



**COMPARISON OF THREE GAMIFIED
STUDENT RESPONSE SYSTEMS IN
TERMS OF EFFECTIVENESS AND
MOTIVATION IN ENGLISH VOCABULARY
LEARNING WITH A PLAYER
TYPE PERSPECTIVE**

M.A. DISSERTATION

HASAN HÜSEYİN ŞAHİN

Eskişehir 2024

**COMPARISON OF THREE GAMIFIED STUDENT RESPONSE SYSTEMS IN
TERMS OF EFFECTIVENESS AND MOTIVATION IN ENGLISH
VOCABULARY LEARNING WITH A PLAYER TYPE PERSPECTIVE**

HASAN HÜSEYİN ŞAHİN

M.A. DISSERTATION

Department of Foreign Language Education

Programme in English Language Teaching

Supervisor: Asst. Prof. SELMA KARA

Eskişehir

Anadolu University

Graduate School

July 2024

JÜRİ VE ENSTİTÜ ONAY SAYFASI



ABSTRACT

COMPARISON OF THREE GAMIFIED STUDENT RESPONSE SYSTEMS IN TERMS OF EFFECTIVENESS AND MOTIVATION IN ENGLISH VOCABULARY LEARNING WITH A PLAYER TYPE PERSPECTIVE

Hasan Hüseyin ŞAHİN

Programme in English Language Teaching

Anadolu University, Graduate School, July 2024

Supervisor: Asst. Prof. SELMA KARA

The significance of vocabulary learning in ELT has been proven with a considerable amount of research; nevertheless, debates about the most effective approaches to vocabulary learning persist to this day. Gamification, which opened new horizons in various fields, took its place in language teaching in the form of Gamified Student Response Systems and Applications (GSRSA). The current study aimed to discover the effects of three GSRSA (Kahoot!, Quizizz, and Socrative) on students' achievement and motivation in vocabulary learning. Besides, the effects of player types on learners' achievement and motivation were studied qualitatively.

“Explanatory sequential mixed method research design” (Creswell,2012) was adopted to collect and interpret data from 224 participants. The data collection procedure was completed with 176 participants in 16 intact classes. Qualitative data was collected from ten participants through face-to-face semi structured interviews. The results revealed that intervention groups' achievement scores were higher than control group's scores. However, the motivation figures of all groups indicated a negative trend. The differences among player types in three intervention groups highlighted the fact that one-for-all approach in GSRSA is required to be replaced with a more individualistic understanding. The success of gamification in vocabulary learning even when the motivation is decreasing imply that GSRSA should become a part of curriculum, course books, teacher training programmes, and in-service training for language teachers.

Keywords: Gamification, Gamified student response systems and applications (GSRSA), English Language Teaching (ELT), Vocabulary learning, Player types

ÖZET

İNGİLİZCE KELİME ÖĞRENİMİNDE ETKİNLİK VE MOTİVASYON AÇISINDAN ÜÇ OYUNSALLAŞTIRILMIŞ ÖĞRENCİ YANIT SİSTEMİNİN OYUNCU TİPİ PERSPEKTİFİYLE KARŞILAŞTIRILMASI

HASAN HÜSEYİN ŞAHİN

İngiliz Dili Eğitimi Programı

Anadolu Üniversitesi, Lisansüstü Eğitim Enstitüsü, Temmuz 2024

Danışman: Dr. Öğr. Üyesi SELMA KARA

Yabancı dil olarak İngilizce öğreniminde, kelime öğrenmenin önemi literatürde yapılan geniş çaplı araştırmalarla kanıtlanmış olup, bu konudaki en iyi yöntemin ne olduğu konusunda tartışmalar bugüne kadar devam etmiştir. Farklı alanlarda yeni ufuklar açan oynunsallaştırma, dil öğretiminde Oynunsallaştırılmış Öğrenci Yanıt Sistemleri ve Uygulamaları (GSRSA) şeklinde yerini almıştır. Bu çalışma üç GSRSA'nın (Kahoot!, Quizizz ve Socrative) öğrencilerin kelime öğrenme başarısı ve motivasyonu üzerindeki etkilerini keşfetmeyi amaçlamıştır. Bunun yanı sıra, Bartle (1996) tarafından tanımlanan oynunsallaştırmadaki oyuncu tiplerinin, öğrencilerin başarısı ve motivasyonu üzerindeki etkileri nitel olarak incelenmiştir.

Araştırmada veri toplamak ve yorumlamak için “Açıklayıcı Ardışık Karma Yöntem Araştırma Tasarımı” (Creswell, 2012) benimsenmiştir. 224 katılımcıdan 176'sı ile veri toplama süreci başarıyla tamamlanmıştır. Nitel veriler, yüz yüze yarı yapılandırılmış görüşmeler yoluyla toplanmıştır. Sonuçlar, çalışma gruplarının başarı puanlarının kontrol grubunun puanlarından daha yüksek olduğunu ortaya koymuştur fakat tüm grupların motivasyon verileri negatif bir eğilim göstermiştir. Üç deney grubundaki oyuncu tipleri arasındaki farklılıklar, oynunsallaştırmada herkes için tek tip bir yaklaşımın daha bireyselci bir anlayışla değiştirilmesi gerektiğini vurgulamıştır.

Anahtar Kelimeler: oynunsallaştırma, oynunsallaştırılmış öğrenci yanıt sistemleri ve uygulamaları, İngiliz Dili Eğitimi, kelime öğrenme, oyuncu tipleri

ACKNOWLEDGEMENTS

This thesis would not have been possible without the support, guidance, and encouragement of many people. First and foremost, I would like to express my deepest gratitude to my advisor, Asst. Prof. Selma KARA, for her continuous support, patience, and insightful guidance throughout the research and writing process. Her expertise and feedback were invaluable in shaping this thesis.

I extend my sincere thanks to all members of the Anadolu University ELT department for their invaluable contributions to my efforts and development. My colleagues at BTU School of Foreign Languages should be noted for their support and encouragement all through this process.

I am also grateful to the members of my thesis committee, Assoc. Prof. Gonca SUBAŞI and Asst. Prof. Mustafa SARIOĞLU, for their thoughtful comments and constructive criticism, which helped improve the quality of this work.

Finally, I would like to thank my family for their unwavering support, patience, and understanding throughout the course of my studies. Their love and encouragement have been my greatest source of strength. I would like to express my deepest gratitude to my wife, Zehra ŞAHİN, my children Didenur and Hamza, my parents Metin and Hatice, and my brother Yusuf ŞAHİN.

This thesis is dedicated to my beloved son Mehmet Akif ŞAHİN, who sadly flew to heaven at the age of eight before this journey.

Hasan Hüseyin ŞAHİN

STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this thesis is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “scientific plagiarism detection program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

Hasan Hüseyin ŞAHİN

TABLE OF CONTENTS

	<u>Page</u>
COVER PAGE.....	i
FINAL APPROVAL FOR THESIS.....	ii
ABSTRACT.....	iii
ÖZET	iv
ACKNOWLEDGEMENTS	v
STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
CHAPTER 1.....	1
1. INTRODUCTION	1
1.1 Introduction	1
1.2 Purpose of the Study	6
1.3 Research Questions	6
1.4 Significance of the Study	6
1.5 Definitions	8
CHAPTER 2	9
LITERATURE REVIEW	9
2.1 Vocabulary in English Language Teaching and Learning.....	9
2.1.1 Significance of vocabulary	9
2.1.2 Explicit and implicit vocabulary learning.....	10
2.1.3 Knowing vocabulary in SLA (Lexical competence)	11
2.2 Gamification	14

2.3 Gamified Student Response Systems and Applications (GSRSA).....	20
2.3.1 Kahoot!	23
2.3.2 Quizizz	27
2.3.3 Socrative	29
2.3.4 Comparison of 3 GSRSA in terms of dynamics, mechanics, and components.....	31
2.4 Player Types	33
2.5 Motivation	37
2.5.1 Intrinsic motivation.....	38
2.5.2 Extrinsic motivation	40
2.5.3 Motivational theories in gamification.....	40
2.5.3.1 Self-Determination theory.....	41
2.5.3.2 Flow theory	42
CHAPTER 3	44
METHODOLOGY	44
3.1 Participants and Research Site	44
3.2 Selection of the Target Vocabulary	45
3.3 Overview of the Research Design	47
3.3.1 Pilot study.....	48
3.3.2 Intervention procedures.....	49
3.4 Materials and Instruments	49
3.4.1 Materials for intervention.....	49
3.4.2 Materials for data collection.....	51
3.4.2.1 Quantitative data collection instruments.....	51
3.4.2.1a Achievement pre-test and post-test.....	51
3.4.2.1b Motivation pre-test and post-test.....	52
3.4.2.2 Qualitative data collection instruments	54

3.4.2.2a Player type scale	54
3.4.2.2b Semi-structured interview	54
3.5 Data Collection and Data Analysis	55
3.5.1 Procedures	55
3.5.2 Scoring the tests	56
CHAPTER 4	57
4. RESULTS	57
4.1 The Effects of Three GSRSA on Turkish EFL Learners' Vocabulary Achievement.....	58
4.1.1 The individual effect of each GSRSA on vocabulary achievement.....	58
4.1.1.1 The effect of Kahoot! on learners' vocabulary learning achievement	59
4.1.1.2 The effect of Quizizz on learners' vocabulary learning achievement.....	59
4.1.1.3 The effect of Socrative on learners' vocabulary learning achievement	60
4.1.1.4 The effect of control condition on vocabulary learning achievement.....	60
4.1.2 The comparison of four groups in terms of vocabulary learning achievement.....	60
4.2 The Effects of Three GSRSA on Turkish EFL Learners' Motivation in Vocabulary Learning	62
4.2.1 The individual effect of each GSRSA on vocabulary learning motivation	62
4.2.1.1 The effect of Kahoot! on learners' vocabulary learning motivation ..	63
4.2.1.2 The effect of Quizizz on learners' vocabulary learning motivation ..	64
4.2.1.3 The effect of Socrative on learners' vocabulary learning motivation.....	64
4.2.1.4 The effect of control condition on vocabulary learning motivation ..	64
4.2.2 The comparison of four groups in terms of vocabulary learning motivation.....	64

