olduğu incelenmiştir.

*Anahtar kelimeler:* Oyunlaştırma, tutum, algı, başarı

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## ABBREVIATIONS

<b>CEFR</b>	: Common European Framework of Reference for Languages
<b>EFL</b>	: English as a Foreign Language
<b>M</b>	: Mean
<b>MA</b>	: Master of Art
<b>N</b>	: Sample Size
<b>SDT</b>	: Self determination theory
<b>SPSS</b>	: Statistical Package for Social Sciences
<b>L1</b>	: First Language
<b>L2</b>	: Second Language

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## 1. INTRODUCTION

Learning vocabulary is a time-consuming process that necessitates a great amount of work on the part of the students. They frequently face problems on this journey, which might easily depress them. As a result, several approaches and tactics for motivating learners, creating a more engaging learning environment, and increasing student motivation have been developed in order to achieve the desired learning results.

Traditional approaches become repetitive and futile in most settings, including education, depending on the time period in which today's generation is emerging. Traditional methods of teaching vocabulary are divided into three categories, according to Gairns and Redman (1986): visual, verbal, and translation. Visual methods; these methods focus on visual memory. They include handouts, pictures, paintings on a whiteboard, flipcharts, relia, imitation, and gesture. They are used to convey the meaning of words. These methods are particularly useful for teaching specific vocabulary items, such as actual objects, actual locations, actual occupations, actual descriptions of people, actual actions, and actual activities. Verbal strategies, such as instances, scales, synonyms, opposites, contrasts, and demonstrative situations are also included. These are the ones that are most helpful for explaining abstract terms. Translation is seen to be a powerful means of meaning communication. Particularly when teaching low frequency terms, it can save time. Overusing translation by teachers, though, poses a serious risk. Using the mother tongue too frequently deters students from becoming aware of when to use L2. They frequently employ L1 "as a scaffolding to link L2 items" (Gairns & Redman, 1998, p. 75). These methods are thus applicable to a more teacher-centered approach. Typically, the instructor chooses the lesson's content rather than the students. This is with relation to the difficulty of acquiring new words and concerns about educational course hours. As a result, educators and others are looking for novel ways to engage and recruit the next generation. Because millennials are so used to using web-based tools, they prefer to spend time online sharing information. To cater to the younger generation, traditional approaches can be substituted with innovative ones (Flores, 2015). In addition, using gamification items in class improves student engagement by making vocabulary learning and repetition more enjoyable.

Gamification is defined by several researchers (Kim, Rothrock, & Freivalds, 2016, Yildirim, 2017, Aşıksoy, 2017): "The procedure of using gaming-related components

and mechanics and non-playful game concept activities to motivate and increase the motivation of participants.” It is also defined as: “the use of game design elements outside the context of games”, and it is also: “Changing a designer’s behavior through fun and enjoyable experiences.” In light of the previous definitions, gamification in education can be defined as using the elements of game design and rewards to introduce an element of fun and enjoyment in education to stimulate learners' involvement in the teaching and learning processes and increase learners' motivation to teach and learn.

According to Li et al. (2013), students reacted favorably to game-play mechanics and they were much more involved in social-interactions when gamification elements were added to English classes. On game aspects, there have been a variety of viewpoints. Barata et al. (2013) completed a five-year analysis of a university course that included both gamified and non-gamified variations of the course, both of which were sponsored by Moodle, which is a freeware and open-source system for online learning. Points, success scores, a leaderboard, tasks, and medals were all part of the gamified edition. They concluded that students improved their attendance and demonstrated a greater level of commitment in this edition. In the gamified version, students still appeared to do well. Gamification is used to inspire and further involve pupils in experimental experiments, engaging younger group (pupils aged 5 to 7). With the use of points and rewards, they saw an improvement in mission completion rates (Brewer et al., 2013). Kickmeier-Rust et al. (2014) proposed another classroom trial with kids aged 7 to 8 years. These authors created a tool with gamification capabilities for studying and performing the multiplication table. They look at the effects of gamification and various forms of feedback and come to the conclusion that their strategy increased enthusiasm and interaction while also improving learning results.

The researchers highlighted in their results author analyses that interest levels improved to pupils engaging in gamification process, that pupils consistently participate in content so they have a favorable outlook toward learning, and that learner output enlarged (Dominguez et al, 2012). Engagement is the real actions and attitude of a pupil about completing coursework. However, the use of gamification tools is increasing student interest in social learning and student-teacher interaction. The increase in the student's motivation positively affected the vocabulary learning process and enabled the students to learn the words more easily.

To summarize, by using gamification, students can increase their adaptation to the vocabulary lesson, and they can contribute to their learning by trying new ways of learning vocabulary. Thanks to gamification, learning vocabulary can be both more fun and more permanent.

### **Statement of the Problem**

It is reasonable to suppose that a significant number of research have found that gamified learning has several advantages. Surendeleg et al. (2014) point out that the majority of gamification research on employ qualitative analysis which explains gamification from a theoretical viewpoint in their own literature review on the topic. Additionally, the majority of the pertinent literature focuses on gamification's impacts on teaching and learning, rather than on language acquisition and instruction specifically, and there is little research on learners' attitudes toward it. In contrast, this study could add to the body of knowledge already available on gamification in English vocabulary learning specifically and look for students' learning' perceptions toward this emerging trend. The findings of the study may focus on providing valuable information on the potential advantages of gamification, give curriculum designers insight into how to incorporate gamification components into the curricula, and help teachers who are looking for new ways to engage their students more actively in the learning process. It could also persuade teachers who are hesitant to include technology into their lessons to do so as a productive teaching method that help their pupils. As a result of games' high degree of attraction for students, there may be an increase in their level of interaction, which may eventually result in the formation of a favorable attitude toward vocabulary learning. According to Nation (1978), the primary challenge with vocabulary education is that somehow very few vocabularies and a small percentage of what is required to understand a term can be covered at any given time. This restriction also applies to accidental learning by hearing or reading, despite the fact that large quantities of autonomous reading and listening are significantly simpler to arrange for than substantial quantities of teaching. Only a little quantity of information about a word may be properly taught at a time. The more complicated the material, the more probable it is that the learners would misinterpret it.

Nation (2005) claims that in order to help students broaden their vocabulary and articulate themselves more simply and effectively, a more comprehensive approach is

needed. Due to a lack of class time and opportunities to study themes, one of the most important concerns in language learning education is that pupils are not getting adequate exposure to English. Apart from English, students have other classes for which they are responsible, so they are unable to devote much time to English and are unsure about when and how to begin learning vocabulary. Most students' desire to learn words is destroyed by these circumstances, which obstruct their progress (Kikuchi, 2009). As a result, it is critical to make current lesson hours as active as possible, as well as to make learning more lasting for students. The aim of this research is to see how gamification affects students' motivation and success in learning English vocabulary.

### **Significance of the study**

Gamification is a method for keeping language learners motivated. Gamification, a relatively new phenomenon, strengthens learner motivation in studying a foreign language by introducing subjects in an enjoyable atmosphere and thereby encouraging learning. When looking at the literature, it is clear that studies on gamification techniques have become increasingly popular in recent years. Studies have been conducted in a variety of settings such as classrooms and online education environments. When looking at the literature, it's clear that research on the subject frequently includes particular game components that are thought to improve motivation. From general investigations, it has been noticed that researchers do not extract new elements in this way or employ distinct gamification elements. Lastly, the majority of studies on the subject focus on the short-term benefits of gamification on attitude of students, students' accomplishment, and students' perceptions. It is important to analyze the long-term impacts on gamification on students' motivation, success, and class participation in order to enrich the literature. In this respect, this technique needs to be developed and matured. It is expected that this analysis was contribute to the literature on how to do long-term gamification studies and what should be considered. In addition, this study is thought to add a unique value to the literature on gamification thanks to its gamification design and instructional design.



## **Purpose of the study**

Given the difficulties and significance of learning English vocabulary as well as the constructive environment that gamification may offer to the process, the purpose of this research is to investigate the ways that gamification may affect students' achievement, students' attitudes and students' perceptions of vocabulary learning.

## **Research Questions**

1. How does vocabulary teaching through gamification affect the students' achievement?
2. How does vocabulary teaching through gamification affect students' attitudes towards vocabulary learning?
3. What are students' perceptions of vocabulary learning through gamification?

## **Literature Review**

The definitions of terms like the features of gamification are provided in this part. The literature study continues with a discussion of the value of vocabulary development and how gamification might be used in the teaching of foreign languages.

## **Background the Study**

Throughout humanity's civilization, games have attempted to fill essential gaps in daily life. Games have been used as a tool for increasing communication between people, teaching life norms, and solving difficulties since ancient times. Through games, both children and adults learn their duties and begin to build their own tactics to attempt to overcome the challenges they encounter. Children learn to speak and engage through games during their early years. Play may be viewed as a form of self-expression for children throughout this time period. Games are important instruments for supporting physical, mental, cognitive, and psychological development throughout childhood. The game logic and mechanism, which allow youngsters to live and experience life via an engaging model, have enabled successful communication and issue resolution at all stages of life. By developing the game features within this framework, we come across a new concept, gamification, as a combination of these elements. The term "gamification" is a new, novel moniker for an old notion.

According to Deterding et al. (pp. 9–15, 2011), the core notions of gamification were first applied in 2008. However, the word "gamification" did not receive widespread usage and acceptance until about the middle of 2010. The idea was also known by the following names: "Efficiency games," "targeted amusement," "fun designs," "behavioral games," "game layer," or "applied gaming" are examples of such terms. However, none of these succeeded, and 'Gamification' is the one that did, "managing to establish itself as a familiar family term. "According to Kapp (2012) gamification is "the use of game-based features, graphics, and game concepts to motivate and encourage users while also assisting them in overcoming difficulties." Gamification is more than simply a game; it is a planned and goal-oriented endeavor. The scholars identify gamification users as players, gamers, users, and students.

Understanding the players is a key component of a successful gamified process. The goal is to determine how to elicit their feelings and desires. Knowing this provides insight into what motivates people to engage in game-like activities. This is the primary cause of the game industry's rapid growth; researchers have researched human behavior and what support playful pleasurable and enroll their findings to gamification. Modern neuroscience and behavioral scientific studies have quantified the research done in the gaming industry. There is actually a science to enjoyment, as stated in Oliver and Simpson (1988). It is also believed that commercial solutions should be founded on a comprehensive grasp of society. Innovators in gamification should understand why games are interesting and, as a result, the mechanics of what draws people. This, in conjunction with game theories, will result in a complete grasp of the fundamental mechanics of gamification.

Gamification may employ a myriad of game features, including bright visuals and cutting-edge technology, but what ultimately apply gamification beneficial is combining our perceptions of what stimulates people and motivates people to take part. Gamers will not play this game that does not appeal to their most fundamental interests. Gamification must recognize and utilize all we know about human behavior, which is that people are motivated by aspiration, prestige, acknowledgment, decision, ideals, findings, growing abilities, profit, and a variety of other factors. People are cognitive and emotional creatures, as well as independent and cultural beings; this enables them to present themselves effectively while also building meaningful connections. In order to design the greatest gamification solution, a deep grasp of psychology must be built. This segment will investigate three forms of psychology (inspirational, cognition, and

interpersonal) with the goal of studying ideas pertinent to gamification that would eventually help in its construction.

According to a survey of the literature, the large number of studies on the application of gamification in the field of language teaching and education focus on how it affects vocabulary growth. This section focuses on investigating the studies surrounding gamified learning environments in courses.

A study on the idea that taking chances is necessary for success in the language learning process was undertaken by Shatz (2015). Gamification was used by the researcher to encourage taking risks and enhance language acquisition. 360 men and 166 women took part in the study, the majority of them were native English speakers studying Finnish. Depending on their language threat, they were placed into three groups: low, middle, and high. According to study findings, compared to the other two groups, the high language risk-taking group scored higher, had more confidence, and felt less anxious.

Acıkgöz (2019) investigated how two distinct gamification programs affected undergraduate students in English preparatory education's performance in acquiring vocabulary and intrinsic motivation. While the other utilized the Quizlet program, Kahoot! employed a gamification tool. Both groups exhibited a notable improvement in their English vocabulary acquisition performance at the conclusion of the 6-week experimental trial. Data from the pretest and posttest were compared, and it was found that the students' intrinsic motivation also varied considerably.

In their study, Buckley and Dolye (2016) focused at the correlation between university students' engagement in class and academic achievement and digital gamification apps. The findings of the study's pretest-posttest data, which involved 100 students, demonstrated that gamified learning environments benefited students' learning processes as well as their interest and involvement in the class.

In addition, Alemi (2010) made research on 3rd high school students in this area. A total of 60 pupils were chosen at random from a group of 100 kids. Two groups, an experimental group and a control group, were formed from the chosen pupils. Pre- and post-tests with questions regarding vocabulary, grammar, and pronunciation were used to collect the data. Following process intervention, the findings of this study also showed that game-based learning has a positive impact on students' academic performance as well as their ability to engage students in learning activities and

successfully create word associations with specific contextualized situations in which students can engage in a purposeful process of learning.