4.3 The Perceptions of Different Player Types in Terms of Success and Motivation Towards GSRSA Used in Learning EFL Vocabulary	66
4.3.1 Achievers' perceptions towards three GSRSA	69
4.3.1.1 Achievers' perceptions of success in vocabulary learning through three GSRSA	70
4.3.1.2 Achievers' perceptions of motivation in vocabulary learning through three GSRSA	71
4.3.2 Socializers' perceptions towards three GSRSA.....	71
4.3.2.1 Socializers' perceptions of achievement in vocabulary learning through three GSRSA	72
4.3.2.2 Socializers' perceptions of motivation in vocabulary learning through three GSRSA	73
4.3.3 Explorers' perceptions towards three GSRSA	74
4.3.3.1 Explorers' perceptions of achievement in vocabulary learning through three GSRSA	75
4.3.3.2 Explorers' perceptions of motivation in vocabulary learning through three GSRSA	75
4.3.4 Killers' perceptions towards three GSRSA	76
4.3.4.1 Killers' perceptions of achievement in vocabulary learning through three GSRSA	77
4.3.4.2 Killers' perceptions of motivation in vocabulary learning through three GSRSA	77
CHAPTER 5.....	79
DISCUSSION.....	79
5.1 Discussion within the Scope of Research Questions.....	79
5.2 The Effects of Three GSRSA on Turkish EFL Learners' Vocabulary Achievement.....	79
5.3 The Effects of Three GSRSA on Turkish EFL Learners' Vocabulary Learning Motivation	81

5.4 The Perceptions of Different Player Types in Terms of Achievement and Motivation Towards GSRSA Used in Learning EFL Vocabulary	83
CHAPTER 6	85
CONCLUSION	85
6.1 Summary of the Key Findings	85
6.2 Implications for Practice	87
6.3 Limitations of the Study	89
6.4 Recommendations for Future Research.....	89
REFERENCES.....	91
APPENDICES	103
Appendix 1: Approval Granted by Research Ethics Committee.....	103
Appendix 2: Permission taken from English Preparatory Programme	104
Appendix 3: Participant Consent Form.....	105
Appendix 4: Target Vocabulary Items with Their Definitions Used in the Study	106
Appendix:5 Vocabulary Pre-test	109
Appendix:6 Vocabulary Post-test	120
Appendix:7 Intrinsic Motivation Inventory	125
Appendix:8 Player Type Inventory	128

LIST OF TABLES

	<u>Page</u>
Table 2.1. Motivator or not for the Players	17
Table 2.2. Comparison of Three GSRSA Used in This Study.....	31
Table 3.1. Cobb’s Online Vocabulary Profiler.....	46
Table 3.2. Intrinsic Motivation Test (IMT) Items.....	53
Table 3.3. Data Collection and Intervention Procedure.....	55
Table 4.1. The effect of three GSRSA on learners’ vocabulary achievement.....	58
Table 4.2. The results of the One-way ANOVA analysis with Pairwise Comparisons..	61
Table 4.3. Games-Howell (Vocabulary Achievement).....	61
Table 4.4. The effect of three GSRSA on learners’ vocabulary learning motivation....	63
Table 4.5. Games-Howell (Vocabulary Learning Motivation Pre-Test).....	65
Table 4.6. Games-Howell (Vocabulary Learning Motivation Post-Test).....	65

LIST OF FIGURES

	<u>Page</u>
Figure 2.1. Levelt's Speech Production Model.....	13
Figure 2.2. Lexical Production and Comprehension Model.....	14
Figure 2.3. Game Elements Pyramid.....	19
Figure 2.4. Basic Clicker Equipment.....	21
Figure 2.5. Kahoot! Class.....	25
Figure 2.6. Kahoot! Podium of Winners.....	26
Figure 2.7. Quizizz Question Sample.....	28
Figure 2.8. Quizizz Immediate Feedback Screen.....	28
Figure 2.9. Socrative Question Sample.....	29
Figure 2.10. Bartle's Taxonomy of Player Types.....	35
Figure 2.11. Spider Web Model presenting the relationship among motivational theories in gamification.....	41

LIST OF ABBREVIATIONS

AWL	:Academic Word List
CEFR	:Common European Framework of Reference for Languages
COCA	:Corpus of Contemporary American English
EFL	:English as a Foreign Language
ELT	:English Language Teaching
EPP	:English Preparatory Programme
ESA	:Entertainment Software Association
ESL	:English as a Second Language
GSL	:General Service List
GSRSA	:Gamified Student Response Systems and Applications
IMT	:Intrinsic Motivation Test
LMS	:Learning Management Systems
SDT	:Self Determination Theory

CHAPTER 1

1. INTRODUCTION

1.1 Introduction

Teaching English is a relentless process of improvement seeking the better as learning English plays a crucial role in every aspect of life and education. Enhancing the ultimate goal of autonomous learner requires improving four basic skills which are listening, reading, speaking, and writing. Vocabulary is the common point which all these skills share and any development in vocabulary teaching affects them substantially (Schmitt, 2008). Allen (1983) declared vocabulary teaching as a vital component in a language classroom for learners to be successful. Furthermore, Laufer (1986) prioritized the role of vocabulary in all forms of language learning and acquisition, no matter it is the mother tongue, second or foreign language irrespective of age whether being an adult or a baby.

Vocabulary studies had been an underestimated component prevailed by grammar at the initial stages of research conducted in English Language Teaching. Numerous authors and researchers started to move the focus of language studies from grammar to vocabulary in the early 1970s. One of the cornerstones addressing the significance of vocabulary was Wilkins (1972) by stating that it is possible to convey some message by excluding grammar, but it would be impossible without vocabulary. In an era when all focus was on grammar, this stance opened up new horizons to the language studies. Other studies conveyed the crucial role of vocabulary within language by using metaphors such as Richards (1976) the most important organ, Harmer (1994) vital organs and the flesh, Coady (1997) as the heart, Sarioğlu (2020) heart and the blood, all of which assuming language as a whole body. According to Scrivener (1994) the only way of transmitting a message in communication is realised through vocabulary. This view might be perceived as vocabulary not only being the message itself but also the channel it is transmitted.

The significance of vocabulary in language learning entailed the questions of what items of vocabulary to teach and how to teach them. In terms of determining items to be taught frequency studies had a dominant role. Various views have been uttered in the

form of thousands of most frequent words and corpus studies since 1940s (Swacha, 2021). As it is reported in Swacha (2021) milestones paving the path to significant advancements in the compilation and analysis of word frequency lists date back to Thorndike and Lorge (1944) who created one of the earliest word frequency lists based on analysis of written texts. Almost a decade later, West (1953) compiled a word frequency list specifically for English as a Foreign Language (EFL) learners. The Brown Corpus, a significant cornerstone in corpus linguistics, which provided a large-scale collection of text samples for frequency analysis, was produced by Kucera and Francis (1967). Carroll, Davies, and Richman (1971) published the first version of the General Service List (GSL), a collection of high-frequency words in English. The Academic Word List (AWL), focusing on words commonly found in academic texts, was developed by Nation (1974). In 2000, Coxhead updated it to include additional academic vocabulary items. Davies (2008) created the Corpus of Contemporary American English (COCA), providing a more recent and comprehensive corpus for frequency analysis. Gardner and Davies (2010) introduced the British National Corpus (BNC), offering a substantial database for studying word frequency in British English. Leech et al. (2014) contributed to the development of the Corpus of Global Web-Based English (GloWbE), expanding the scope to include English usage on the internet worldwide. All these efforts of creating corpora and vocabulary lists for EFL/ESL learners have become to be adjusted according to the Common European Framework of Reference for Languages (CEFR) levels (A1, A2, B1, B2, C1, C2). This international framework not only helped to diminish the controversy around which vocabulary items should be taught, but also created a solid ground for methodologists trying to find solutions for problems and difficulties in vocabulary learning. However, studies pertaining the teaching methodology and classroom implications of vocabulary learning were not concurrent with corpus or vocabulary list research.

Paulston and Bruder (1976) were among the pioneers of vocabulary item studies considering methodology component as well. New vocabulary items are perceived to be problematic and difficult for all groups concerned with them including students, teachers, and researchers (Allen, 1983; Barcroft, 2015; Boers & Webb, 2021; Durrant & Schmitt, 2020; Laufer, 1986; Paribakht & Wesche, 1997; Schmitt, 2000). Although teachers and researchers strive for enhancing vocabulary learning process for the learners, students do not adopt any different strategy from shopping list form rote learning which results in fruitless effort for all parties (Gairns & Redman, 2011; Harmer, 2007; Nation, 2001;

Richards & Rodgers, 2014). One of the greatest obstacles pertaining to the vocabulary teaching – learning process is learner motivation. Even if a teacher/researcher follows the most efficient methods and uses the most effective tools, the consequent result of the process mostly depends on the learner (Deci & Ryan, 2000; Dörnyei, 2001; Gardner, 2010; Schunk & Greene, 2020). Limitations of time and resources bring about the issue of efficiency.

Given that students today are titled as Gen Z learners or digital natives, the terms "digital immigrants" and "digital natives" have become widely used in educational settings (Bennett et al., 2008; Helsper & Eynon, 2010; Kennedy et al., 2021; Prensky, 2001). They were exposed to a wide range of technological instruments throughout their entire lives, including mobile phones, personal computers, various digital games, and online platforms, as they were born during the technological revolution (Bachmair et al., 2010; Kıyanççek & Uzun, 2023; Nikolov & Janssen, 2021). As technology develops, the amount of information and communication technology (ICT) used in language classrooms has increased dramatically to appeal to digital native learners. Utilizing solely overhead projectors and computers in the classroom can be neither satisfactory nor appealing for Generation Z, which brought about the implementation of extra technologies such as tablets and mobile phones (Bachmair et al., 2010; Levy, 2009; Nikolov & Janssen, 2021; Warschauer & Healey, 1998). Education is a perpetual process of seeking feasible changes in order to enhance learning. Gamified learning might be perceived as a convenient, remunerative, and conducive way of attaining learning objectives (Sanchez, Langer, & Kaur, 2020).

Generation Z (Gen Z) constitutes the demographic cohort succeeding Millennials and preceding Generation Alpha. The delineation of this generation lacks a universally ratified commencement and cessation point; nevertheless, Gen Z is generally classified as individuals born from the mid-1990s to the mid-2010s (Bennett, 2008). Gen Z is distinguished by its upbringing in an era dominated by digitalization, wherein technology, social media, and the internet have pervaded their lives ubiquitously. Coined as digital natives, these individuals possess an innate proficiency with technology and exhibit a notable adeptness with digital devices and online platforms from an early developmental stage (Bennett & Maton, 2010; Jones et al., 2010; Prensky, 2001). One of the recent solutions proposed in order to overcome motivation obstacle of Gen Z is gamification.

Gamification is defined as “using game elements in a non-gaming context” by Pelling (2002). Considering the number of people playing games all over the world, time invested by them, and their motivation to do so attracted psychologists’ attention (Mekler et al., 2017; Ryan & Deci, 2000; Werbach & Hunter, 2012). Their findings echoed in a multidisciplinary area and opportunities proposed by gamification received great applause in business, economy, finance, health care, customer services, employee training, education, and all areas where possible to implement (Deterding et al., 2011; Putz, Hofbauer, & Treiblmaier, 2020; Werbach & Hunter, 2012). Gamified activities enabled an increase in participation and motivation while enhancing advancements in problem solving skills. The advantages of gamification based on previous research are listed as increased learner engagement, intrinsic and extrinsic motivation, retention of knowledge, enhanced learning, behaviour change, advancement of teamwork and cooperation, cost-effective training, and active involvement on behalf of learners (Deterding et al., 2011; Geissinger-Berthold et al., 2021; Morschheuser et al., 2021; Rapp et al., 2020; Werbach & Hunter, 2012).