Karatekin (2017) uses gamification tools like Duolingo, Kahoot, and others to enhance vocabulary learning in English classes. The findings of the study of the quantitative and qualitative data collected from the experimental and control groups of secondary school pupils in the fifth grade revealed that gamification applications had no discernible impact on vocabulary learning in English sessions. However, based on the results, it has been shown that these methods encourage students to practice, as well as boost their levels of interest and involvement in the session.

In a research by Maden (2016) that looked at how Kahoot's gamification application affected undergraduate students' vocabulary learning in academic English sessions, Kahoot!. It was determined that the gamification application's rapid feedback function and entertaining user interface had a favorable impact on the students' motivation and interest levels.

Dicheva et al. (2015) used the systematic mapping method to analyze papers on gamification in education. 34 studies, all of which were carried out between 2010 and 2014, were covered by the investigation. The study has revealed that, despite the fact that gamification in education has been discussed in numerous publications, there hasn't been a thorough experimental study on how to integrate game elements into the teaching environment. Instead, most of these publications define some game dynamics and mechanisms, which are repetitive uses. Similar to this, Rodrigues et al. (2019) looked at the fundamental idea of gamification. The research included 50 studies that were done between 2011 and 2016. Twenty-eight similar concepts were found to be employed in the studies, and there were found to be eight themes. It is hoped that game design material will support future research by integrating it with work, education, and learning.

In order to judge the perceptions of gamified teaching applications on student achievement and students' approach to classes, Yıldırım (2017) conducted an experimental study on 97 students who took the Education Principles and Methods course in the primary school mathematics education department during the 2014–2015 academic year at a state university in the north of Turkey. 48 students make up the control group while 49 students are in the experimental group. The study's scope called for the employment of both an experimental design and a qualitative research methodology. Gamifying the Teaching Principles and Methods curriculum was done as

part of the experimental design. Both groups received the identical program. A combination of traditional (60%) and online learning was used in this study (40 percent). The distance learning phase employed the free and open-source Moodle platform. Students were assigned tasks within the moodle system, such as blogging on a certain subject, analyzing an article, and creating a project assignment. Both groups received a pre- and post-test. The study's findings show that the gamification-based education application has a favorable impact on students' academic performance and attitudes toward the lesson. Students in the experimental group outperformed those in the control group in terms of performance. The study's findings indicated that coeducational teaching strategies improved student achievement.

Hamari et al. (2014) looked at the experimental investigations on gamification. The scope of the research covered 24 studies that were carried out between 2010 and 2013. According to the research, gamification has a good impact, but the exact nature of this impact depends on the users and the context in which it is used.

The motivational impact of gamification on 83 participants was researched by Roy et al. in 2018. Two gamified online learning systems, Khan Academy and Code Academy, featuring gamified components including badges, points, and avatars, were used and evaluated by study participants. 39 individuals were assigned to the Code Academy platform, while 44 individuals were assigned to Khan Academy. It was discovered that the participants used the gamified system because they wanted to learn, were curious, enjoyed themselves, and wanted to become more competent. The participants claimed that using the system is motivated by gamification in and of itself. Gamified information had a favorable impact on students' motivation and performance in the study.

The findings demonstrate that gamified approaches primarily boost students' motivation and interest in the course, make it easier for them to concentrate, and have a beneficial impact on their performance. It alludes to how gamified approaches are engaging and student-centered. The research under consideration stress that productivity gained from learning and training settings using gamified techniques rises, and that issues with motivating learning environments (such as difficulty finding a place to feel independent, etc.) may be resolved. The foundation of the gamification-enriched education program created within the purview of the thesis research is the motivating approach and design highlighted by the studies investigated in the literature study about the area of education.

## **Related Theories**

Every contact between humans and technology reveals a deep link between motivational difficulties and psychological state. Many things in education that interact with students may have natural motivating notions when procedures to elicit their requirements and engagement. Detailed understanding of motivational theories developed, on the other hand, supports this particularly aware and provides a meaningful comprehension on gamification in order to design a new one. This section will look at some motivational psychology theories that are important in understanding gamification.

## **Self-Determination Theory**

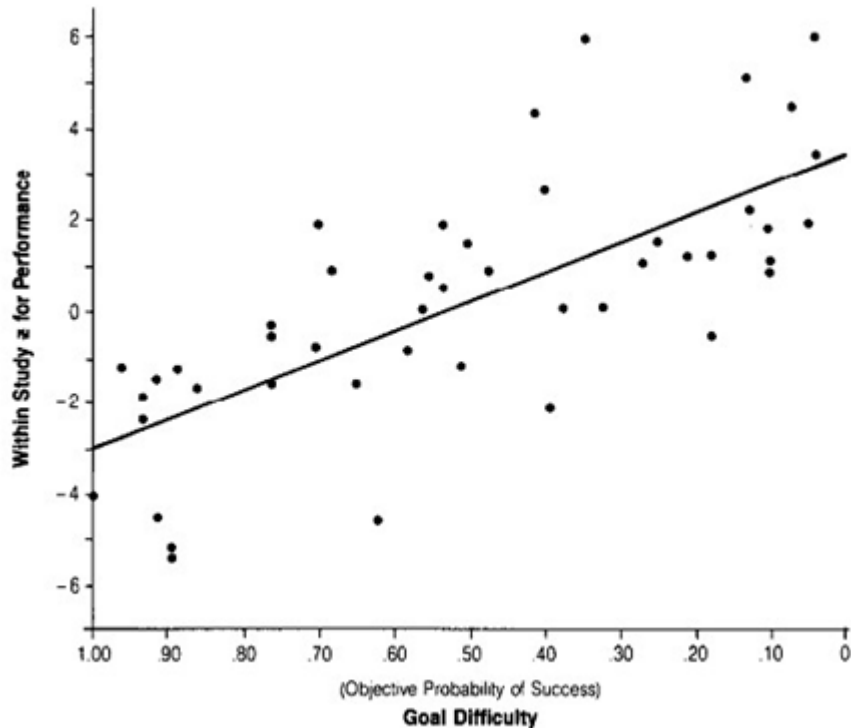
In the realm of motivational psychology, the self-determination hypothesis is one of the most important theories. Self-determination theory is a humanitarian motivation theory that examines human beings' underlying psychological needs for personal progress and well-being, as well as the impact of external circumstances on motivation. By measuring demands and purposes, SDT can anticipate goal-oriented actions. SDT focuses on the fundamental psychological requirements of autonomy, competence, and connectedness, as well as their essential role in self-determined motivation, well-being, and progress. Finally, SDT discusses the crucial role of the social and cultural context in supporting or impeding people's basic emotional requirements, apparent sense of self-esteem, productivity, and well-being (Legault, 2017). Ryan and Deci (2000) identify three intrinsic requirements that drive human motivation and, when met, result in significant personal improvement.

1. **Relatedness** is the desire for social contact, interactions, and interconnection. During the game process, this is the time when the gamer interacts with other users.
2. **Autonomy** is the desire to have independent decisions. In a game, for example, the player is offered several pathways to pick from. By allowing individuals to make their own decisions, the routes they take will lead them to their own particular results.
3. **Competence**: the desire to have a perception of ability. This is felt in a game as the player's competency and skills improve as they go.

## Goal Setting Theory

For decades, goal-setting theory has been used to describe how to drive individuals to achieve better at work by defining and managing targets. Because gamification is fundamentally a goal-oriented activity geared toward encouraging motivation, it stands to reason that these two approaches would complement each other quite well and help us build more motivational experiences. Surprisingly, relatively few research papers have carefully investigated the application of goal-setting theory to explain and guide game design, with the majority of literature focused on self-determination theory as the theoretical foundation for gamification. This idea enabled us to provide a plausible description of how game-like experiences engage the processes of action when goal setting is employed to increase performance, according to Locke and Latham;

1. Game experiences typically result in self-attribution of performance, positive affect, and self-efficacy, hence amplifying the consequence of improvement.
2. Making clear goals through game-like aspects and motivating users to seek them helps users focus their attention and efforts on reaching the goal.
3. Gamification can assist users in developing skills by adjusting tasks according on the individuals' present abilities.
4. Gamification might motivate users to lose and try again until they acquire mastery, hence encouraging perseverance.



*Figure 1.* Goal difficulty and performance: a relationship (Locke, 1968).

Setting several objectives for learning can increase motivation and learning since setting goals and learning are closely connected concepts. As they are objectives that must be accomplished in order to attain a higher objective, gaming features like badges, progress bars, and levels can be used to apply goal-setting theory.

### **Self-Efficacy theory**

Bandura (1977) stated that self-efficacy is the belief in one's own capacity to take the steps necessary to meet specific performance objectives. Self-efficacy is the belief in one's own capacity to manage someone's desire, action, and social environment. The objectives for which people struggle, the quantity of energy devoted on goal accomplishment, and the possibility of obtaining specific degrees of behavioral performance are all influenced by these cognitive self-evaluations. Self-efficacy assumptions, unlike standard psychological conceptions, are thought to alter based on the area of functioning and the circumstances surrounding the manifestation of behavior. It is one's assessment of his own performance, ability, and capacity to do a task effectively. Self-efficacy, performance success, emotional arousal, social



reinforcement, and psychological knowledge are all factors to consider. It is impacted by four key information sources.

Game design gives feedback on individuals' developing and developing self-efficacy and competence levels, individuals need to focus on the development of their specialist knowledge and skills.

### **Fogg's Behavior Theory**

Fogg (2009) established a behavior model in which the person must have “motivation, ability, a sufficient trigger” to do the behavior. The definitions of Fogg's major notions, motivation, ability, and trigger, are as follows:

- **Motivation** is defined as the quantity to somebody who is committed or involved in doing a behavior.
- **Ability** is the extent to which someone possesses the necessary skills or instruments to carry out the behavior. Even if the individual is very motivated to do the activity, it will not be completed if he or she lacks the necessary skills. However, the amount of desire may be sufficient for the individual to discover a way to acquire the abilities required to conduct the behavior.
- **Trigger** is the quantity to which somebody is compelled to engage in the conduct. Having the skill and motivation alone is insufficient to produce a behavior; thus, humans require triggers that drive them to do the activity at a specific time. When a person lacks desire to engage in an action, the trigger may be a lightning that drives the individual. However, if a someone has the motivation and capacity to do the activity, the trigger may serve as a reminder.

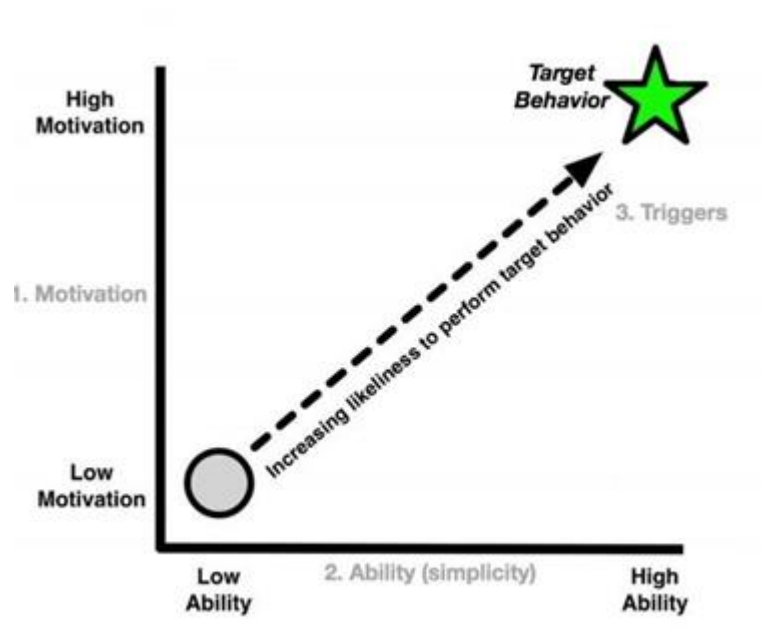


Figure 2. Fogg's behavior model.

The key components for producing goal behavior are motivation, ability, and triggers, and they must all be present at the same moment (See Figure 2). If someone lack the necessary skills, motivation alone may not be sufficient to influence desired behavior. Strong motivation and ability do not guarantee that the goal action will occur if triggers are not received at the appropriate times, even while high drive and ability prompt people to look for methods to improve their abilities. It is more likely for someone to engage in target activity if triggers are present and they have the necessary skill and desire.

In gamification, game features work as facilitators, pushing users over the pretty exciting and causing them to do the intended action. In summary, an effective game - based system must concurrently activate all three parts of the behavior model.

### **Gamification Theory in Education**

It is well known that nations all over the world are impacted by the world's rapid growth of information and communication technology in a variety of ways by which social and cultural life has been impacted (Demirbilek & Yücel, 2011). In accordance with this developments, the process of acquiring a language needs work, and this work must be put out continually. Studies are conducted to simplify and improve on the process of learning a foreign language, and strategies to make the greatest use of

evolving information technology are explored. In that case, gamification is one of the most popular techniques in many areas of education and also employed in the study of foreign languages

Education is one of the areas where games gamification elements are commonly employed. Because the technique and method of presenting educational information have an influence on students' learning habits, gamification as a pedagogical approach and games as a tool are used to tackle difficulties in the field of education. Gamification, in this sense, is a solution-oriented technique that enhances the way the lesson is taught and preserved. It is essential to grasp the technological components and explain the ideas of gamification and games in order to comprehend the games that help to give educational activities in a more quality and enjoyable manner. Gamification may encourage students to participate in class, provide teachers with better tools to assist and reward students, and encourage students to contribute their whole selves to the learning process, according to Lee and Hammer (2011).

Gamification, which includes involving students actively, makes learning a foreign language more pleasurable while also promoting interest in games, which have become a part of everyday life. Students get the ability to adapt to their surroundings because of the gamification tools utilized in foreign language instruction. The learners become sociable by honing their interpersonal and communication abilities. They understand themselves and their surroundings. Being able to converse in the target language and being exposed to it might be considered one of the fundamental requirements for learning a foreign language. Studies have been conducted to boost academic achievement and motivation in the study of foreign languages in light of shifting demographics, and new instructional strategies have been created to take these factors into account. New strategies and techniques that will improve students' academic performance and motivation within the context of foreign language education have been incorporated in current foreign language teaching programs. The success rate of students who have a high degree of motivation in learning a second foreign language improves in direct proportion to their motivation level, according to Krashen (1981), who was discussing the significance of motivation in the acquisition of a second foreign language. Therefore, educators cannot dismiss the importance of motivation in the process of learning a foreign language. Different incentive strategies and techniques have been applied to teaching foreign languages over time. According to Flores (2015), gamification apps, which are often utilized in all other fields of education, may be a

powerful source of incentive for learning a foreign language. Learners' interest in and motivation for the course are increased when gamification tools are employed in foreign language sessions. One of the key elements that promotes learning a foreign language is motivation. Gardner et al. (1985) highlight the critical role that motivation plays in learning a foreign language. The gamification-related components are strongly tied to the internal and external motivational elements that are crucial to the study of foreign languages. Numerous research in Turkey look on the motivational impact of gamification applications. According to Yıldırım and Demir (2014), game patterns intended to boost motivation may also raise students' involvement. Güler and Güler (2015) note in a different research that using gaming aspects in educational designs might increase students' motivation. Similar to this, Kocadere and Alar (2015) claim that their games - based evaluation process has a favorable impact on students' motivation, pleasure, and knowledge. Additionally, they claim that the gamified evaluation method makes learning enjoyable and less stressful for students.

Additionally, Xu et al. (2021) discover that gamification treatments enhance intrinsic motivation, which may in turn have a favorable impact on learning, by fostering social interaction and making use of game components like points, badges, and leaderboards. According to Dehghanzadeh et al. (2019), gamification of language learning exercises may have some advantageous effects so, it is likely to apply gamification treatments to boost students' productivity in language learning classes since gamification is motivating, pleasurable, entertaining, and interesting. Açıkgöz (2019) investigated how two distinct gamification programs affected undergraduate students in English preparatory education's performance in acquiring vocabulary and intrinsic motivation. While the other utilized the Quizlet program, Kahoot! employed a gamification tool. Both groups exhibited a notable improvement in their English vocabulary acquisition performance at the conclusion of the 6-week experimental trial. Data from the pretest and posttest were compared, and it was found that the students' intrinsic motivation also increased

Since the 1960s, computers have been used often to teach foreign languages (Lee & Hammer, 2011). Nowadays, computer-based foreign language instruction has been substituted by online gaming (Tüzün, 2006). Online games boost efficiency in learning other languages, according to a number of existing studies. In foreign language teaching, online games serve as an environment for effective dialogue. As a result of

this meaningful communication, students are able to engage in the process more effectively by laying the groundwork for meaningful inputs.

In the millennium age, where technology impacts education as much as it does every other sector, it is impossible to resist adopting digital media as a learning and teaching instrument in the field of foreign languages. People feel at ease and are free of language learning anxiety while using digital platforms in foreign language sessions. Because of the comfortable, engaging, and motivation-boosting nature of digital platforms, the learning and teaching environment. Students' motivation levels will rise as they get more interested in the surroundings and realize how much easier studying is, and the learning process will become something they do on a regular basis. In order to improve student achievement and maintain their enthusiasm in foreign language lessons, it will be beneficial to employ gamification as a powerful tool.

The course material will be more relevant and remembered for pupils if they are having fun, are excited, and are motivated while learning a foreign language. The quality of language instruction will enhance if digital games are widely used and meaningfully integrated into the teaching process rather than being used to fill in the spaces between classes or waste time.

### **Young Learners via Gamification**

According to Zhu et al.(2016), learning is the way of acquiring capability and comprehension. Competence is described as possessing certain abilities, and recognizing as having particular knowledge. Modern educational literature is heavily influenced by the contemporary issue of using technology, such as computer games, to improve students' learning in the classroom. This is crucial in the modern world, as students have easy access to new games on devices other than desktop computers and gaming consoles. Researchers from numerous fields have researched the design of video and computer games in an effort to determine how certain game design elements may be applied to the creation of teaching aids ( Pinelle et al, 2008). Children learn new behaviors and chances to behave in scenarios that are often part of their daily lives while playing games that allow them to explore their surroundings. Children are encouraged by games to be flexible, use a variety of knowledge sources, investigate, and experience in order to find better ways to address the same issue (Barr, 2017)

In conclusion, games demand the player's whole attention and are voluntary activities that are obviously disconnected from real life. They also create an imaginary universe that may or may not be related to reality. The goal of the game is to transport the players into a separate universe that is governed by various laws and behavioral patterns. Games can be instructive but are mostly played for enjoyment and entertainment. Games in overall, and interactive media in specific, are currently demonstrating their value as teaching and training aids.

### **Teaching Vocabulary in ESL Classes**

One of the most essential factors in being able to communicate successfully in a language is vocabulary competence. Despite its significance, one of the most difficult components of language acquisition is expanding a learner's vocabulary. By expanding their vocabulary, language learners can expand their word bank and expand their linguistic ability. However, learning new vocabulary can be difficult, especially for nonnative English speakers who have issues with new word definitions, spelling, pronunciation, proper word usage, guessing meaning from context, and so on. Providing classes in the pupils' mother tongue rather than the target language, which results in poor performance. To demonstrate that they are proficient English users, the students must master vocabulary. Similarly, teachers face a difficult task in meeting the demands of their pupils and ensuring that they learn terminology in an engaging manner. As a result, it's critical to identify students' vocabulary-learning issues, propose vocabulary-learning strategies that can improve students' knowledge of the target vocabulary, and provide opportunities for them to learn new terms.

Teaching vocabulary is crucial since it is an integral aspect of all languages. There are many different ways to teach vocabulary and justifications for using each one. According to Hadfield (1998), children have to go through three different procedures in order to retain a word. Learning the definition of a word comes first, followed by personalizing it to be pertinent, and then remembering it. This aids the student in creating an interconnected and pertinent knowledge network.

According to Ur (2012), young learners required repetition in which they receive, visualize, or act out the term numerous times in order to truly learn and remember it. You can achieve this by writing the words on the walls of the classroom or by having the students review the new words each day. The majority of children find that learning

vocabulary is "a branching journey rather than a sequential one" because they need to be able to connect the new words to concepts, words, or things they already know (Morgan and Rinvoluceri, 2004, p.7). When teaching new vocabulary, it is best to start by introducing the word in its context before giving students the chance to use it out of context later on. While there are various ways to teach a word to pupils to help them learn it, it is useless if they cannot understand it when the term is taken out of context. Although young learners can pick up words rapidly, they have a harder time understanding structures.

To guarantee long-term retrieval and maintenance, new information should be incorporated with accumulated knowledge. This means that they need to be put into working memory and constantly filed away and retrieved, as well as being compared, merged, linked, categorized, pictured, and re-shuffled (Thornbury, 2002, p.45). Many of us learn best via repetition, but repetition can grow tedious. By employing various presentation techniques, all learning styles are taken into account and we receive the repetition we require to retain the language.

### **Teaching Vocabulary and Gamification**

It takes a lot of work to acquire vocabulary in a second language, thus most of students look for the most effective method for them. The ability to read, write, communicate, and listen is closely related to vocabulary development. Vocabulary knowledge and language use complement one another, and they are intertwined in communication (Nation, 2005). Understanding more words guarantees fluency in a language.

According to Akin and Seferoğlu (2004), pupils struggle greatly in this area since they are not aware of effective language acquisition strategies. Despite having the ability to recall word meanings, pupils frequently struggle when attempting to use them. Students can learn how to use words if they are exposed to real-world context in their learning contexts. Through gamification, it is possible to create engaging and motivating learning environments that also cater to students' needs and expectations for productive language.

Gamifying language encourages learning since it helps students socialize and enables them more eager to study in a fun environment. Students can practice their language with visual help thanks to videogames. According to Guichon and McLornan

(2008), using language in a variety of situations facilitates understanding and broadens vocabulary development. Using online gamification technologies to help students review vocabulary and explore it in various texts enhances their vocabulary understanding.

Sze Lui (2012) conducted a case study, at the University of Macau with five groups of students at university to indicate the impact of using gamification on consolidation of vocabulary learning. Thus, two online games were played by students during a semester, to develop and consolidate student's vocabulary. At the end of process, student's tendency and ideas related to the usage of gamification in vocabulary learning were gathered through an online survey. The result of survey indicated that students had fun, and they were more interested in learning vocabulary through gamification, while they were recalling the words faster than any other vocabulary activities. Thus, learners may have positive attitudes towards language learning too.

In a study, Mert and Samur (2018) investigated how learners feel about gamification. In their study, the researchers discovered that 12 students from various grade levels had favorable attitudes about game aspects, and that after using the gamification strategy, their interest and accomplishment rose. Students felt more successful and happy with themselves while using game features like points, badges, and leaderboards. They got the chance to see the effects of their conduct through gamification and adjust their behavior in response to those outcomes.

In a different research by Taylor and Reynolds (2018), 41 students from a South Korean university were divided into experimental and control groups. An digital gamification application called Kahoot was employed in the experimental group. The study's authors concluded that Kahoot promoted learning in an enjoyable and engaging way, which helped students' retention of vocabulary information. Additionally, Kahoot increased concentration, increased learning, and provided students with intrinsic motivation.

The impact of gamified vocabulary learning on Turkish students studying German as a second language was examined by Kayserolu and Samur (2018). Young students in a private school in Istanbul who were enrolled in the third grade participated in their study. They used the gamified question-and-answer tool "The Quiz Game" during a six-week experimental process that they conducted. Each time, the kids engaged in the game for 20 minutes. For the purpose of gathering data, the researchers created a mixed methods research design. In order to get qualitative data, they interviewed students and

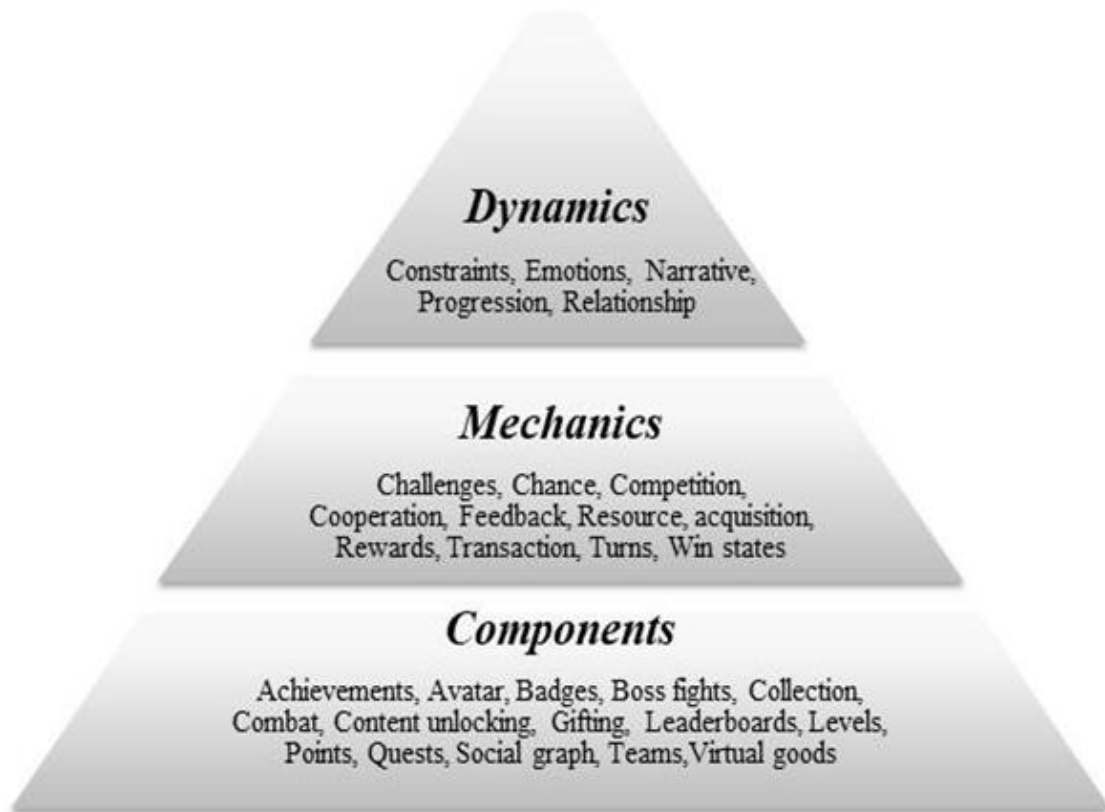


administered a personalized motivated questionnaire in order to learn how they felt about the gamified learning process. Pre/post assessments were used to track the students' development when gathering qualitative data. 97 percent of college students in this survey shown a desire to acquire German vocabulary, according to the report's results, and a comparison of the pre- and post-test results revealed a significant improvement in both groups' vocabulary education level.