Gamification constitutes a significant component of learning due to its capacity to increase learner engagement. Authors attempted to define gamification and the reasons of its popularity in different fields as well as education (Boyle et al., 2016; Burke et al., 2018; Deterding et al., 2011; Denham, 2020; Geissinger-Berthold & Schweizer, 2021; Ibáñez & Di-Serio, 2018; Kordaki & Roussos, 2021; Mekler et al., 2017; Seaborn & Fels, 2015). It is claimed that gamification enhances the highest degree of motivation as a learning method. Process of integrating gaming elements with non-gaming contexts is a crucial part of active engagement on behalf of the learners. The initial part of this design process should address the question why people play digital games. Zichermann & Cunningham (2011) explained the desire to play by the dopamine produced in the brain while Csikszentmihalyi (2008) advocated the mood “flow” which consists of highly concentrated loss of awareness both time and self, demolishing the extends of apathy and nervousness. Deci and Ryan (1985) proposed the psychological need for “autonomy, competence, and relatedness”, which constitute the basis of Self Determination Theory (SDT), as the underlying reason of this desire.

Although teaching and learning conditions are widely influenced by technological advancements, it is still a challenge to promote and nurture learner engagement in a

gamified context (Perera, 2020). Gamification has most commonly been used in the form of Gamified Student Response Systems and Applications (GSRSA) in ELT to discard motivation and engagement problems. Positive effects of GSRSA reported in other fields are reiterated for the gamified vocabulary teaching-learning studies in ELT (Antonietti & Giorgetti, 2021; Barata et al., 2013; Chen et al., 2020; Sailer & Homner, 2014). However, gamification studies are claimed to have underestimated the individual by focusing on its positive effects on the target population.

Even though individual differences have been a serious consideration in ELT, the relationship between GSRSA and player types which constitute the reflection of individual aspects in the field is not addressed adequately (Dewaele, 2014; 2021; Dörnyei, 2005; 2009; Ellis, 2012; Mercer & Dörnyei, 2020; Oxford, 2017). While the significance of game mechanics and dynamics are emphasized by various authors, other elements such as the participants, context, and challenges are not perceived with equal importance as well (Deterding et al., 2011; Hamari, Koivisto, & Sarsa, 2014; Kapp, 2012; Mekler, 2017; Reeves & Read, 2009; Shute & Ventura, 2013; Werbach & Hunter, 2012). Analysing the gamers is a crucial step in enhancing the success rate of gamification. Bartle (1996) defined four basic gamer behaviour as achiever, killer, socializer, and explorer which constitutes a basis for all categorisation efforts. According to Finckenhagen (2017), the number of contextual factors influencing gamification can be up to 28 among which gamer types play a significant role.

Although many authors and researchers claim that reading is the sole way to learn vocabulary (Coady, 1993; Hulstijn, 2009; Krashen, 1989), there are many who advocate that it is possible through explicit teaching (Brown, 2007; Laufer, 2003; Nation, 2001; Schmitt & McCarthy, 1997; Schmitt, 2000; 2008; Thornbury, 2002; Ur, 2012). Gamification creates an opportunity to disguise explicit vocabulary teaching in a game context. Board games or other types of games have been used in language classes, which created the basis for integrating digital /online games. Although many components of language teaching/ learning processes have been studied from the individual perspective, player types and their implications for language learning settings have been an underestimated component. Explaining the roles of player types and gamification in language learners' vocabulary learning achievement and motivation constitutes the purpose of the current study.

1.2 Purpose of the Study

Within the scope of aforementioned research and views, the most efficient ways of overcoming the challenges encountered through vocabulary teaching-learning process is vague (Dewaele, 2021; Kapp, 2012). This experimental study with a mixed research design is implemented in order to shed light on the effects of gamification and gamer typology on learners' motivation and achievement in learning vocabulary.

The findings of the research could have several pedagogical implications, including aiding the development of efficient teaching materials, designing vocabulary activities, and enhancing both learner performance and motivation. The results might address the need to further the student-centred approach in ELT by diagnosing the relationship between player types and certain GSRSA characteristics.

1.3 Research Questions

The following research questions are aimed to be addressed in this study:

1. What are the effects of three GSRSA (Kahoot!, Quizizz, and Socrative) on Turkish EFL learners' recognition of target vocabulary items?
2. What are the effects of three GSRSA (Kahoot!, Quizizz, and Socrative) on Turkish EFL learners' motivation in vocabulary learning?
3. What are the perceptions of different player types towards GSRSA in learning EFL vocabulary?

1.4 Significance of the Study

Although the significance of vocabulary in language learning has become indisputable, controversy surrounding the methodology has brought about varying views. The integration and easy accessibility of educational technologies especially for Gen-Z, the change from teacher-centred to student-centred language classroom understanding, and attention directed to individual differences rather than theories trying to explain

shared characteristics lead to significant modifications and claims (Borg, 2021; Brown, 2007; Gao, 2023; Harmer, 2007; Hubbard, 2019; Kumaravadivelu, 2006; Larsen-Freeman, 2000; Lin & Warschauer, 2021; Long, 1996; Mishra & Yadav, 2023; Nunan, 1991; Richards & Rodgers, 2001; Scrivener, 1994; Stockwell, 2019; Thornbury, 1999; Ur, 1996; Zheng & Warschauer, 2020). Considering all the ideas presented above, gamification has become a commonly used phenomenon in EFL. It seems impossible to prescribe one-for-all way of teaching-learning vocabulary in an EFL context, considering the various factors involved in the teaching-learning processes, which calls for empirical evidence. The existence of scientific data may not guarantee smooth implementation in each context due to individual differences. Player types, and their effects on students' performance and motivation have been neglected due to the fact that one individual carries the characteristics of more than one player type, which makes distinction almost impossible. That is why, the relationship between player types and learner preferences in GSRSA is dealt with interviewing learners who belong to only one group of player classification via a qualitative design in this study. It is aimed to identify the strengths and weaknesses of using GSRSA in School of Foreign Languages English Preparatory Programme (EPP) at a state university in the city of Bursa, Türkiye. The study focuses on testing the existence of correlation between gamification and motivation, gamification and achievement quantitatively.

This study has three unique aspects expected to be beneficial with an effort to fill the gap in the literature. First of all, even though the studies comparing GSRSA according to their effects on student achievement and motivation is abundant, research comparing the effects of game dynamics, mechanics, and components is scarce. Secondly, GSRSA is not systematically used in EEP, which requires scientific support to integrate into the curriculum. Finally, most studies pertaining to player types cannot go any further than determining the player types in a gamified context. Learners' perspectives are included in the current study so as to discover the individual needs, expectations, and perceptions.

1.5 Definitions

Gamification: utilizing the mechanics and elements of games out of the game context in real life

Gamified Student Response Systems and Applications (GSRSA): communicative instruments designed to facilitate participant/learner engagement by allowing them to provide answers to multiple choice questions by using simple equipment with buttons on it or more complicated keypads.

Motivation: Motivation is an evolving term trying to define the rationale behind human behaviour and it encompasses drives and motives triggering; individual characteristics and emotions; impulse to achieve; commencement, direction, magnitude, persistence and excellence; source and intensity intrinsic force to succeed; self-confidence; involvement of emotions, desire to participate and control over them. In this study, two major theories explaining motivation in gamification, which are SDT and Flow Theory, will be considered for defining motivation. SDT defines motivation as psychological desire for “autonomy, competence, and relatedness” while the dopamine produced in the brain is the definition of motivation in Flow Theory.

Player Type: four basic gamer behaviour as achiever, killer, socializer, and explorer.

Vocabulary: comprehensive sequence of words that exist in a particular language

CHAPTER 2

LITERATURE REVIEW

2.1 Vocabulary in English Language Teaching and Learning

2.1.1 Significance of vocabulary

Definitions of vocabulary presented in dictionaries share common properties as being comprehensive sequence of words that exist in a particular language (<https://www.merriam-webster.com/dictionary/vocabulary>). Ur (2012) claimed that degrading vocabulary to single words might be inadequate and using the term “item” instead of “word” is more appropriate.

Conducting research in vocabulary learning requires comprehending the significant role of vocabulary in the language. Although it is not a basic skill named among reading, speaking, listening, and writing, it is embedded in all these basic skills and has an indisputable place in them. The role of vocabulary in language learning gained the significance it deserved after the efforts of various researchers namely Wilkins (1972), Richards (1976), Harmer (1994), Coady (1997), and Nation (2001). Wilkins (1972) manifested indispensable characteristic of lexis and its precedence over grammar in conveying messages. What is more, Widdowson (1978) declared that comprehension of a grammatically accurate sentence constructed with inappropriate lexical items is not possible for a native speaker while a message with correct lexis, but inaccurate grammar can still be understood. In other words, semantic structure should be prioritised over syntactic structure and syntax should ensue lexis. According to Krashen (1989), the major message transmitter in communication is the lexical unit without which expressing and understanding the message conveyed cannot be possible. Another support for the superiority of lexis over syntax is expressed through the frequency of breakdowns caused by errors in communication. Misunderstandings can be caused more frequently by lexical mistakes than caused by syntactic errors (Folse, 2006; McCarthy, 1990; Sinclair, 1975). Symbiotic mutual benefit between language use and vocabulary was expressed by Nation (2001), in which development of vocabulary enhances language use and vice versa. The affiliation between communication and vocabulary, perceived significance of vocabulary, and the essential contribution of lexis for grammatical competence are stated as the most basic three reasons expressing the crucial role of vocabulary in Barcoft (2004). The

abundance of theories contrasting grammar and vocabulary was rejected by Schmitt (2000) by coining a new term as *lexicogrammar* which advocates the fundamental link between grammar and vocabulary. The emergence of corpus studies revealed that restrictions posed by semantic relations which had previously been attributed to grammatical rules should be conceptualized as synergic partners without exact boundaries.

The shift of focus from grammar to vocabulary brought about numerous questions to be addressed in language learning process (Paulston, 1976; Wallace, 1982; Allen, 1983; Thornbury, 2004). Among those, the major concern has been on which lexical items to be taught and how to teach them. One of the significant responses to these questions echoed as whether to teach vocabulary items implicitly or explicitly (Deci & Ryan, 1985; Dörnyei, 2001; Dörnyei, 2009; Dörnyei & Kubanyiova, 2022; Gardner, 2010; Harmer, 2007; Krashen, 1981; MacDonald & Crichton, 2023; Mercer & Williams, 2021; Oxford & Shearin, 1994; Ushioda, 2020).