Consequently, it can be said that gamification of vocabulary has many benefits in EFL lessons when the relevant research is taken into account. It alters the way that students view vocabulary acquisition for the better, enhances vocabulary knowledge by making learning from mistakes easier to retain, inspires students, and helps them succeed in a positive and enjoyable way.

### **Game Design Elements**

Some characteristics of gamification are unique to games. The characteristics of games that make them popular and pricey to own are those game features. The "Ten Ingredients of the Great Games," as identified by Reeves and Read (2009), include avatar-based personality, three-dimensional surroundings, narrative context, feedback, identities, rankings, and level. These gameplay components serve as the foundation for gamification applications too. Gamification strategy may be combined with some of these game components, depending on the situation, in order to increase performance or productivity or to address certain psychological demands. According to the description, each one of them serves a certain function. For instance, study findings indicate that although characters, meaningful tales, and coworkers influence perceptions of social relatedness, scoreboards, performance charts, and badges all favorably influence competence need fulfilment and perceived job significance.



*Figure 3.* Hierarchy of Game Elements (Werbach and Hunter, 2012)

Werbach and Hunter (2012) divide game components that are connected to gamification into three groups in descending order of complexity in Figure 3. These groups are called dynamics, mechanics, and components. In a gamified model, dynamics reflect the greatest degree of abstraction and are not directly implemented in the system; in contrast, mechanics are the procedures that encourage consumer or student interaction, and components are particular representations of the mechanics and dynamics. Each mechanic is connected to one or more variables in its pyramid, and each element is connected to one or more mechanics or dynamics. Not even all the things in a subcategory can be included in a gamification design since it would be impractical.

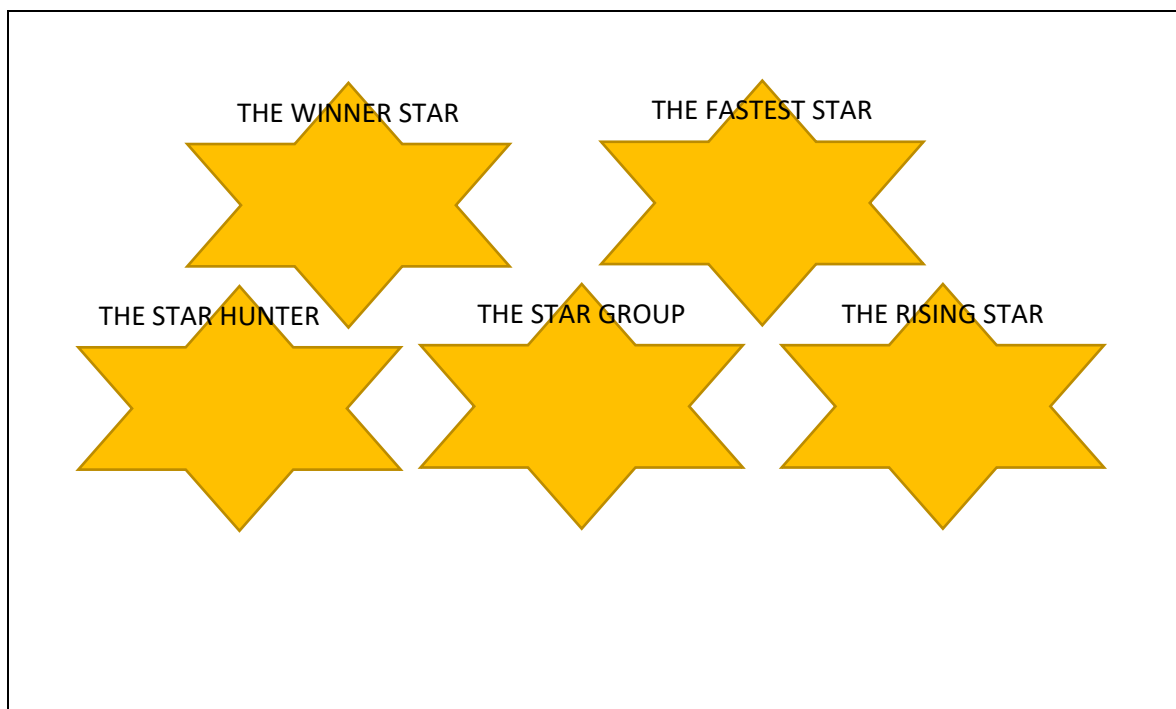
### **Points**

The primary components of the majority of games and gamification ideas are points. They are gathered and given rewards for finishing particular tasks or engaging in particular activities (Werbach & Hunter, 2012). Points appear to be crucial for offering

feedback. Additionally, points largely target the behaviorist learning method, according to Sailer et al. (2013). In addition, they act as awards or positive reinforcement.

## Badges

Sometimes, the terms accomplishments and badges are used synonymously. As "a visual depiction of some success inside the gamified process," a badge is defined (Werbach & Hunter, 2012). Because the possibility of earning a badge inspires users to strive toward their objectives, badges are seen to be beneficial. Badges offer guidance on the different system-wide tasks. This feature is useful for training new users and assisting seasoned ones in broadening their engagement.



*Figure 4. Badges*

As shown in Figure 4, students earn badges according to the stars they earn. These badges mean;

- **THE WINNER STAR:** The student who accumulates the most stars individually receives this badge.
- **THE STAR GROUP:** It is the badge given to the group members who collect the most stars.

- **THE FASTEST STAR:** It is the badge earned by giving the fastest correct answers.
- **THE STAR HUNTER:** It is the badge won by the student who collects the most stars as a group or individually.
- **THE RISING STAR:** A little different from the others, this badge is awarded to the student who motivates his/her friends and puts in the most effort.

### **Leaderboards**

In a gamified setting, leaderboards let users compare their accomplishment to those of other customers or students. They identify the top performance in a specific activity. They also provide players a success rating based on a few factors. Leaderboards, according to Werbach and Hunter (2012), may motivate learners to advance if they are a couple points away from the following stage, but they may demotivate them if they are located at bottom of the scoreboard.

### **Graphs of Performance**

They display each player's development individually. Performance graphs compare the history and current performance of each individual while progress bars show progress made toward a goal (Sailer et al., 2013). They are all important for giving comments. Performance graphs, in contrast to leaderboards, display an individual's past and current achievement rather than comparing them to others.

### **Avatars**

Avatar is a fictional figure that serves as a visual representation of the player and can go through many phases of growth. A gamer or student may select their own avatars or design their own (Kapp, 2012). When authors and academics examine the usage of avatars in games or educational contexts, they emphasize how they serve as catalysts for sentiments of identity and society membership.

### **Rewards**

Rewards are used to boost motivation since they demonstrate the player's achievement. Rewards can take the form of points, prestige, virtual cash, access to

better material or features, products, and power, according to Zicherrmann and Cunningham (2011). Rewards and feedback are essential components of any effective gamification strategy, and both struggle and achievement must be recognized.

To summarize, the above game components are the ones that are most frequently utilized to gamify learning. While some of them are deemed to be extremely valuable, others are not. In order to preserve the desired efficiencies of game-thinking, gamification should be built based on other game elements such as problem solving, engagement, narrative, or image processing of the individuals, according to Kapp (2012). Points, badges, and rewards are the least interesting and advantageous aspects of games. It makes no sense to include any or all of the game features for the purpose of gamification since each of the game parts serves a distinct function. It is crucial to make sure that the components of a gamified strategy match to the requirements of that unique details.

## **2. METHODOLOGY**

Research methodology of study is presented in this chapter. The research design is presented first. Second, a description of the study's settings and participants follows. Then, a thorough presentation of the data collecting tools follows. Finally, the process of data analysis is described.

### **2.1. Research Design**

The primary objective of the study is to examine how gamification affects students' vocabulary acquisition. For this purpose, a case study was carried out. A case study is an empirical investigation that examines a current phenomenon inside its actual setting, particularly when the distinctions between phenomenon and setting are hazy, according to Yin (1994). Case studies can reveal detailed information on a particular learner, as Johnson (p.16, 1992) also acknowledges. They can provide information on how specific L2 (second language) learners communicate and learn, how their personalities, attitudes, and objectives connect with the classroom environment, and the specifics of their linguistic development.

In addition, this case study uses a mixed-methods research methodology. Qualitative and quantitative research elements are combined in mixed-methods research. According to Dörnyei, qualitative research deals with textual material that is examined using non-statistical methods, whereas quantitative research relies on numerical data that is analyzed using statistical methods (2007). Mixed-methods research, a relatively new addition to research methodologies, integrates both qualitative and quantitative research to strengthen triangulation. The idea of "mixing" research methodologies is to combine their advantages while reducing their disadvantages. In this regard, mixed-methods research is seen to be a suitable method of bolstering the recent study.

### **2.2. Research Setting and Participants**

In the current research, the secondary school students were chosen using a convenience sampling process. Cohen & Manion (1994) stated that convenience sampling is a method of sampling that entails selecting the most convenient participants to act as responders and repeating the process until the desired sample size is reached. The study's participants were selected from the 5th grade classes which have 23

students and whose attendance was compulsory in Ozel Hatay Doga secondary school. The 5th grade students were selected because they are called "prep class" and they have 17 hours of English lessons per week, so they were more appropriate to apply gamification elements and come up with reliable results. Preparatory class means that English lessons are more common, and students are taught in courses such as mathematics, Turkish, science and social sciences. 5th grade students are more suitable for this research due to their age and intensive English course hours. There are a total of 23 students in the class, 11 girls and 12 boys and they all 10 years old.

In general, the school has rich features in terms of applying different activities to students. It is easy to make technology-based games in the computer class and it has an English class that students can use for other games. The convenience of school conditions helped to adapt the gamification environments to the annual plan and the classroom.

### **2.3. Instruments**

The study focuses on both success and perception in learning English vocabulary. Learners' successes and perceptions toward learning vocabulary in English as a foreign language before and after the incorporation of gamification in English vocabulary acquisition were assessed using the pre-test and post-test as a questionnaire at the beginning and end of the process. During the six period, 4 games were utilized in total. Games were played at the end the lesson. Before and after the gamification process, a questionnaire were utilized to analyze the effects of gamification on students' views about English vocabulary learning. There were a total of 15 multiple-choice questions on a Likert scale in the questionnaire. Students were asked to select the best response from a list of five options, which included "Strongly Agree," "Agree," "Uncertain," "Disagree," and "Strongly Disagree." The scale was also translated into Turkish and adjusted to the academic levels of the participating students. For her postgraduate thesis on "How Games Work On Adults in Teaching 30 Vocabulary," Senerguc (2009) created and used the questionnaire that was used in this study. Then Gülsoy (2013) modified the question according to young learners. The scale's trustworthiness was evaluated by using the statistical analysis program SPSS 13.0, Gülsoy (2013) evaluated the validity and the scale was judged to be valid since Cronbach's Alpha was discovered to be 0.986, which was higher than the threshold of ,6, moreover, the

variance was 189,011 percent, the mean was 31,80, and the standard deviation was 13,748.

Additionally, vocabulary test was applied to the students and their vocabulary success were measured at the beginning and at the end to measure the rate of learning the words that students have learned by using gamification elements in the classroom. The activity consists of 4 parts and 25 questions. Each question is calculated as 4 points, for a total of 100 points. This vocabulary exam was used many times for new students who started in middle school to learn their English level, so it is suitable in terms of validity and trustworthiness, furthermore, Doğa college has around 100 schools in Turkey and this word test has been taken from the resources prepared by the teachers who are experts in the assessment and evaluation department of Doğa College.

The students also kept reflective diaries to learn the students' observations about the applications, their feelings and thoughts, their perspectives about the game and to maintain continuity in the research.

#### **2.4. Procedure of the Study**

Both the departmental administration and the students were requested to express their agreement to participate in the research before it begins. Before starting the application, detailed information about the research was given to the students and parents. The vocabulary to be used before and after the application was prepared by testing department of school. The questionnaire that measured the perspective of the students was determined and the necessary permissions were obtained from the person who prepared the questionnaire. The gamification elements to be applied were prepared before they were implemented. After each application, students were asked to write a diary reflecting their feelings and thoughts about the practice. The 6-week procedure is as follows;

The application was explained to the students, and a questionnaire and the vocabulary test were administered, and they were informed that this application would not affect the school success scores of the students.



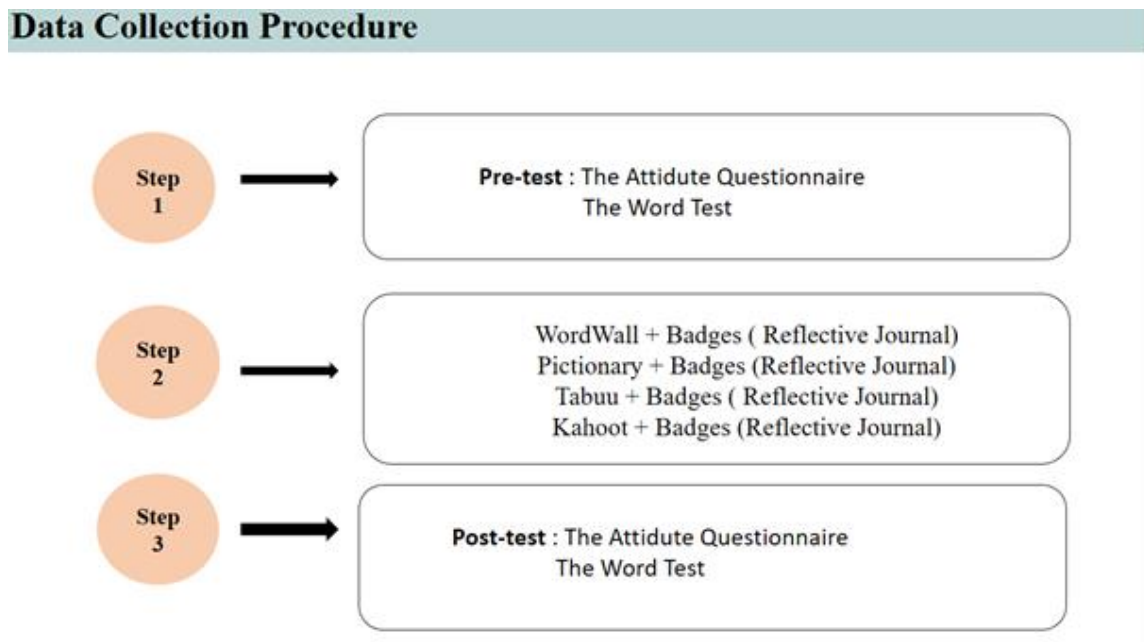


Figure 5. Data Collection Procedure

### 1st week

#### Word-Wall

The word wall application was where the students initially got started. An entertaining, engaging, and instructive gaming application for the browser is called Word wall. For students, this application has the potential to be an engaging learning resource, media, and assessment tool. In order to make it simpler for new users to utilize and develop the materials offered by the media, Word wall includes examples of the imagination of teachers. It is possible to think of Word wall as a web application that is used to develop instructional games that are disguised as fun quizzes. This application server is ideal for creating an evaluation and learning tool.

In the classroom, the students were split into three groups. On Word wall, they played word games. Extra points were awarded to those who replied in the lowest amount of time while also being accurate. In the group with the most overall points, they were declared the winner of the day. For each accurate response, students received stars both individually and collectively. Students received badges according to the stars they earned. At the end of the Word wall application, students expressed their ideas and feeling as a diary about the lesson they spent with Word wall.

**2nd week****Pictionary**

Three groups compete in the game of Pictionary. Each group member takes a turn coming to the whiteboard and picking a card at randomly from a pile of cards the teacher has previously prepared. In the allotted time, the child who selects the card tries to communicate the word on the card to his or her group solely by drawing, without using any words or gestures. The teacher keeps track of the time allotted for each word, which is 75 seconds. If the word on the card is drawn on the board and accurately anticipated by the student group, they receive points. The team with the most points wins the match. The Pictionary game was performed in the third week at the conclusion of the two-hour class period since it was simpler to play than previous games and took just around 40 minutes to complete. The purpose of starting the gamification process with Pictionary was to provide a setting where students would feel at ease and make the transfer to other games that needed more knowledge easy. Students still continued to gain stars with Pictionary. At the end of the Pictionary application, the students expressed their feeling and ideas about the application to their diary.

**3rd Week****Taboo**

Taboo is also an another game in research which played in three groups in class. One member from each group takes turns coming to the board and selecting a random card supplied beforehand by the teacher. Each card has a major term and five more forbidden words listed beneath it. Students attempt to convey the primary term to their group without using the forbidden words. Each student has a limited amount of time, and if the group of students on the board correctly predicts the word, they receive points. The group with the most points wins the game. Students continued to earn stars in this application as in other games. After the application, the children expressed their feelings and thoughts about the game, as in other applications, and wrote them in their diaries.



*Figure 6.* Example of taboo card

As seen in Figure 5, the words that are wanted to be explained on the taboo card are at the top and the bottom of the forbidden words. The student tried to gain stars by explaining this within the given time. Taboo is one of the useful game tools to reinforce vocabulary teaching.

#### **4th Week**

##### **Kahoot!**

Kahoot! was originally deployed in 2013 and was played by millions of individuals throughout the world. It quickly became one of the most popular application, particularly in remote education, during the COVID19 process. In Kahoot, many question kinds may be utilized to create a quiz. Because of the popular game-based teaching culture, the technology allows teachers to quiz students both inside and outside of the classroom. Students are able to concentrate on words more as points are gained proportional to the time, which is useful for reinforcing vocabulary teaching. They played this game in the school's computer class. The game was individual, unlike the others. Students wrote their feelings and thoughts in their diaries as they did in other applications.

At the end of the gamification applications process, both a questionnaire and a word test were administered to the students as a post-test and the research was completed.

## **2.5. Data Analysis**

The Statistical Package for Social Sciences (SPSS) was used to evaluate the quantitative information obtained from the Attitude Questionnaire. The mean rank, sum of rank, negative rank, positive rank, ties, Asymp. Sig. (2 tailed) and Z scores of the outcomes were computed using this program. Because the sample size is 23, the Wilcoxon Signed rank test was used to analyze the questionnaire and word test's pre-test and post-test data to see if there were a significant change on pupils' attitude and performance.

For qualitative research methods, the reflective journals written by the students were examined and categories were formed by using content analysis method and interpreted according to the analysis of the answers given by students.

### 3. FINDINGS

In this section, qualitative and quantitative research data results were presented. In the quantitative research, the results of the word test and questionnaire applied to the students and the reflective journal analyzes written by the students in the qualitative research were also given in this part.

#### Findings On the Descriptive Statistics of the Attitude Questionnaire in English

This section contains information about the descriptive qualities of The Attitude Questionnaire in English and the word test, such as mean rank, sum of rank, negative rank, positive rank, ties, total, Asymp. Sig. (2-tailed), Z and N. Wilcoxon signed-rank test results for the comparison of The Attitude Questionnaire in English pre-test and post-test scores for the total. The most important scale to consider, according to this data, is "Asymp. Sig. (2-tailed)" (P value). If P is between .05 to .01 range, this indicates that the items and test have changed significantly. "N" refers to the number of students, and we can also observe the changes in their positive rank and negative rank.

#### Results from the quantitative data

##### The Attitude Questionnaire in English

Table 1.

*Wilcoxon signed-rank test results regarding students' attitude toward vocabulary learning with gamification.*

	Posttest	N	Mean	Total	z	P
	Pretest		Rank	Rank		
Study Group	Negative	1	1.50	1.50	-4.061	<b>.000**</b>
	Rank					
	Positive	<b>21</b>	11.98	251.50		
	Rank					
	Ties	1				

\* $\leq .05$ ; \*\* $\leq .01$

Table 1 includes values such as mean rank, sum of rank, negative rank, positive rank, Z and P values (Asymp. Sig. (2-tailed) values for The Attitude Questionnaire in English are presented. Post- test and Pre- test results showed us: Z (-4,061) and P value (.000). The point of crucial here is P value which showed us that there is a significant difference between Pre- test and Post- test ( $P < 0,05$ ). A statistically significant difference was found among the pre-test and post-test scores of The Attitude Questionnaire in English ( $p = ,000$ ;  $p < ,05$ ). Test results showed that post-test scores of the participants had higher than pre-test scores of the participants.

Table 2.

Wilcoxon signed-rank Results for Comparison of Pre-test and Post-test Item Scores of the Items of the Attitude Questionnaire in English

Items	Test	n	Mean rank	Sum of rank	Ties	Z	P
<b>Item 1</b>	Negative Rank	0	.00	.00	0	-3.275	<b>.001**</b>
	Positive Rank	13	7.00	91.00			
<b>Item 2</b>	Negative Rank	1	3.50	3.50	13	-2.511	<b>.012*</b>
	Positive Rank	9	5.72	51.50			
<b>Item 3</b>	Negative Rank	0	0	0	4	-3.878	<b>.000**</b>
	Positive Rank	19	10,00	190,00			
<b>Item 4</b>	Negative Rank	4	5.00	20.00	7	-2.538	<b>.011*</b>
	Positive Rank	12	9.67	116.00			
<b>Item 5</b>	Negative Rank	2	4.50	9.00	15	-1.414	.157
	Positive Rank	6	4.50	27.00			
<b>Item 6</b>	Negative Rank	2	5.00	10.00	13	-1.941	.052
	Positive Rank	8	5.63	45.00			
<b>Item 7</b>	Negative Rank	5	5.50	27.50	7	-2.158	<b>.031*</b>
	Positive Rank	11	9.86	108.50			

<b>Item 8</b>	Negative Rank	1	3.00	3.00	17	-1.667	.096
	Positive Rank	5	3.60	18.00			
<b>Item 9</b>	Negative Rank	5	7.60	38.00	10	-.546	.585
	Positive Rank	8	6.63	53.00			
<b>Item 10</b>	Negative Rank	4	5.00	20.00	7	-2.652	<b>.008**</b>
	Positive Rank	12	9.67	116.00			
<b>Item 11</b>	Negative Rank	1	5.00	5.00	8	-3.210	<b>.001**</b>
	Positive Rank	14	8.21	115.00			
<b>Item 12</b>	Negative Rank	0	0.00	0.00	16	-2.530	<b>.011*</b>
	Positive Rank	7	4.00	28.00			
<b>Item 13</b>	Negative Rank	0	.00	.00	12	-2.979	<b>.003**</b>
	Positive Rank	11	6.00	66.00			
<b>Item 14</b>	Negative Rank	1	5.00	5.00	9	-3.078	<b>.002**</b>
	Positive Rank	13	7.69	100.00			
<b>Item 15</b>	Negative Rank	0	.00	.00	15	-2.546	<b>.011*</b>
	Positive Rank	8	4.50	36.00			

\* $<.05$ ; \*\* $<.01$

In table 2, comparisons of pre-test and post-test item scores of The Attitude Questionnaire in English are presented. When we examined the items based on their P value values, we discovered that there were many significant positive differences ( $p = .000$ ). Therefore, it is observed in the table above that most of the post-test scores in the subject group showed a positive difference when compared to the pre-test. Items with significant differences according to P values are presented below.

The use of vocabulary games in classes according to Item 1 made a significant difference. It shows that word games have an important role in the process. According to the P value of item 2 after the application, the difference in results shows us that students are satisfied with additional activities outside of the book, and most of the

post-test scores in the subject group showed a positive difference when compared to the pre-test. Most of the students showed positive change according to the post-test results of item 3. The P value of item 3 shows that the students want to learn the words in different ways, not on the same plane. Another important change in Item 4 shows that students like to learn with different methods in the lesson. Students did not prefer to learn vocabulary with a single monotonous method. We see that various vocabulary learning methods in gamification work well in this item. 10 students' post-test scores in subject showed a positive attitude according to the results of item 10, and the P value of item 10 shows once again how important the game factor is; it shows that it is highly productive when the game element is used with vocabulary lessons ( $p = .008$ ). The tremendous change in item 11 shows us that when the game element is used in the lessons, they feel very comfortable, which helps them to participate actively and to break that serious perception in the lesson ( $p = .001$ ). There is no negative rank according to post-test scores in the subject group. The P value of item 12 for pre-test and post-test scores is shown in Table 2 ( $p = .011$ ). An incredible change has been seen in item 12, as the feeling of accomplishing something on their own motivates the students even more. The significant change in item 13, the P value, demonstrates that games aid in student memory ( $p = .003$ ). The P value for Item 14 indicates that students are not bored while playing games and that they have a more productive learning process ( $p = .002$ ). There is no negative rank, and 8 students' scores change in a positive way. The P value of item 15 ( $p = .011$ ) shows us that students do not want to learn the word based on the book alone.