2.1.2 Explicit and implicit vocabulary learning

An extensive amount of research on vocabulary in Second Language Acquisition (SLA) mainly focused on whether to teach lexical items implicitly or explicitly which can be encountered in the form of incidental-intentional or direct-indirect instruction (Barcoft, 2004; Day et al., 1991; Ellis, 1995; Long, 1997; Nation, 2001; Wesche Paribakht, 2000). Implicit vocabulary learning pertains to acquiring words unintentionally while engaging in activities not specifically focused on vocabulary enhancement (Laufer & Hulstijn, 2001; Nation, 2001). On the other hand, explicit vocabulary learning involves participating in activities with the purpose of memorizing lexical information (Hulstijn, 2001). Coady (1997) presented the view ceasing to perceive vocabulary learning as a dichotomy but a continuum consisting of four main positions. First position is based on Krashen's innatism advocated by Nagy and Anderson (1984) claiming that learners need implicit vocabulary learning embedded in reading which excludes all forms of explicit teaching. The second position differs from the first with the inclusion of explicit strategy training to a certain degree (Oxford, 1989). Explicit instruction of frequent words initially followed by contextualised learning constitute the third position in language teaching.

Vocabulary lists covering the most frequent words and extensive reading materials designed to reiterate target vocabulary account for this position. The final stance in the continuum advocates traditional understanding without any methodology. Instead of proposing the superiority of one position over another, a harmony of all stances supplementing and complementing each other became the dominant view (Akakura & Saito, 2020; Ellis, 2002; Gu, 2003; Laufer & Hulstijn, 2001; Li, 2021; Nation, 2001; Schmitt, 2008; Webb, 2007).

One of the milestone studies conducted by Long (1997) introduced a taxonomy based upon the focus of learning. In this taxonomy, Meaning Focused Learning (MFL) corresponds to implicit learning, Forms Focused Learning (FsFL) means explicit learning, and Form Focused Learning (FFL) is a combination of both implicit and explicit learning. The limits of this taxonomy were broadened to include vocabulary instruction as well (Doughty & Williams, 1998; Laufer & Girsai, 2008).

2.1.3 Knowing vocabulary in SLA (Lexical competence)

Although there is almost a consensus about what knowing vocabulary is as recognizing and retrieving the phonology, syntax, and semantics of a lexical item, how many items of the whole vocabulary in a language should be known to master the vocabulary component of a language is still controversial (Cobb, 2018; Groot, 2024; Jiang & Grabe, 2022; Laufer, 2012; Meara, 2009; Nation, 2006; Read, 2021; Schmitt & Schmitt, 2020; Webb, 2019; Zhang & Cheng, 2023). Nation (1990) brought two dimensions as breadth (extensiveness) and depth (knowing derivations, inflections, spelling, pronunciation, meaning of lexical items) to knowing vocabulary. In addition to this, a third dimension pertaining the fluency (access and retrieval speed to lexical knowledge) was introduced (Meara, 1996). According to Nation (2001), a native speaker of English with a decent education should have mastered approximately 20.000 vocabulary items. Schmitt's (2008) claim regarding 98 % coverage of a text as sufficient was supported by corpus studies indicating 8000-9000 lexical items (Nation, 2006). A major game changer was the introduction of Common European Framework (CEFR). In order to meet the requirements of CEFR at the highest level, knowing 4500-5000 items was sufficient according to a corpus study conducted by Milton and Hopkins (2006)

although they themselves put forward the counterargument that a vocabulary repertoire within this band cannot be enough to meet the objectives stated in CEFR.

Another concern pertaining the knowledge of lexis is depth or quality at various degrees. Nation (2001) analysed the levels of the notion of vocabulary as follows:

- a. the capability of identifying the lexical item upon encountering it
- b. being acquainted with its written representation to facilitate recognition
- c. acknowledging the morphological structure of a lexical item with its derivations and inflections to synthesize semantic variances
- d. comprehending the specific meaning conveyed in a message
- e. comprehending the contextual meaning of a lexical item in which it appears
- f. understanding the underlying concept of a lexical item which enables comprehension across diverse contexts
- g. awareness of associated lexical items
- h. capability to discern the appropriate usage of the word within the context
- i. ability to identify collocations associated with the lexical item

Since gamification and player types are the key domains of the current study and the target vocabulary implemented are contextualised within the limitations a sentence may serve, knowing the meaning and the written form a lexical item was accepted sufficient among the levels stated by Nation (2001).

Whether a recently learned lexical item is in the productive or receptive repertoire of a learner constitutes another dimension of the vocabulary knowledge (Barcroft, 2020; Guo & Zhang, 2021; Liu & Jiang, 2024; Meara, 1996; Nation, 2001; Yıldırım & Aslan, 2023). The initial and foremost aim of the current intervention is to enhance acquaintance with the form, function, and use of a lexical item with a receptive understanding. Multiple confrontations with each lexical item, which is limited to once or twice in teaching-learning settings, should be supported by intentional repetitions, meaningful input and output tasks, and responsiveness practices in the long run (Nation, 2001; Schmitt, 2008).

As it is reported in Nation (2001), a system tailored by Levelt (1989) sheds light on the issue of how vocabulary learnt and should be taught. This model identifies the common characteristics of explicit and incidental lexical processes in teaching and learning vocabulary (Schmitt,2000).

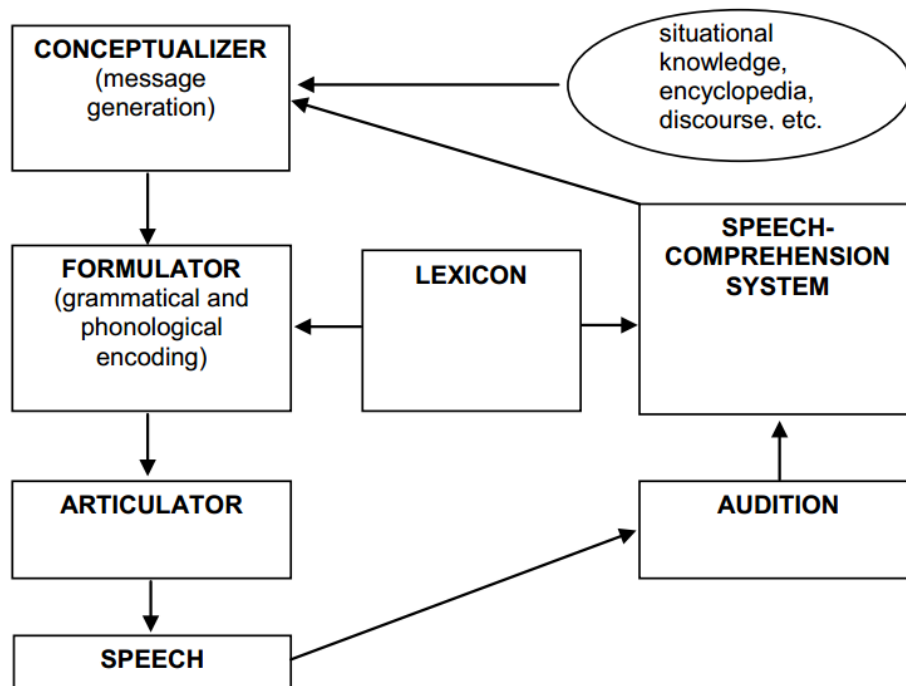


Figure 2.1: Levelt's Speech Production Model (Levelt,1989)

DeBot, Paribacht, and Wesche (1997) introduced an alternative framework for second language incidental learning of vocabulary based on Levelt's (1989) model. The nature of gamified activities in language learning contexts is similar to a mother trying to spoon-feed her baby by pretending to be a car going into the garage or an aeroplane landing to the baby's tongue. Perception of the same activity from both sides are different in terms purposes. Mother is feeding the baby while the baby is just playing a game. A similar case can be adhered to the classroom setting where the teacher is trying to teach some lexical items through gamification while students pay attention just for the sake of participating in an intriguing game. The current study is designed with an explicit vocabulary teaching perspective, but the perception of students might seem more incidental than explicit.

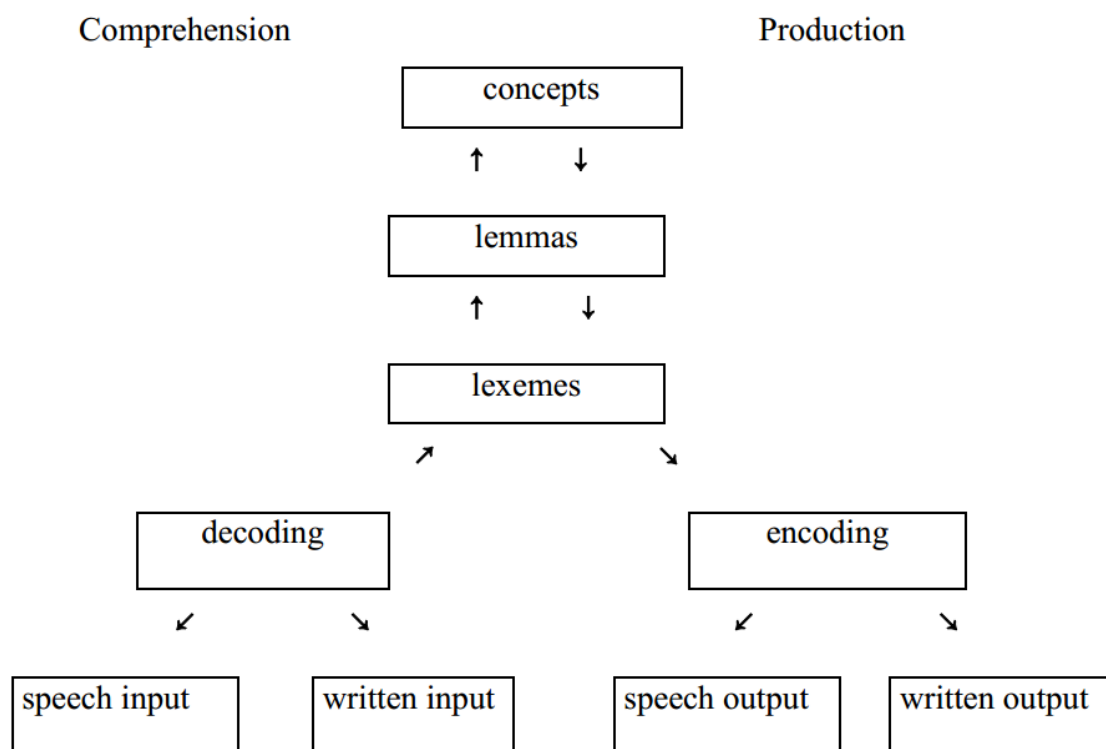


Figure 2. 2: *Lexical Production and Comprehension Mod. (DeBot, Paribacht, & Wesche, 1997)*