To sum up, the change in item mean scores shows that students benefited from gamification items, and gamification items made them feel more comfortable, happy, and productive during learning vocabulary.

### **Findings regarding the students' test scores**

The word test results applied to the students to examine the comparison in their vocabulary achievements are presented in this section. The purpose of this word test is to examine whether the gamification application affects the success of the students.

### **Word Test**

In table 4, Wilcoxon signed-rank test results for comparison total of pre-test and post-test scores of The Word Test.



Table 3.

*Wilcoxon signed-rank test results regarding students' achievement.*

	Posttest	N	Mean	Total	z	P
	Pretest		Rank	Rank		
Study Group	Negative	0	.00	.00	-3.844	<b>.000**</b>
	Rank					
	Positive	8	4.50	36.00		
	Rank					
	Ties	15				

\* $<.05$ ; \*\* $<.01$

According to Table 3, there is no negative rank and 8 of the students are in the positive rank. A statistically significant difference was found among the pre-test and post-test scores of The Word Test ( $p=.000$ ;  $p<.05$ ). Test results showed that post-test scores of the participants had higher than pre-test scores of the participants. We can observe from the P value data that gamification significantly affects student achievement ( $p=.000$ ).

### Findings from the Qualitative Data

#### Findings from students' reflective diaries

At each end of the gamification applications, the students kept diaries related to that application. When these diaries are examined, it seems that most of the students have positive feedback on the elements of gamification. While some students seem to be more motivated to attend classes, some students feel more successful thanks to the stars they have earned. Based on the diaries written by the students, five categories have been created; competitive spirit, cooperative learning, progression and achievement, motivation and strengthening of creativity

### **Competitive spirit**

Competitive spirit motivates you to achieve at a greater level and eventually inspires you to be your best self on every specific moment. When we examine our capacity for achievement in the most challenging conditions, we are probing the depths of what moves us. At the core of our hearts is a crucial success factor known as passion in competitive spirit. A passionate student is one who regularly gives their all to all they do, not just during infrequent performances and competitions, striving to provide their absolute best effort.

The following quotes from the participants' insightful comments show that they loved the gamification system and thought it gave them a feeling of competition:

Participant 1: “.....*I enjoy competing in class against my buddies.*”

Participant 3: “.....*Our group's performance was good today, we were third, but we will definitely be first next time.*”

Participant 12: “..... *I was happy to play in the game, next time I will work harder and be the first.*”

Participant 17: “..... *The fact that some of my friends passed me in the game made me even more ambitious.*”

Participant 21: “.....*By giving the most correct answers in the word game, I won the most stars and became the 1st and I am very happy.*”

The comments in this category highlight the social component of the gamified system, which is that group projects and solo work are both made more motivating by the participation of other learners. A little competitive environment encourages pupils to feel more invested in the activities.

### **Cooperative learning**

Cooperative learning games are one technique to encourage students to interact with one another in meaningful ways, which is essential. It's a terrific method to increase students' motivation and support the growth of critical thinking abilities to incorporate games into lesson preparations. Additionally, it gives pupils the chance to improve their language skills and discover how to cooperate rather than compete when working in a team.

Students frequently seek assistance from one another when working on vocabulary-related activities. It is understood from the following quotations that students become less shy and express themselves better when working in groups.

Participant 4: “.....*I feel more comfortable in the group.*”

Participant 5: “.....*I love my friends and I love playing games together.*”

Participant 11: “.....*Working with a group is more enjoyable.*”

Participant 13: “.....*I feel shy when I come to the board alone.*”

Participant 21: “.....*I love my teammates; I enjoy playing games together.*”

We can conclude from this category that there was some student engagement and group activities and when they work as a team, they assist one another.

### **Progression and Achievement**

Progress and achievement are classified in a different category, as reported by the pupils. The pupils claimed that playing the games makes them even better. They claimed that they perceived themselves differently now than they did in the earlier games, and they demonstrated this improvement by the stars they received for their performance on the course. Students receive stars when they respond correctly to the game's questions; as the stars build up, they also receive badges.

Participant 1: “.....*I earned more stars in my third game than in the first game.*”

Participant 3: “.....*The first game was harder for me, now I have more stars.*”

Participant 14: “.....*I am happy to see that I have succeeded.*”

As seen in the examples above, the information that the students gave about themselves gave us positive feedback about their own progress, and in this way, the games contributed to the progress and achievement of the students.

### **Motivation**

According to the answers given by the students, we can mention that they refer to motivation. We can examine motivation in two different sub-categories.

- **Intrinsic Motivation**

The act of performing a task without any visible external incentives is known as intrinsic motivation. Instead of being motivated or under pressure from outside sources, like a deadline or reward, you do it because it's engaging and fun. According to the answers given by the students, the emotions evoked in the students are 'Willingness to succeed', 'Feeling of becoming part of the classroom'.

- **Extrinsic Motivation**

Extrinsic motivation is a type of drive that is fueled by benefits from outside sources. These might be material, like cash or marks, or immaterial, like acclaim or renown. Extrinsic motivation is only focused on external rewards, in contrast to intrinsic motivation, which comes from inside the person. According to the answers given by the students, they were supposed to earn "badges" and "stars."

The following quotes from students' comments demonstrate that they loved the gamified system since they found it entertaining and motivating:

Participant 8: “.....*I feel more motivated during lesson, I love games.*”

Participant 9: “.....*I am happy when I win and get stars.*”

Participant 17: “..... *I love playing games with friends so funny. When I play games with my friends I feel motivated*”

Participant 21: “.....*When I earn stars, I feel more motivated, I want to gain more stars.*”

Participant 22: “.....*When I won the game, it motivated me. I will be the winner next game.*”

We can conclude that gamification has a favorable impact on students' vocabulary development. According to the student's responses, gamification had a good impact on emotions and thoughts during the learning process. The student's responses backed up the use of gamification in vocabulary learning. They happier and more excited when she is learning through games. As a result, the children are more motivated in taking part in the session. It was observed that when integrating gamification components in the vocabulary learning process, the student learned the most. Willingness to succeed is one of the most important elements in gamification. The student wants to win or show what she knows during the game. They need to show their knowledge to friends or teachers. Feeling like becoming part of the classroom is also another important element of gamification. The student feels more motivated during the game, and they improve the feeling of belonging to the class with peer games. Other rein-forcers employed in gamification include chocolate and extra points as a reward. These seemingly insignificant aspects can serve as a relevant and crucial stimulus for the student.

## **Creativity**

The strengthening of creativity was linked to the imagination of activities for language acquisition employed up to that time. When class engagement was strong enough, students started to enjoy learning only for its own sake and grew more independent learners who could take care of their responsibilities.

Participant 2: “..... *It was very enjoyable to take on various roles to tell the words.*”

Participant 3: “.....*Trying to draw different pictures was the part I enjoyed most.*”

Consequently, encouraging students engaged in creative activities and fostering their independence improves the motivation for this effort. To completely determine if gamification may actually alter students' general creativity and motivation for studying foreign languages, this approach is definitely worth investigating.

The reflective journals collected from the participants demonstrate us that the students had to chance to express themselves and their feelings in the most comfortable way in the study. When we summarize the categories consisting of the diaries written by the students, gamification increases their achievement, attitude and in the lesson to a high degree.

## **4. DISCUSSION**

### **Discussion**

The aim of this research is to examine the changes in the student's attitude, success and perspective towards the lesson by including gamification in the vocabulary learning process. Both quantitative and qualitative research methods were employed to accomplish this purpose. The study employed a questionnaire, word test, and reflective journal to gather the relevant data. Statistics were used to examine the acquired data, and the results are described in detail in the Results section. These results are described in this chapter in the context of the study questions and with reference to the pertinent literature. The study's shortcomings are then discussed along with suggestions for further research.

### **Discussion of the Research Question I**

#### **How does vocabulary teaching through gamification affect the students' achievement?**

The first research question of this study explores whether there is a change in students' learning and achievement of gamification while learning vocabulary. Learning new words or practicing ones already learnt has not been easy for students. In English the words are not read exactly as they are written, students get distracted when learning the words, and they struggle to retain the words in their brains, which are the main issues. Therefore, gamification elements aim to help students understand and learn words better and it might help the students to be more successful. For this purpose, the Word Test was applied at the beginning and at the end of the application in order to understand whether gamification affects the success of the students. According to the Word Test results ( $P = ,000$ ) before and after the gamification applications, there are significant changes in the post-test results compared to the pre-test results. The participants had higher scores in post-test compared to the pre-test on the Word Test. Therefore, it is possible to draw the conclusion that the treatment had a favorable influence on the students' achievement scores. Additionally, it was found that there was a statistically significant difference between the Word Test scores of the subject group participants, on the pre-test and post-test, and comparable results were also found in earlier research findings.

According to results, we can say that language instruction doesn't only happen in a classroom with books, we need to use gamification's technological features in vocabulary teaching as well, because modern kids are digital natives, technology should be employed constantly by both students and instructors in the 21st century educational system. Computer networks and smart applications are among the most common and effective ways in language education, to allow contact between language learners and teachers or peers. Adapting internet-based applications such as Kahoot and Wordwall to lessons helps students to have an effective lesson, and also results show us that using this kind of applications increased students' achievement. With regard to gamification and students' achievement, in a research done by Maden (2016) that investigated how Kahoot's gamification application affected undergraduate students' vocabulary learning in academic English sessions, it has been shown that the use of gamification improves academic performance. The results of the Maden (2016) research and the current research results show that there are similar results in terms of success.

Similar studies have also suggested that gamification components are beneficial to students' achievement. In their study, Buckley and Dolye (2016) focused on the correlation between university students' engagement in class and academic achievement and digital gamification apps. The findings of the study's pretest-posttest data, which involved 100 students, demonstrated that gamified learning environments benefited students' learning processes as well as their interest and involvement in the class. Yıldırım (2017) carried out an experimental research survey with 97 pupils at a state university in Turkey in the 2014–2015 academic year. Through the results from pre– and post–test scores, it was revealed that the treatment via gamified teaching practices, which persisted for 14 weeks in the academic session, significantly improved the academic achievement of students and their perceptions toward the lesson. Uz Bilgin and Gul (2020) used a quasi-experimental study approach to examine the impacts of gamification, encompassing both online and in-person activities, on students' attitudes, and academic accomplishment. It was discovered that there seemed to be a substantial difference between the experimental and control groups in their academic accomplishment ratings based on the scores received by 92 pupils.

As a consequence, it is clear from the study findings and studies in the literature that gamification components utilized in vocabulary instruction in the classroom have an important impact on students' achievement.

## **Discussion of research question II**

### **What are students' perceptions of vocabulary learning through gamification?**

This question aimed to elicit participants' perspectives on the use of gamification tools for vocabulary improvement. It might be challenging for students to maintain consistency in their vocabulary acquisition processes, to pay attention during the session, and to extend the concentration period, particularly in younger age groups. Students become bored and distracted when vocabulary classes are taught using the same techniques or solely using the book. The inclusion of gamification elements in the vocabulary learning process had a significant positive effect on students' behavior and motivation in the light of the quantitative and qualitative findings. The questionnaire applied in the quantitative research process shows a fascinating positive change between post-test results and pre-test results and qualitative research analyzes support this positive change. According to the reflective journals of the students, most of them agreed that gamification applications are helpful for them while learning vocabulary, which suggests that all 23 students are quite familiar with gamification tools and aware of the benefits of them for vocabulary learning.

The research's findings indicate that students generally think favorably of the process of gamifying education. Although the progression structure, accomplishment points, badges, and the process's logic and emotional response are its most salient components, elements are seen by the general public, and it might be argued that dynamics and mechanics, like the unseen portion of an iceberg, have a higher significance in the process. In other words, gamification cannot be defined as the usage of components alone, without the dynamics and mechanics. Kim (2015) further emphasizes the fact that elements like scores, medals, and ratings are only the process's reinforcement systems.

De-Marcos et al. (2014) have suggested that gamification has a favorable impact on students' perceptions and gamification features are used to help learners retain and comprehend the lessons being provided and to keep their attention on the teacher. De-Marcos et al. (2014) found that although the experimental group's grade point averages and attendance rates were lower than those of the control group, they had more favorable perceptions regarding gamification. Hamari et al. (2014) conducted research in which they looked at twenty-four experimental studies on gamification. They discovered that gamification does have a favorable impact on student results. The students in the current study were projected to have favorable perceptions about



gamification, and the conclusion is consistent with the pertinent literature. And also, the data from the students' reflective journals reveals that gamification aspects promote engagement in the lesson, encourage students to be ambitious and active in both individual and group work, boost their willingness to learn the subject, and foster a pleasant learning environment. Gamification features are used to help learners retain and comprehend the lessons being taught and to keep their attention on the teacher and the topic at hand. According to Mei and Yagn's (2019) study, language learning and environmental understanding both benefit from the integration of augmented reality and gamification. Both of these together help learners increase their environmental consciousness and reflective thinking abilities. Students are more actively engaged, and their cooperation abilities are improved in a fun setting. According to students, Kahoot is one of the most important elements that affect the students' approach to the vocabulary lesson. This internet-based game had a significant impact on students' participation in the lesson. It was examined that students learned to respond faster and to act together with the group. In Pratama's (2020) study's results, using Kahoot to teach English topics makes learning enjoyable. As a result, one of the factors contributing to learner acceptance of this program is the usage of gamification.