2.2 Gamification

Fun, rules, goals, competition, imaginary roles, and collaboration are the key terms used in definitions of the notion ‘game’ (Ellis, 2003; Hadfield, 1998; Harmer, 2007; Johnson, 2021; Jones & Thomas, 2022; Larsen-Freeman, 2000; Lightbown & Spada, 1999; Long, 1983; Nunan, 1999; Pelling, 2002; Richards & Rodgers, 2001; Rixon, 1981; Scrivener, 2005; Thornbury, 2005; Tomlinson, 2023; Ur, 1996). A more recent concept ‘gamification’ was first lexicalised in 2002 by Nick Pelling although the use of ‘games’ in educational contexts date back to 1960s (Marczewski, 2013). A distinction between ‘game-based learning’ and ‘gamification’ is crucial in order to conduct well-rounded research in the field of gamification. Game-based learning consists of input, processing, and output to connect the learning context to real-world experiences with the aim of increasing motivation in education (Dickey, 2007; Garris, Ahlers, & Driskell, 2002; Michael & Chen, 2006; Prensky, 2001). On the other hand, gamification is broadly defined as utilizing the mechanics and elements of games out of the game context in real life (Kapp, 2012; Pelling, 2002; Werbach & Hunter, 2012; Zicherman & Cunningham,

2011). Kapp (2012) elaborated the definition as applying the principles and mechanics of games to enhance engagement, motivation, and learning when addressing complex nature of problem-solving scenarios. Gamification comprises integrated game-like problems to be solved, communication, feedback, regulations, and feelings (Burke, 2014; Deterding et.al., 2011; McGonigal, 2011; Salen & Zimmerman, 2004). Gamification is not the direct use of computer games in training or education but using the game elements and principles in educational context (Squire, 2003).

Portero and Rodriguez (2022) assessed the perceptions of preservice teachers on gamification both for their current studies as a student and for their classroom practices in their future career as a teacher. As per the findings, an overwhelming majority of the preservice teachers expressed satisfaction with the experience, indicated a willingness to employ this approach in their subsequent practices, and perceived participation in a gamified design intrinsically motivating.

Koeltzsch and Stadler-Heer (2021) provided supportive data in their study investigating the positive contribution of gamified activities in language classrooms for risk taking, learner perception, and motivation. 117 participants from different levels of schooling were included in the study. Findings of the action research concluded that it is crucial to design a gamified activity according to the level of learners so that learners will not be demotivated due to the difficulty of game objectives or language content. Authors of the study stated the absence of a control group in the study, the novelty of learners in a gamified system, and including only one type of activity as the weaknesses of their research. The existence of limitations did not obstruct findings positively supporting students' attitudes, perceptions, and motivations in favour of gamification.

One of the scarce research including teachers', coordinators', and students' perceptions of gamification at the same time was implemented by Weissheimer, Souza, Antunes, and Filho (2019). This research was conducted within a project called 'Language without Borders' with the aim of identifying a vocabulary teaching and learning system empowered by gamification. The data collection procedure consisted of utilizing an observation grid during classroom sessions, supplemented by the facilitation of two focused discussion sessions. One session involved the students, while the other involved the teachers who incorporated the games into their instructional practices. The quantitative data analysis revealed that teachers predominantly opted to integrate

vocabulary games as introductory activities in their classes, while also maintaining a balance between competitive and collaborative elements in game design. Students demonstrated higher levels of engagement compared to disengagement during these activities. The qualitative findings suggest that both educators and students perceived the activity as a valuable learning opportunity. No matter how much teachers tend to conceptualize learning vocabulary within a broader framework, students still view rote memorization as the primary acquisition way of new vocabulary learning. Researchers concluded that students need more practice, time, and guidance to replace their routine vocabulary learning habits with new ones.

The longitudinal action research undertaken by Putz, Hofbauer, and Treiblmaier (2020) stretching over 2 years presented the data obtained from 617 participants. The effects of gamification on learning were the focus of their study. The data collected delved into a steady increase in students' performance and retention of vocabulary items over time. They summarised their findings as increased involvement, improved attendance rates, and a greater percentage of students successfully completing the course. The results of gamification in the short term (immediately after the implementation) were much higher than the long term (two weeks after the implementation). The final results were not statistically significant even though the experimental group outperformed the control group. The retention rate decreased over time in both gamified and non-gamified groups. However, the pace of the decline was slower in the gamified group than it was in the control group.

Sanchez, Langer, and Kaur (2020) investigated the effects of gamification on student achievement in language exam context. They presented 473 learners tests in two forms: first being traditional test with four options and second form covering the same content with gamified tests. Although the experimental group performed better in the initial tests, they could not maintain the same level of success in the proceeding tests which attributes the temporary increase in achievement level to novelty effect. In general, the findings suggest that gamification could serve as a feasible option for short-term tasks. They also bring attention to potential issues related to a novelty effect, suggesting instructors refrain from employing the same gamification approach indefinitely. Additionally, they point out cases where gamification may not effectively address the needs of underperforming students.

Aguilos, Gallagher, and Fuchs (2022) aimed to elaborate students' language learning motivation with a more specific perspective of qualitative research and to design a learner-centred framework for gamification in ELT. The participants were 27 undergraduate students constituting the focus group. Almost all participants reported that gamified fun classroom games like Kahoot! are exciting and engaging for them. However, evidence supporting the positive effects of GSRSA on vocabulary learning in the long run were not present among the findings of the qualitative study. The results of the study were partially in line with the general assumptions of gamification. However, the table given below provides more insight to the weaknesses of gamification when learners are given the opportunity to freely express their ideas.

Table 2. 1: *Motivator or not for the players (Aguilos, Gallagher, & Fuchs ,2022)*

Affordances	Motivator	Not a Motivator
Earning Points	Points that can be converted to grades	Points that cannot be converted to anything
Badges / Medals	Something to show off to their parents	If it is announced in any form of social media
Levels	For self-improvement	Public announcement or leaderboard
Rewards	Money and grades (to graduate)	-
Competition	Competition with themselves	Competition against others

Aguilos, Gallagher, and Fuchs (2022) concluded that gamification stands as a potent instrument for augmenting students' educational experiences and nurturing their cognitive development. Nonetheless, scholarly inquiry has brought to light that gamification methodologies possess the capacity to diminish intrinsic motivation, particularly when the considerations of players' individual needs and objectives are disregarded. Thus, in the absence of meticulous planning and execution, the integration of gamification may culminate in ineffectual learning outcomes. The amalgamation of user-centric design principles from gaming contexts into non-game settings holds promise for fostering meaningful gamification. User-centred meaningful gamification engenders

protracted and profound engagement among users, non-game-related activities, and affiliated institutions.

Kingsley and Grabner-Hagen (2019) conducted research both to indicate the effectiveness of gamification in vocabulary teaching and to scaffold critical thinking skills of learners by a curriculum designed with this aim in mind. They included game designs supported by the literature to integrate gamification to vocabulary learning-teaching in their context. They focused on the steps of material design and implementation more than they did on their findings. They defined ten steps on how to change a non-gamified vocabulary content to a gamified one by developing quests, integrating game mechanics and dynamics, determining assessment, making the content more concrete for the learners, and having fun.

Millions of people from all ages invest their time and energy to playing computer games although they get nothing concrete in return in addition to the money they spend to obtain, continue, and become better (Alvarez & Michaud, 2021; Boyle et al., 2012; Deterding et al., 2011; Gee, 2003; Klimmt & Hartmann, 2006; Li & Ranieri, 2010; Lim, 2022; Pivec, 2013; Shaffer et al., 2005; Steinkuehler & Duncan, 2008; Squire, 2008; Vasalou et al., 2012). In addition to all these questions, the theoretical and psychological relationship between games and motivation are explained in detail in section 2.5 motivation.

Widespread use of mobile phones, tablets, and internet connection especially by Generation-Z, who grew up with technology and technological equipment, made it inevitable to integrate these technologies to education (Brown, 2023; Clark, 2024; Garcia, 2024; Johnson, 2021; Lee, 2022; Smith, 2020;). The mood and motivation of people in playing digital games influenced the views of marketing and business industries. Comprehending the rationale behind this human behaviour was financially beneficial in various ways. Marketing industry would sell products easily if they could direct the public attention in gaming to other products (Brown & Clark, 2019; Garcia & Lee, 2021; Johnson & Smith, 2020). The case was the same within the gaming industry as it is vital to understand the consumer attitude and behaviour. The next step was using the enthusiasm and attention people pay to games, in their work life to improve the quality and professional development efforts. The effect of gamification spread to education as well as other fields such as health, transportation, and communication (Lee & Garcia,

2022). Catering to so wide variety of fields in real life leads gamification to encompass diverse game elements, mechanics, and components (Werbach & Hunter, 2012). A hierarchy including the most widely used examples of each category is depicted in the figure below:

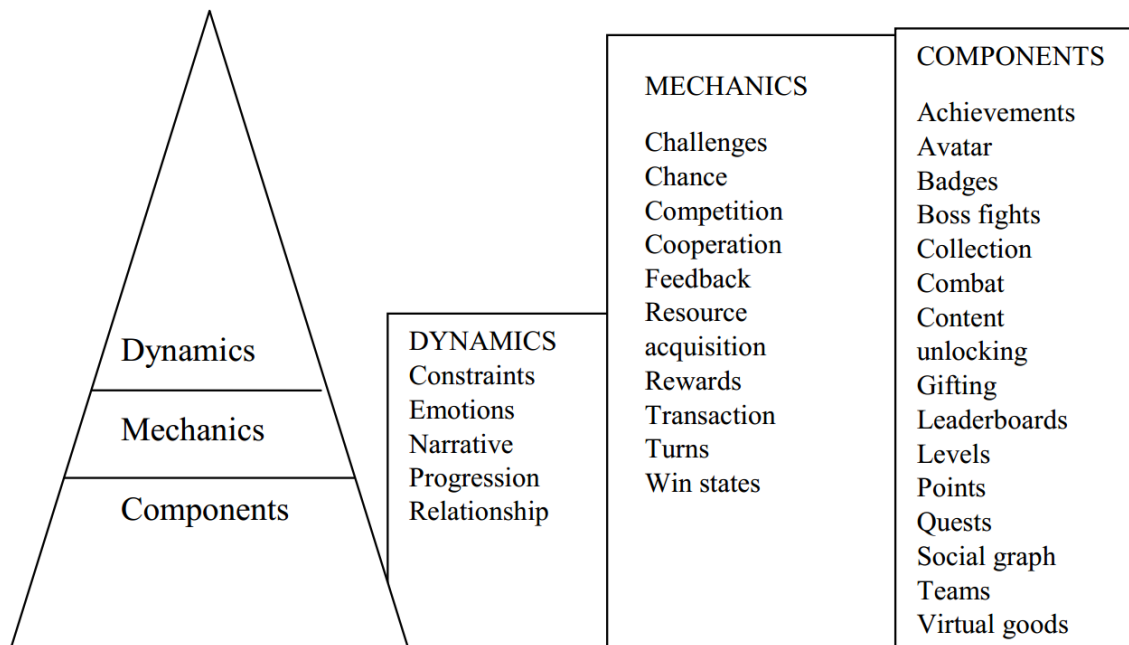


Figure 2.3: Game Elements Pyramid (Werbach & Hunter, 2012, p.78)

While interpreting the figure above designed by Werbach and Hunter (2012), it is crucial to note that the significance of each level is presented with a top-down perspective rather than a bottom-up one. In other words, game dynamics placed at the highest level of the pyramid must be embedded, considered, and prioritized in the game from beginning to end. Major dynamics depicted in the pyramid which are constraints (challenges and limitations), emotions (positive, hostile, neutral), narrative (is the story embedded implicitly or explicitly), progression (advancing to next levels and sections), and relationship (individual, team, opponent, against computer). It is necessary to reiterate the superiority and priority of game dynamics over all other elements.

In order to clarify the difference between dynamics and mechanics, the possibility of relating multiple mechanics to a single dynamic can be beneficial (Werbach & Hunter, 2012). Mechanics need more action than dynamics as they are interfaces created to connect players to dynamics. The relationship between components and mechanics exists the same way in the relationship between mechanics and dynamics. Considering the frequency of these components or elements in gamified designs levels, points, badges,

leaderboards, and achievements / challenges constitute the top five list of most common game elements existing in almost all gamified designs (Brown & Clark, 2019; Garcia & Johnson, 2018; Johnson & Smith, 2020; Kim, 2008; Lee & Garcia, 2021; Smith & Lee, 2022; Werbach & Hunter, 2012; Zichermann & Linder, 2013).

Gonzalez and Adelantado (2021) approached gamification with a post-modern perspective and aimed to identify the limitations, inconsistencies, and risks of gamification. They asserted that games and gamification caused the line between childhood and adulthood to disappear. They emphasized the complex nature of gamification and the futility of embracing one sole theory to explain the phenomenon. In their study, GSRSA are criticised for not focusing on the individual or human but the speed, success, objectives, and content to be presented. In order not to cause a misunderstanding, it is crucial to clarify that their attitude was not against gamification but against the widespread understanding and implementation of gamification. They tried to propose a new model for gamification based on their criticisms.

All the discussion around gamification with both its pros and cons indicate that its current form is a result of previous experiences and signal of future advancements. In order to keep in line with the innovations in other fields, researchers and instructors in ELT need to adopt and adapt these advancements into language learning contexts. The most common integration of gamification into ELT emerged in the form of GSRSA. Studying these systems and applications not only in theoretical dimension but also in technical and practical dimensions is crucial to conduct research in this field.

2.3 Gamified Student Response Systems and Applications (GSRSA)

Student response systems, alternatively known as audience participation systems (Caldwel, 2007), individual feedback systems, classroom interaction systems, digital balloting systems, polling systems, surveying systems, handsets, zappers or as clickers (Bergtrom, 2006; Lantz, 2010) are communicative instruments designed to facilitate participant/learner engagement by allowing them to provide answers to multiple choice questions by using simple equipment with buttons on it or more complicated keypads. The first implementations of GSRSA date back to the 1960s (Brown & Clark, 2020) when they were used in teaching biology and chemistry (Johnson & Smith, 2018).



Figure 2.4: Basic Clicker Equipment

The inclusion of smart phones, tablets, and applications in education lead to the replacement of basic clickers equipment with lots of limitations (Brown & Clark, 2020). Nevertheless, it is crucial to state the role of clickers as the initial step should not be underestimated (Garcia & Johnson, 2021). Applications designed in order to develop GSRSA experience such as Kahoot!, Quizizz, Socrative, QuizGame, and Quizlet replaced all of the terms attributed to GSRSA especially Kahoot! having the leader position in this change. The advancements in artificial intelligence might enable students to provide short answers, voice recordings, or longer combinations which will replace the multiple-choice limitation in contemporary applications (Baker, 2022; Heffernan, 2019; Rose, 2021; Schwartz, 2020; Slotta, 2020).

The purpose of this mechanism is to enhance the efficiency and effectiveness of the learning process and classroom dynamics (Deterding et al., 2011; Hamari et al., 2014; Hung, 2021; Landers & Landers, 2020). The greatest advantage of GSRSA is enabling all participants to respond simultaneously to a question or a series of questions while traditional classrooms follow raise your hand or show a card system which are time consuming and less appealing (Annetta et al., 2019; Gros, 2017; Plass et al., 2022). Positive effects of GSRSA on student motivation (Keller & Suzuki, 2018), risk-taking (Bjorklund, 2019), engagement (Kiili, 2018), academic performance (Rooney et al., 2020), immediate feedback (Gee et al., 2019), and cooperation (Sailer et al., 2021) can be listed as the basic factors resulting in the widespread use of this technology in various classroom settings with sufficient technology.

GSRSA are designed as one-size-for-all in uniformity (Deterding, 2011; McGonigal, 2011; Werbach, 2012) without respecting individual differences among learners (Santrock, 2022; Tomlinson, 2020). Furthermore, almost all of them have similar designs with slight changes in style, mechanics, designs, elements, and patterns. Although these differences might seem insignificant, they might cater to different learners with different player behaviours, with different intelligence types, and varying according to age. The majority of studies on GSRSA are implemented with the aim of experimenting the success of a specific application or applications while underestimating the variance on learner/player types (Bartle, 1996; 2003; Gee, 2013; Marczewski, 2019). The similarity between the development process of intelligence theories evolving from single intelligence to multiple intelligence theory (Gardner, 2007), and the development of player type classifications starting from one-size-for-all understanding to Bartle's 4 basic player types might focus the research endeavours on player/learner types and their preferences/needs (Deterding et al., 2021). The current studies on player types cannot go any further than describing, identifying, and classifying the player types. In other words, the attention paid to GSRSA should be diverted to player types to determine both the future of GSRSA and learners (Deterding, 2019; Hunter, 2017; Werbach, 2021).

Poole and Clarke-Midura (2020) from Utah State University, summarised the advantages of utilising game elements in English as a Second Language (ESL) being entertaining, persistent motivation, enhanced interaction, improved cooperation, providing immediate feedback, facilitated vocabulary learning, and reduced language learning anxiety leading to risk taking. They conducted a meta-analysis study by including in-depth analysis of 148 articles. They emphasized the scarcity of studies with more than 100 participants. They concluded that sufficient body of literature exists to support the superiority of gamified activities over non- gamified ones. A change of focus from this aspect to classroom dynamics was seen crucial for the future of vocabulary learning and gamification.

Jueru et al. (2020) included 555 participants from China and Portugal to identify the reasons behind the success of gamification. They listed 18 principles of gamification to be successful. According to their findings the number of principles increased to 22 and they found that the effects of gamification differ a lot depending on the culture and the native language. Another finding indicated that the motivation to continue using GSRSA

for language learning decreased over time and age was a significant factor causing a gap between the age group younger than 24 and the older group.

Blume (2020) initiated her study to quantify if there is a reason behind the scarcity of gamified digital activities in EFL settings in German context stemming from the beliefs of preservice teachers extending to their future practices. With questionnaires implemented to 150 participants the researcher concluded that preservice teachers experienced technology in their own prior education but not in the form of games or gamified activities. They utilized technology solely for listening activities or reaching online course content. With empirical support from other studies, Germany is reported to have the last rank in the computer use for educational purposes. Although preservice teachers have positive attitudes towards gamified activities, their experiences from their pre-university years affect the existence possibility of gamification in their future practices.

Bawa and Brockford (2020) conducted their study aimed to investigate the role of Digital Educational Games (DEG) and Massively Multiplayer Online games (MMOs) in the American context with 96 students at university. DEG corresponds to GSRSA as it is used in the current study. Authors mentioned three options of DEG to be utilized as Kahoot!, Socrative, and Quizziz. According to the theoretical base they adopted, Kahoot! was credited to be the best option in line with Activity Theory. They collected both quantitative and qualitative data and triangulated them. Their findings were in line with the mainstream literature supporting the use of GSRSA with educational purposes. They attributed the success of GSRSA in student achievement to the increase in motivation level of learners.

2.3.1 Kahoot!

A project at Norwegian University of Science and Technology was launched wherein the educational environment adopts a transient guise akin to quiz show broadcasted, with the instructor assuming the role of the host and students as the participants in 2006 (Graph & Olive, 2018). ‘The Lecture Quiz Programme’ research platform materialized following the iterative development and assessment of numerous prototypes over an extended period (Shenoy & Challa, 2018). In 2012, the inception of a

start-up company marked the commencement of the development of a novice GSRSA, Kahoot!, which was crafted from scratch, rising upon the foundations laid by ‘The Lecture Quiz Programme’. The official introduction of Kahoot! was realised in 2013 (Specht, 2020). Initial tests revealed the advantages as increased student participation, motivation, engagement, perception, and edutainment (Garza et al., 2023; Kalleny, 2020; Koçak, 2021; Kohnke & Moorhouse, 2022; Wang & Tahir, 2020). Being monodirectional, enabling teachers to prepare their own materials and utilise the materials prepared by others, facilitating the assessment, not requiring any registration for students, competition, entertainment, and allowing participation anonymously which reduces the student anxiety increased the popularity of Kahoot! in classrooms (; Kalleny, 2020; Koçak, 2021; Kohnke & Moorhouse, 2022; Licorish & Lötter, 2022; Wang & Tahir, 2020). Kahoot! was claimed to be the most competitive GSRSA focused on the learner engagement (Bratel, 2022; Holbrey, 2020; Kohnke & Moorhouse, 2022; Reynolds & Taylor, 2020; Tompkins, 2022).

Kahoot! is a formative assessment tool which provides real time data for researchers/teachers and immediate feedback for learners (Garcia, 2020; Minton, 2021; Reynolds & Taylor, 2020; Rowley, 2020). It was the first of its kind having combined game elements with a serious focus on them. GSRsAs released after Kahoot! carried most of its characteristics with minor changes which created the impression of being derivations of Kahoot! (Rowley, 2020). To elaborate these small differences, a space race game is embedded in Socrative to show the progress of the learner/ team of learners in the form of a rocket which moves according to accuracy and speed of the answers provided. Kahoot! only applies ranking and points for this purpose in addition to the podium at the end of the round. Another GSRSA, Quizizz is designed with a more asynchronous system which enables learners to use individually free of time and place restrictions. In other words, Quizizz activities can be assigned as homework and can be used as a self-study tool. However, Kahoot! does not include these game elements addressing the “Blackberry Prayer” effect (Michaluk et al., 2010) as a criticism for technology damaging the relationship among individuals and their relationship with their environment. In order to increase the cooperation and awareness of their surroundings, participants have to take their eyes off their mobile screen. Discussion around the “Blackberry Prayer” effect caused another difference in which students can see both the question and options on their own screen enabling Quizizz to be used without a big screen

or overhead projector. To increase the fun element, instructor can automatically turn on the jokes mode while preparing the quiz material, but they are not comprehensible in EFL and ESL contexts mainly due to cultural differences.