### **Discussion of research question III**

#### **How does vocabulary teaching through gamification affect students' attitudes towards vocabulary learning?**

This research question aims to determine how the usage of gamification applications affects students' attitudes toward vocabulary acquisition. With the use of a questionnaire, the information on the students' attitudes was gathered. According to the comparison of the pre- and post-test results of the questionnaire, there was a significant difference in the attitudes of the students with the use of gamification elements ( $P = .000$ ). According to Item 1 ( $p=001$ ), vocabulary lessons have become more fun for them, and answering questions has become more enjoyable with gamification features, which has contributed to creating a positive atmosphere in the classroom for vocabulary lessons. Similar to this research, Mert and Samur (2018) investigated how learners feel about gamification. In their study, the researchers discovered that 12 students from various grade levels had favorable attitudes about game aspects, and that after using the gamification strategy, their interest and accomplishment rose. In addition to this, games can reduce anxiety, according to Richard-Amato (1988). According to Al Neyadi

(2007), employing games and activities to drill vocabulary improves students' word memorization skills and promotes student participation, which has made students have a positive attitude toward vocabulary lessons. The use of language games offers a number of benefits, including enjoyment, a better mood, and engagement in the activity. In another study, an innovation gamification method was tested by Landers and Armstrong (2017), and depending on the findings, they concluded that students' past experiences and attitudes about learning through game-based education affected their motivation too.

Similarly, Sze Lui (2012) conducted a case study, at the University of Macau with five groups of students at university to indicate the impact of using gamification on consolidation of vocabulary learning. Thus, two online games were played by students during a semester, to develop and consolidate student's vocabulary. At the end of process, student's tendency and ideas related to the usage of gamification in vocabulary learning were gathered through an online survey. The result of survey indicated that students had fun, and they were more interested in learning vocabulary through gamification, while they were recalling the words faster than any other vocabulary activities. Thus, learners may have positive attitudes towards language learning too. According to Yildirim's (2017) study, the gamification-based education application has a favorable impact on students' academic performance and attitudes toward the lesson.

The survey findings mentioned above and the research studies done in the literature have shown that students had favorable attitudes about vocabulary learning through gamification.

### **Pedagogical Implications of the Study**

Numerous pedagogical implications arise from this study. First of all, when learners are motivated with gamification during vocabulary learning, interested in what they are learning, and enjoying how they are learning, gamification becomes the most successful key in teaching. As with the benefit presented by the games, engaging pupils in activities can prevent them from falling into a state of interactivity and they feel like they are losing track of time. The dynamics established by using gamification in education can offer chances for challenge and provide sources of enjoyment.

Gamification components in the classroom are preferred when students have the opportunity to reflect on what they are learning in an organized manner and have the option to choose a course of action. Through the use of gamification, students can learn a variety of abilities related to cognitive self-regulation. In order for students to identify their own learning objectives, choose the best learning tactics to attain them, and manage their time and resources in light of gamification, educators should create contexts that inspire, motivate, and lead them.

## 5. CONCLUSION

The study's findings demonstrated that, when used appropriately, gamification may encourage students' learning and alter the environment of learning environments for the better. The impacts of gamification on student accomplishment should be taken into account while developing lectures because the main objectives of classroom context are to raise learner achievement and inform them of the curriculum's aims.

The pupils considerably outperformed themselves on the pre-test, as shown by the results of the post-test. Thus, the subject group's pre- and post-test comparison revealed that students' English vocabulary knowledge rose over the course of the 6-week procedure, and this had a favorable impact on accomplishment. Additionally, the post-test comparison makes it clear that gamification had a far greater impact on students' success than the conventional approach.

In this study, both qualitative and quantitative data were used to analyze motivation and attitude in addition to achievement. The quantitative data results showed that attitudes and motivation among students in the subject group had improved. Additionally, the findings from the reflective journals demonstrated that the students' perspectives on acquiring language had improved. They are eager to take vocabulary classes that incorporate gamification.

### **Limitations and Suggestions for the Further Studies**

Since there are only 23 participants in this study, which aims to evaluate students' motivation, attitudes, and success with gamified vocabulary processes, it is possible that the results cannot be applied to other students studying in similar settings or at different educational levels or institutions. In keeping with this, researchers can develop expansive gamification tools that can be used in more investigations.

Even if the current study has some of the limitations described above, it can still offer some useful advice, especially in the digital world we live in when anybody can get information from anywhere and people need to be adaptive to the always changing environments around them. Thus, it is recommended that educational facilities at different levels provide their students with interactive learning environments to stimulate their passion and engagement in the subject matter for a more effective course process of negotiation. According to Yildirim and Sen (2021), gamification is a model that may be used at all instructional levels, from elementary school to higher education.

Additionally, this study only included students; however, future studies might include college faculty members and administrators. The observation of the development in two groups, one of which has implemented vocabulary games and the other of which has not, might serve as a final recommendation. The benefits of using vocabulary games may be shown by comparing the data collected from these two groups.

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## APPENDICES

## Appendix A. Request from the Institute of Social Sciences for Thesis Ethical Permission Approval

<b>T.C</b>	
<b>ÇAĞ ÜNİVERSİTESİ</b>	
<b>SOSYAL BİLİMLER ENSTİTÜSÜ</b>	
<b>TEZ / ARAŞTIRMA / ANKET / ÇALIŞMA İZİNİ / ETİK KURULU İZİNİ TALEP FORMU VE ONAY TUTANAK FORMU</b>	
<b>ÖĞRENCİ BİLGİLERİ</b>	
<b>T.C. NOSU</b>	
<b>ADI VE SOYADI</b>	İlker Gündoğan
<b>ÖĞRENCİ NO</b>	2020008027
<b>TEL. NO.</b>	
<b>E - MAİL ADRESLERİ</b>	
<b>ANA BİLİM DALI</b>	İngiliz Dili Eğitimi
<b>HANGİ AŞAMADA OLDUĞU (DERS / TEZ)</b>	Tez
<b>İSTEKDE BULUNDUĞU DÖNEME AİT DÖNEMLİK KAYDININ YAPILIP-YAPILMADIĞI</b>	2021-2022 BAHAR DÖNEMİ KAYDINI YENİLEDİM.
<b>ARAŞTIRMA/ANKET/ÇALIŞMA TALEBİ İLE İLGİLİ BİLGİLER</b>	
<b>TEZİN KONUSU</b>	Öğrencilerin kelime öğrenmelerinde oyunlaştırmanın rolünün araştırılması
<b>TEZİN AMACI</b>	Oyunlaştırma sürecinin amacı, öğrencilerin dikkatini derste ve derslerde tartışılan konulara çekerek derslerin daha uzun ömürlü olmasını sağlamaktır. Öğrenciler, kelime öğrenimini daha hızlı ve daha cazip hale getirmenin yanı sıra kelime öğrenmeyi basitleştirerek kelime öğreniminde yetkinliğe ulaştırmak ve öğrencilere önyargıların üstesinden gelmeleri ve kendi özel öğrenme tercihlerini geliştirmeleri konusunda yardımcı olmaktır. İngilizce 'de kelime kazanımının zorlukları ve önemi ile oyunlaştırmanın sürece getirebileceği iyi ruh hali göz önüne alındığında, bu çalışmanın amacı oyunlaştırmanın öğrencilerin kelime edinme isteklerini nasıl etkilediğini görmektir.

<p><b>TEZİN TÜRKÇE ÖZETİ</b></p>	<p>Oyunlaştırmanın öğrencilerin kelime öğrenimindeki yerini keşfetmektir. Yarı deneysel araştırma yöntemiyle, kontrol ve deney grubu olmak üzere yaşları 10-12 aralığında olan iki farklı 5.sınıf öğrencileri ile yürütülecektir. Öğrencilerden çalışma öncesinde gerekli izinler alınıp, bilgileri gizli tutulacaktır. Anket, öğrencilerin nasıl olduğunu ifade etmelerini sağlamak için Gülsoy (2013) tarafından geliştirilen Likert ölçeği ile kelime oyunlarına ne kadar katılıyorlar ya da katılmıyorlar öğrenmek için; Her biri beş seçenekler deneysel katılımcıların tutumunu ölçmek için kullanıldı. Seçenekler şunlardı: "Kesinlikle katılıyorum", "Katılıyorum", "Belirsiz", "Katılıyorum" ve "Kesinlikle Katılmıyorum", öğrencilerin bu konudaki yansımalarına ve kararlarına ilişkin 15 sorudan oluşmaktadır. Toplanan veri istatistikî yöntemler kullanılarak SPSS programıyla analiz edilecektir. Öğrenciler her oyun sonrasında günlük tutmaları istenilecektir.</p>
<p><b>ARAŞTIRMA YAPILACAK OLAN SEKTÖRLER/ KURUMLARIN ADLARI</b></p>	<p>Özel Hatay Doğa Ortaokulu</p>
<p><b>İZİN ALINACAK OLAN KURUMA AİT BİLGİLER (KURUMUN ADI-ŞUBESİ/ MÜDÜRLÜĞÜ - İLİ - İLÇESİ)</b></p>	<p>Defne İlçe Milli Eğitim Müdürlüğü / Defne/Hatay</p>
<p><b>YAPILMAK İSTENEN ÇALIŞMANIN İZİN ALINMAK İSTENEN KURUMUN HANGİ İLÇELERİNE/ HANGİ KURUMUNA/ HANGİ BÖLÜMÜNDE/ HANGİ ALANINA/ HANGİ KONULARDA/ HANGİ GRUBA/ KİMLERE/ NE UYGULANACAĞI GİBİ AYRINTILI BİLGİLER</b></p>	<p>Hatay Doğa Ortaokulu / 5.sınıf öğrencileri / Hatay / Defne</p>

<b>UYGULANACAK OLAN ÇALIŞMAYA AİT ANKETLERİN/ ÖLÇEKLERİN BAŞLIKLARI/ HANGİ ANKETLERİN - ÖLÇELERİN UYGULANACAĞI</b>	The Attitude Questionnaire in English (Senergüc,2007) Vocabulary Exam 1 (Pre-Test) Vocabulary Exam 2 (Post-Test) Reflective journal
<b>EKLER (ANKETLER, ÖLÇEKLER, FORMLAR, .... V.B. GİBİ EVRAKLARIN İSİMLERİYLE BİRLİKTE KAÇ ADET/SAYFA OLDUKLARINA AİT BİLGİLER İLE AYRINTILI YAZILACAKTIR)</b>	1) Bilgi ve Kabul formu 1 Sayfa 2) Bilgi formu 1 Sayfa 3) The Attitude Questionnaire in English (2007) 2 sayfa 4) Vocabulary Exam 1 2Sayfa 5)Vocabulary Exam 2 2 Sayfa

**ÖĞRENCİNİN ADI - SOYADI:** İlker Gündoğan **ÖĞRENCİNİN İMZASI:** Enstitü müdürlüğünde evrak aslı ıslak imzalıdır.  
**TARİH:** 17/02/2020

**TEZ/ ARAŞTIRMA/ANKET/ÇALIŞMA TALEBİ İLE İLGİLİ DEĞERLENDİRME SONUCU**

**1. Seçilen konu Bilim ve İş Dünyasına katkı sağlayabilecektir.**

**2. Anılan konu İngiliz Dili ve Eğitimi faaliyet alanı içerisine girmektedir.**

1.TEZ DANIŞMANININ ONAYI	2.TEZ DANIŞMANININ ONAYI (VARSA)	ANA BİLİM DALI BAŞKANININ ONAYI	SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRÜNÜN ONAYI
Adı - Soyadı: Aysun DAĞTAŞ	Adı - Soyadı: .....	Adı - Soyadı: Şehnaz ŞAHİNKARAKAŞ	Adı - Soyadı: Murat KOÇ
Unvanı: Dr. Öğr. Üyesi	Unvanı: .....	Unvanı: Prof. Dr.	Unvanı: Doç.Dr.
İmzası: <b>Evrak Onayı e-posta ile alınmıştır.</b>	İmzası: .....	İmzası: <b>Evrak onayı e-posta ile alınmıştır.</b>	İmzası: <b>Enstitü müdürlüğünde evrak aslı imzalıdır.</b>

ETİK KURULU ASIL ÜYELERİNE AİT BİLGİLER						
Adı - Soyadı: <b>Şehnaz ŞAHİNKARAKAŞ</b>	Adı - Soyadı: <b>Yücel ERTEKİN</b>	Adı - Soyadı: <b>Deniz Aynur GÜLER</b>	Adı - Soyadı: <b>Mustafa BAŞARAN</b>	Adı - Soyadı: <b>Mustafa Tevfik ODMAN</b>	Adı - Soyadı: <b>Hüseyin Mahir FİSUNOĞL U</b>	Adı - Soyadı: <b>Jülide İNÖZÜ</b>
Unvanı : Prof. Dr.	Unvanı : Prof. Dr.	Unvanı: Prof. Dr.	Unvanı : Prof. Dr.	Unvanı: Prof. Dr.	Unvanı : Prof. Dr.	Unvanı : Prof. Dr.
Enstitü müdürlüğünde evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.	Enstitü müdürlüğünd e evrak aslı ıslak imzalıdır.
<b>Etik Kurulu Jüri Başkanı - Asıl Üye</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>	<b>Etik Kurulu Jüri Asıl Üyesi</b>
<b>OY BİRLİĞİ İLE</b>	<input checked="" type="radio"/>	<b>Çalışma yapılacak olan tez için uygulayacak olduğu Anketleri/Formları/Ölçekleri Çağ Üniversitesi Etik Kurulu Asıl Jüri Üyelerince İncelenmiş olup, ..... / ..... / 20..... - ..... / ..... / 20..... tarihleri arasında uygulanmak üzere gerekli iznin verilmesi taraflarımızca uygundur.</b>				
<b>OY ÇOKLUĞU İLE</b>	<input type="radio"/>					
<b>AÇIKLAMA: BU FORM ÖĞRENCİLER TARAFINDAN HAZIRLANDIKTAN SONRA ENSTİTÜ MÜDÜRLÜĞÜ SEKRETERLİĞİNE ONAYLAR ALINMAK ÜZERE TESLİM EDİLECEKTİR. AYRICA FORMDAKİ YAZI ON İKİ PUNTO OLACAK ŞEKİLDE YAZILACAKTIR.</b>						

## Appendix B : Consent Form of the Study

Sayın Veli;

Çocuğunuzun katılacağı bu çalışma, “Öğrencilerin kelime öğrenmelerinde oyunlaştırmanın rolünün araştırılması” adıyla, 21/03/2022-2/05/2022 tarihleri arasında yapılacak bir araştırma uygulamasıdır.

**Araştırmanın Hedefi:** Araştırmamızın amacı öğrencilerin oyunlaştırma ile kelime öğrenimini daha hızlı ve daha cazip hale getirmenin yanı sıra kelime öğrenmeyi basitleştirerek kelime öğreniminde yetkinliğe ulaştırmak ve öğrencilere önyargıların üstesinden gelmeleri ve kendi özel öğrenme tercihlerini geliştirmeleri konusunda yardımcı olmaktır

**Araştırma Uygulaması:** Anket / Günlük şeklindedir.

Araştırma T.C. Milli Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleştirilmektedir. Araştırma uygulamasına katılım tamamen gönüllülük esasına dayalı olmaktadır. Çocuğunuz çalışmaya katılıp katılmamakta özgürdür. Araştırma çocuğunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuğunuzun katılımı **tamamen sizin isteğinize bağlıdır**, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılmamama veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilemeyecektir.

Çalışmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir.

Uygulamalar, genel olarak kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuğunuz kendisini rahatsız hissederse cevaplama işini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çocuğunuz çalışmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Anket çalışmasına katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir.

Onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımızla,

Araştırmacı : İlker Gündoğan

İletiş

*Velisi bulunduğum ..... sınıfı ..... numaralı öğrencisi .....  
.....'in yukarıda açıklanan araştırmaya katılmasına izin veriyorum.  
(Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz\*).*

.../.../.....

Veli adı-soyadı:

imza

## Appendix C. Questionnaire

### The Attitude Questionnaire in English

**1. I like the classes in which we play vocabulary games more**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**2. I like practicing extra activities outside of the English course book**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**3. I want to learn English vocabulary in the same manner all the time**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**4. I feel excited when I encounter a different teaching method**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**5. I like vocabulary games and entertainment**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**6. I like actively taking part in the class**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**7. Competition is one of my favorite features**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**8. I enjoy succeeding and winning**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**9. I enjoy cooperating**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**10. I enjoy learning through vocabulary games**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**11. I feel comfortable during the vocabulary games**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**12. I would like to achieve with my own struggle**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**13. When I learn subject through vocabulary games, I remember it more easily**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**14. I enjoy learning through vocabulary games because I do not get bored**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree

**15. I want to learn English vocabulary from the English course book alone**

a) Strongly Agree b) Agree c) Uncertain d) Disagree e) Strongly Disagree



## Appendix D. Word Test

**Name:**  
**Surname:**  
**Score:**

### 1-Fill in the gaps with the words in the box. (7\*4 = 28)

*takes * don't go * plays *don't like *has * speak * goes
---

- a) Jackie ..... beautiful photographs. Her camera is new and expensive.  
 b) I ..... camping in autumn because it's usually cold here.  
 c) Garry usually ..... video games when he gets back home from school.  
 d) I ..... painting. I think it's very boring.  
 e) Terry ..... a surfboard.  
 f) He always..... swimming in the summer.  
 g) Laura can't ..... French. She wants to take some French classes

dangerous • experience • fantastic • homesick • mountains • wildlife
--

### 2- Fill in the gaps with the words in the box. (6\*4 = 24)

- a) Always have a guide with you. You may get lost in the .....  
 b) Climbing this mountain in winter can be ..... Be careful!  
 c) Do you want to share your ..... with us?  
 d) I feel ..... when I stay in another city away from my family.  
 e) The ..... in this forest is colorful and amazing!  
 f) The film about those climbers and travelers is ..... I want to watch it again.

**3-Fill in the gaps with the correct word from the box. (6\*4 = 24)**

clever • fair • freckles • moustache • tall • wavy
--

- a) Alice isn't medium height. She's .....
- b) Carla's dad hasn't got a beard, but he's got a .....
- c) Matt's got ..... on his face.
- d) My friend's hair isn't straight. It's .....
- e) My hair isn't dark. I've got ..... hair.
- f) Renata is very good at Math. She's .....

**4-Fill in the gaps with the words in the box (6\*4 = 24)**

camping • cycling • painting • playing • surfing • taking
---

- a) I love nature, so I go ..... with friends every month in summer.
- b) I've got the best camera, so ..... photographs are easy.
- c) Linda can't go ..... with her friends because her bike is broken.
- d) Jackie is very good at art. .... is her favorite hobby.
- e) Alice doesn't like ..... because she's afraid of water.
- f) ..... video games are never boring.

## Appendix E. Thesis Ethical Permission Approval



T.C.  
ÇAĞ ÜNİVERSİTESİ  
Sosyal Bilimler Enstitüsü

Sayı : E-23867972-050.01.04-2200001470  
Konu : Bilimsel Araştırma ve Yayın Etiği  
Kuruldu Kararı Alınması Hk.

24.02.2022

REKTÖRLÜK MAKAMINA

**İlgi:** 09.03.2021 tarih ve E-81570533-050.01.01-2100001828 sayılı Bilimsel Araştırma ve Yayın Etiği Kurulu konulu yazınız.  
İlgi tarihli yazınız kapsamında Üniversitemiz Sosyal Bilimler Enstitüsü bünyesindeki Lisansüstü Programlarda halen tez aşamasında kayıtlı olan **İlker Gündoğan** isimli öğrencimize ait tez evraklarının "Üniversitemiz Bilimsel Araştırma ve Yayın Etiği Kurulu Onayları" alınmak üzere Ek'te sunulmuş olduğunu arz ederim.

Doç. Dr. Murat KOÇ  
Sosyal Bilimler Enstitüsü Müdürü

Ek : 1 Adet öğrenciye ait tez evrakları listesi.

**Appendix F. Ethic Committee Approval of Çağ University for Institute of Social Sciences**



T.C.  
ÇAĞ ÜNİVERSİTESİ  
Rektörlük

Sayı : E-81570533-044-2200001641  
Konu : Bilimsel Araştırma ve Yayın Etiği  
Kurul İzni Hk.

02.03.2022

**SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜNE**

İlgi : a) 24.02.2022 tarih ve E-23867972-050.01.04-2200001470 sayılı yazınız.  
b) 22.02.2022 tarih ve E-23867972-050.01.04-2200001433 sayılı yazınız.

İlgi yazılarda söz konusu edilen Özge Özdemir ve İlker Gündoğan isimli öğrencilerimizin tez evrakları Bilimsel Araştırma ve Yayın Etiği Kurulunda incelenerek uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Prof. Dr. Ünal AY  
Rektör

## Appendix G. Ethic Committee Approval to Distribution Locations



T.C.  
ÇAĞ ÜNİVERSİTESİ  
Sosyal Bilimler Enstitüsü

Sayı : E-23867972-044-2200002026

16.03.2022

Konu : İlker Gündoğan'ın Tez Anket İzni  
Hk.

### DAĞITIM YERLERİNE

İngiliz Dili Eğitimi Tezli Yüksek Lisans Programında kayıtlı **İlker Gündoğan** isimli öğrencimizin, “**Öğrencilerin kelime öğrenmelerinde oyunlaştırmanın rolünün araştırılması**” konulu tez çalışması Üniversitemiz öğretim üyesi **Dr. Öğr. Üyesi Aysun Yurdaışık Dağtaş** danışmanlığında halen yürütülmektedir. Adı geçen öğrenci tez çalışmasında **Müdürlüğünüze bağlı Özel Hatay Doğa Ortaokulunda halen eğitim gören 10-12 yaş aralığında olan iki farklı 5.Sınıf öğrencileri** kapsamak üzere kopyası Ek’lerde sunulan anket uygulamasını yapmayı planlamaktadır. Üniversitemiz Etik Kurulunda yer alan üyelerin onayları alınmış olup, gerekli iznin verilmesi hususunu bilgilerinize sunarım.

Prof. Dr. Ünal AY  
Rektör

Ek :

- 1 - 4 sayfa tez etik, tez anket formu.
- 2 - 1 sayfa tez danışmanı onay maili.
- 3 - 3 sayfa olacak şekilde İngiliz Dili Eğitimi Anabilim Dalı Başkanı İmzalı Form.
- 4 - 3 sayfa soru listesi.
- 5 - 2 sayfa sorular listesi.
- 6 - 1 tez etik izin istek yazısı.
- 7 - 1 sayfa tez etik izin yazısı.
- 8 - 1 sayfa Milli Eğitim Müdürlüğü başvuru formu.
- 9 - 1 sayfa Milli Eğitim Müdürlüğüne başvuru formu devamı.
- 10 - 1 sayfa öğrenci imzalı talep dilekçesi.
- 11 - 17 sayfa öğrenciye ait tez önerisi.
- 12 - 1 sayfa öğrenci imzalı taahhütname.
- 13 - 1 sayfa öğrenci imzalı veli onam formu.

Dağıtım:

Gereği:

Defne İlçe Milli Eğitim Müdürlüğüne/ Hatay  
Özel Hatay Doğa Ortaokulu Müdürlüğüne

Bilgi:

Hatay İl Milli Eğitim Müdürlüğüne  
Hatay Valiliğine

**Appendix H. Official Permission from Provincial Directorate of National Education in Hatay and from Governorship of Hatay**



T.C.  
HATAY VALİLİĞİ  
İl Millî Eğitim Müdürlüğü

Sayı : E-32889839-605.01-46637057  
Konu : İlker GÜNDOĞAN'ın  
Araştırma İzin Onayı

29.03.2022

**VALİLİK MAKAMINA**

Çağ Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi tezli yüksek lisans programı öğrencisi İlker GÜNDOĞAN, "Öğrencilerin Kelime Öğrenmelerinde Oyunlaştırmanın Rolünün Araştırılması" konulu tez çalışmasını yapmayı talep etmektedir.

Söz konusu çalışmanın "Millî Eğitim Bakanlığı Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü'nün 21.01.2020 tarihli ve 81576613-10.06.02-E.1563890 ve 2020/2 nolu Araştırma Uygulama İzinleri Genelgesine" uygun olduğundan, ilgilinin araştırmanın Müdürlüğümüzün izni ile denetimi ilçe millî eğitim müdürlükleri ve okul/kurum idaresinde olmak üzere, kurum faaliyetlerini aksatmadan, gönüllülük esasına göre, elde edilen verilerin kamuoyu ile paylaşılmadan önce Müdürlüğümüzün ilgili birimine iletilmesi ve onaylı bir örneği Müdürlüğümüzde muhafaza edilen ve uygulama sırasında da mühürlü ve imzalı örnekten çoğaltılan veri toplama araçlarının kullanılması koşuluyla; İlimiz Defne İlçesi Özel Hatay Doğa Ortaokulu 5. Sınıf öğrencilerine haftada 1 saat olmak üzere 8 hafta süreyle uygulama çalışması yapmasını, olurlarınıza arz ederim.

Fahrettin ÖVER  
İl Millî Eğitim Şube Müdürü

OLUR

Mesut ÇERKO  
Vali a.  
İl Millî Eğitim Müdür V.