Figure 2.5: Kahoot! Class

If the infrastructure to provide all learners a device to join the game is not present, participants need a mobile device with internet connection. Students can choose a nick name or automatically it can be created by the system. Colours represent the options reflected on the main screen. Students not only race against each other to give the correct answer but also, they must be faster than other participants to get higher points. Leader board showing the top five players after each question is animated to show the changes in the ranking. Learner who answered many questions in a row or who made a comeback after so many wrong answers is also written under the leader board. A podium showing top three players and winner placed on it is displayed at the end of the game on the main screen.

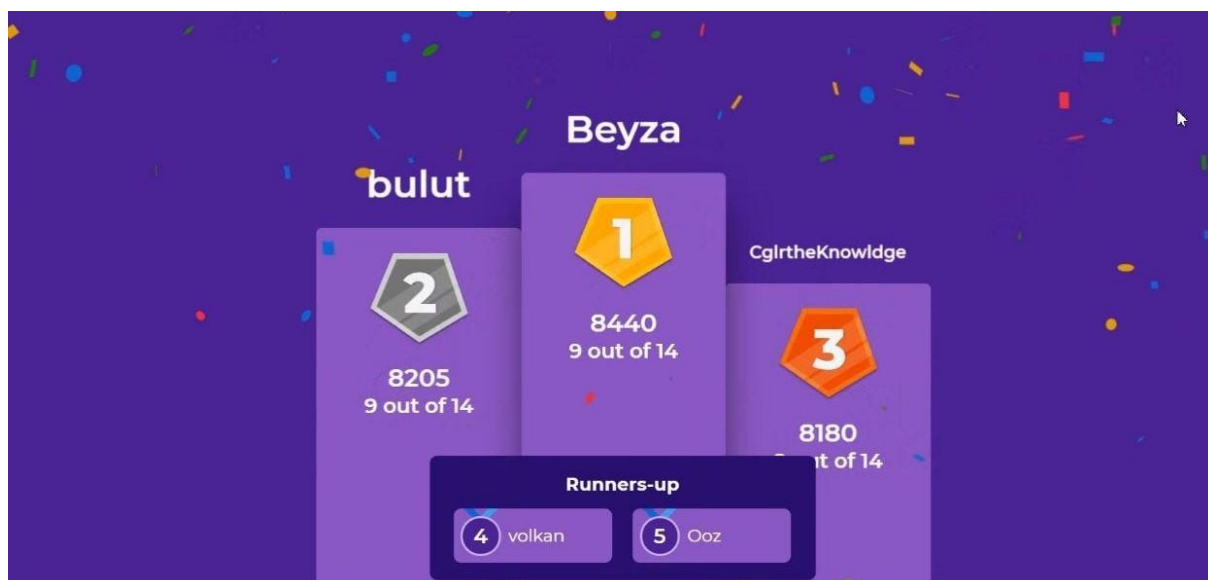


Figure 2.6: Kahoot! Podium of Winners

Kahoot! has more than 70 million users over the world and reached 10 billion participants indicating that people experienced Kahoot! as a player 10 billion times (<https://kahoot.com/company/>, retrieved 13.02.2024).

Kahoot! being the leader GSRSA in the market, is effective in learning vocabulary in English which requires repetition (Edmonds et al., 2021; Rice & Tokowicz, 2020; Wong & Barcroft, 2020). Moreover, teachers can see and analyse learners' performance in each question after the game and pay more attention to less successful items or learners. Enabling audio-visual and video embedding opportunities let Kahoot! cater to different senses which is crucial in vocabulary learning and retention in the long term (Johnston, 2019).

Kohnke and Moorhouse (2021) conducted their study to explore further aspects of the use of Kahoot! in language learning settings especially focusing on individual limitations and teachers' perceptions. Their findings indicate that Kahoot! has positive effects on learners' motivation stretching beyond the classroom. It caters to the needs of all learners from varying levels. They integrated Kahoot! with reading and listening activities for short answer questions. One weakness of Kahoot! not allowing open ended question responses in free version was handled via the integration of Mentimeter which is another GSRSA with different purposes. Other strengths of Kahoot! as enabling limitless repetition of activities crucial for vocabulary learning, anonymous participation

of learners enabling risk taking skills, and data provided for teacher use were emphasized in the study.

Reynolds and Fuchs (2021) investigated the relationship between vocabulary learning through Kahoot! and intrinsic motivation level in a university ESL setting with 45 hours of implementation through 15 weeks. The findings of the study indicated that Kahoot! enhanced vocabulary learning but the difference between the intervention group and the control group in terms of vocabulary learning success was not statistically significant. Authors interpreted this finding as Kahoot! being neither better nor worse than any other teaching system. When the change in the motivation of the learners was quantified, Kahoot! group's motivation level increased significantly but the same was not observed in the control group. A serious drawback expressed in the body of literature in gamification is using GSRSA too often for prolonged time periods which results in a significant decline in student motivation (Martins et al., 2019). What is more, the in-depth data review over the period of the study gives a misleading figure similar to Hawthorne Effect which attributes the changes of performance and motivation at the initial steps of the study to the awareness of being observed or studied.

The greatest problems reported in the literature common for GSRSA are internet connection problems, overcompetitive participants, and more successful learners making use of the activity more than the less successful ones which are all valid for Kahoot! as well (Brookhart, 2017; Kaufman, 2015, York et al., 2019).

2.3.2 Quizizz

Quizizz was established in Bangalore, India in 2015 by two maths teachers, Ankit and Deepak (<https://quizizz.com/home/about>, retrieved 10.01.2024). Although it carries many common features in terms of game mechanics, dynamics, and design with Kahoot!, the most distinctive characteristic of it was enabling teachers to assign the activity as homework (Bolshakova, 2022; Plump, 2017). The difficulty and time-consuming nature of vocabulary learning does not allow classroom time to be sufficient to yield the most effective results. Thus, it is crucial to make the most out of the classroom time and stretch learning beyond the classroom. This is the outstanding strength of Quizizz among GSRSA. What is more, students have access to the tests designed to cover their course

content any time they want if there is not a deadline for the activity decided by the instructor (Rosdy, 2021).

Another distinctive feature of Quizizz is yielding student performance results both individually and cumulatively. Analysing input-output data enables instructors to provide efficient feedback and take necessary precautions for the next steps of planning accompanied with problematic sections becoming apparent.



Figure 2.7: Quizizz Question Sample



Figure2.8: Quizizz Immediate Feedback Screen

Almost all GSRSA enable to obtain immediate feedback. What makes Quizizz distinguished is enabling teachers to provide cumulative delayed feedback in the classroom by hiding the correct answers from participants (Amalia, 2020; Cruz, 2019;

Laura, 2021). Students can only see their overall final score when they implement the activity either as homework or in class activity. This might be another opportunity for students to revise their answers multiple times until they get a perfect score which will increase the time and repeated encounters ideal for better vocabulary learning (Laura, 2021).

GSRSA are designed to cater to all groups from all ages. However, Quizizz focuses on young adults more than other age groups. Sound effects, music, and memes provided in the system are in tune with the young adults who have grown up with technology (Amelia, 2020; Kraus, 2020).

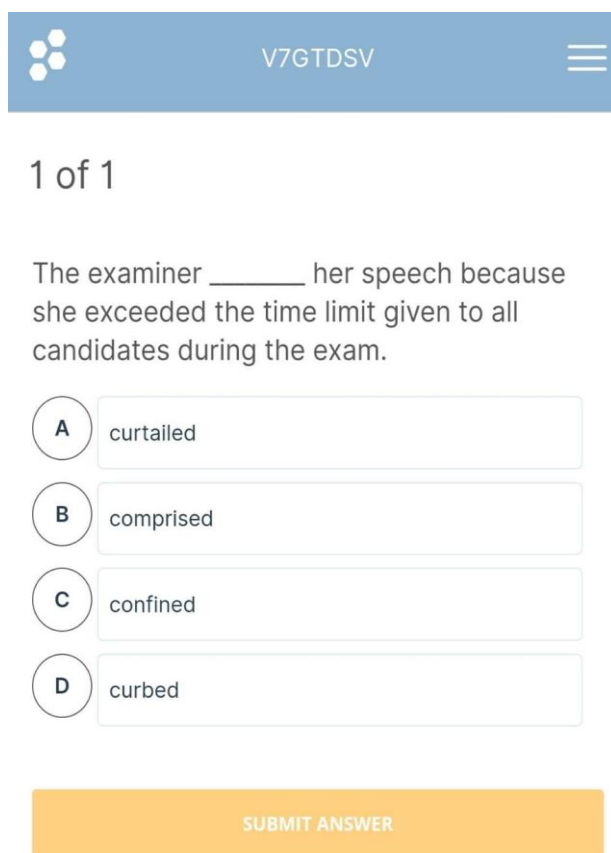
2.3.3 Socrative

In the realm of educational technology, Socrative emerged as a noteworthy platform designed to enhance student engagement and empower assessment practices. Socrative prioritizes formative assessment methodologies, offering educators real-time feedback to gauge student comprehension through a variety of question formats (Powell et al., 2020). Conversely, Kahoot! is renowned for its game-based learning approach, orchestrates interactive quizzes imbued with competitive elements such as points, leaderboards, and time constraints (Gow & Chen, 2019). While both platforms integrate gamification features to varying degrees, Socrative maintains a more structured, assessment-focused approach, whereas Kahoot! fosters a lively classroom atmosphere with its energetic gameplay (Hwang et al., 2020).

In terms of question types, Socrative offers a broader spectrum, accommodating multiple-choice, true/false, short answer, and open-ended questions to cater to diverse assessment needs, while Quizizz predominantly supports multiple-choice queries alongside image-based and true/false formats (Gow & Chen, 2019; Powell et al., 2020). All three platforms facilitate seamless integration with popular learning management systems (LMS), augmenting their utility and accessibility within educational settings (Hwang et al., 2020).

Space Race, in which students try to move their space shuttle forward by providing correct answers, is a game dynamic embedded in Socrative. Another aspect making Socrative unique is that it enables instructors to poll answers to any question formed

verbally or on the board without any input processing to the system. Within Socrative, educators possess the capability to aggregate class outcomes on a question-by-question basis and extract them for subsequent analysis (Christianson, 2020; McKenzie & Ziemann, 2020). Such adaptability grants instructors the latitude to employ Socrative across a spectrum of instructional modalities, spanning from anonymous surveys to assessable formative or summative evaluations. Through affording this breadth of functionality, Socrative augments its versatility and relevance within educational milieus, accommodating the multifaceted assessment requisites and pedagogical proclivities of educators (Wash, 2014; Wood, 2020).



V7GTDSV

1 of 1

The examiner _____ her speech because she exceeded the time limit given to all candidates during the exam.

A curtailed

B comprised

C confined

D curbed

SUBMIT ANSWER

Figure 2.9: Socrative Question Sample

Vurdien (2021) aimed to carry the difficulty of vocabulary learning to one step further by conducting research on the effects of Socrative in phrasal verbs teaching in terms of student engagement and performance. The participants consisted of 33 ESL students at B2, C1, and C2 level according to CEFR. The intervention lasted for three months which corresponded to 12 classes in total. At the end of this period, the comparison of pre-test and post test yielded positive results in terms of both learner

motivation and achievement. The absence of a control group might be a defect reducing the reliability of the data presented, since other factors contributing to learner achievement and engagement were not eliminated. This criticism is common for the majority of studies conducted on gamification (Kıyançık & Uzun, 2022).

2.3.4 Comparison of 3 GSRSA in terms of dynamics, mechanics, and components

A brief summary and comparison of three GSRSA used in this study is presented in the table below to comprehend the differences and similarities among them.

Table 2.2: *Comparison of Three GSRSA Used in This Study*

Criteria	Kahoot!	Quizizz	Socrative
Account obligation	Students X Teachers +	Students + Teachers+	Students X Teachers+
Free account enabling shared use	+	X	X
Multi device (screen) obligation	+	X	X
Competition	+	+	+
Self-Paced option	X	+	X
Assessment purpose	+	X	+
Utilising other users' materials	+	+	x
Possibility of assigning homework	X	+	X
Time constraint	+	X	+/X
Flexible progression	X	+	+
Team mode	+	+	+
Instant feedback	+	+	+

In the list of game dynamics, constraints appear to be one of the most distinctive and prominent dynamic distinguishing three GSRSA within this study. The sub-category of this dynamic can be challenges as a mechanic. Kahoot! enforces time constraints on question responses, heightening the competitive environment (Vanslette, 2019), whereas Quizizz grants players the freedom to respond to questions at their own pace, alleviating time constraints (Sprenger & Schwaninger, 2021). However, Socrative offers instructors

the flexibility to administer quizzes with or without time limits, enabling customization of constraint levels by the instructor (Hermida et al., 2021).

Game dynamic emotions can provide a distinctive perspective to compare GSRSA. Kahoot! generates enthusiasm and involvement through its dynamic display and leaderboard setup (Pratiwi & Waluyo, 2023), whereas Quizizz incorporates humour and customizable avatars to enrich user experience and participation (Vurdien, 2021), and Socrative places a higher emphasis on delivering feedback rather than eliciting emotional responses, concentrating on academic evaluation (Treve, 2021).

Kahoot! adheres to a linear progression structure, navigating through questions while concurrently updating leaderboards (Pratiwi & Waluyo, 2023), whereas Quizizz presents a more flexible progression format, empowering users to advance at their own pace while receiving instantaneous feedback (Vurdien, 2021). Conversely, Socrative employs either linear or branching progression methodologies, delivering immediate feedback but providing fewer visual cues to guide progression (Treve, 2021).

Cooperation and competition constitute shared mechanics as all of the three GSRSA allow team mode, individual mode, and similar options with slight differences. However, Kahoot! requires physical together existence of the players which is not possible in distance education. Each team can access the game via only one device. On the other hand, Quizizz has a different perspective in team mode which is much more applicable in distance education as well. Students join a team or randomly assigned to groups and answer the questions on their own device. Cumulative performance of the team is calculated and shown on the teacher's screen. Socrative has the same features with Quizizz. Besides, the space race in which each team's progress is depicted with a rocket is an additional feature present in Socrative (Kohnke & Moorhouse, 2022).

A substantial volume of studies has been conducted to compare GRSRA in differing variations and combinations. A mixed design comparative analysis to evaluate the effectiveness of achievement and participant engagement in gamified educational contexts facilitated by Kahoot! and Quizizz by Göksun and Gürsoy (2019) was administered in a similar context to the current research. Their outcomes identified that Kahoot! yielding higher results than the control group while both of them outperformed the Quizizz group. The qualitative data obtained by interviews clarified the differences

among the groups as the feedback system of Quizizz being not sufficient, individual progression not being attractive, and technological problems occurring quite often.

2.4 Player Types

Gamification has gained significant attention in the field of English Language Teaching (ELT) as a powerful tool to enhance learner motivation and engagement (Cruz et al., 2023; Çınar et al, 2022; Gowindaran, 2020; Martinez & Sprechen, 2022). Understanding the different player types or user profiles that learners exhibit in gamified contexts is an aspect of gamification as important as eight computer game categories because each category is expected to have a different effect on the learners' motivation and attitude (Bovermann & Bastiaens, 2020; Gros, 2007; Prensky, 2001). Richard Bartle, who had been in the game industry since 1970s and had contributed to the first Multiuser Dungeon Game (1978), was the first to classify player types into four categories with a psychological perspective. Bartle (1996) classified players as *achievers*, *socializers*, *killers*, and *explorers* according to the active relationship between two dimensions of playing styles. Initially, Bartle (1990, p. 9) perceived four player types as “action versus interaction, and world-oriented versus player-oriented”. His subsequent efforts (Bartle, 1996; 2003; 2004) to identify player types with a better insight revealed that all players have all of these characteristics at varying degrees instead of being in contrast to each other while enabling researchers to identify the dominant player type. Inherently, these domains intersect, and players frequently transition among all four, contingent upon their disposition or prevailing approach to gameplay. Players typically possess a predominant style and will only transition to alternative styles, whether consciously or subconsciously, as a strategic method to further their principal objectives (Bartle, 2004).

Identifying the characteristics of each player type might provide better insight to curriculum design efforts in ELT vocabulary teaching (Rogers & Heidt, 2020). Achievers prioritize the accumulation of points and progression through levels as their primary objective, with all other aspects of gameplay ultimately serving this purpose (Cömert & Samur, 2023; Sivonen & Heikkinen, 2022). Exploration is deemed essential solely for the discovery of new treasure troves or more efficient methods of accruing points. Social interaction serves as a leisurely means of uncovering insights from other players regarding point accumulation, with the intention of applying such knowledge to amass wealth. Combat is deemed necessary solely to eliminate competitors or obstacles

hindering progress, or to acquire substantial point rewards, particularly if points are awarded for defeating other players (Bartle, 1996; 2001; 2004; Hamlen, 2022; Majors et al., 2021; Reyssier, 2022).

Explorers derive satisfaction from uncovering the inner mechanisms of the game, engaging in progressively obscure actions in remote, unconventional locations to unearth intriguing features, such as bugs, and deciphering underlying mechanics. While scoring points may be necessary to advance to subsequent stages of exploration, it is considered tedious, and virtually anyone can accomplish it with minimal effort. Combat, although expedient and potentially enlightening is deemed troublesome in the long term due to the potential repercussions of retaliation from defeated rivals. Social interaction holds the potential for providing valuable insights and novel ideas to experiment with, yet the majority of discourse is deemed irrelevant or outdated. True enjoyment stems from the thrill of discovery and the endeavour to compile the most comprehensive collection of maps conceivable (Bartle, 1996; 2001; 2004; Hamlen, 2022; Majors et al., 2021; Reyssier, 2022; Santos et al., 2021).

Socializers prioritize interpersonal connections over the game itself, considering it merely a platform for player interactions. They value building and maintaining relationships, empathizing, entertaining, and observing others' progress. While some exploration may be required for social engagement, points may also be necessary to access advanced communication abilities and gain community recognition. Combat is only justified as a final recourse in defence of close friends against severe wrongdoing. Ultimately, the most gratifying aspect lies in forming profound, enduring relationships, and comprehending others (Bartle, 1996; 2001; 2004; Hamlen, 2022; Majors et al., 2021; Santos et al., 2021).

Killers derive satisfaction from exerting dominance over others in the gaming environment. More frequently, killers engage in direct attacks on other players with the intent of eliminating their characters, hence the name of this play style. The greater the distress inflicted, the greater the killer's enjoyment. Accumulating points is typically necessary to attain sufficient power to inflict substantial harm, and exploratory efforts are directed towards discovering novel methods of causing havoc. Even social interaction serves strategic purposes, such as gathering intelligence on opponents or discussing tactics with fellow killers. However, these activities are viewed merely as means to an

end. True satisfaction for killers lies in knowing that their actions have genuinely upset another player, who is powerless to retaliate, thereby eliciting a rush of exhilarating enjoyment (Bartle, 1996; 2001; 2004; Hamlen, 2022; Majors et al., 2021).

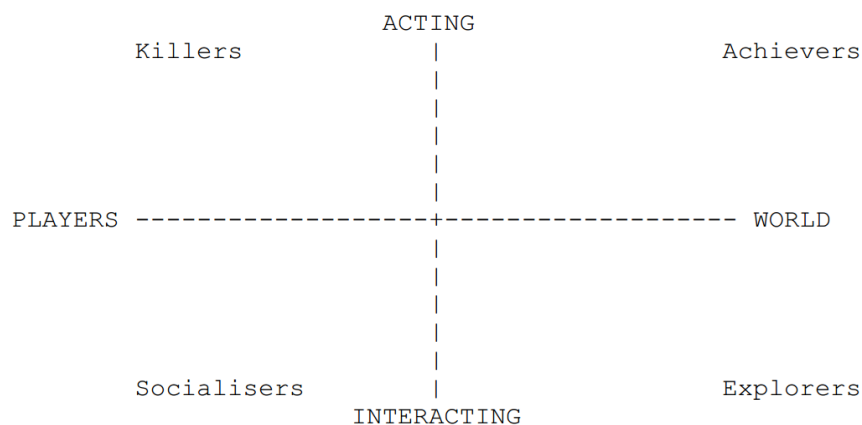


Figure 2.10: *Bartle's Taxonomy of Player Types*

Bartle (1996) explained what should be anticipated when one player type is dominant over others and proposed solutions to balance or manipulate the game atmosphere. Considerable insight was gained through his comprehensive explanations of communication between each player type which can be a prevalent factor in planning communication aspect of a gamified activity in ELT classroom. Another dimension pertaining the player type might affect classroom management of instructors. For instance, Bartle (2003) suggests that in order to decrease the number of killers or killer attitude in the classroom, all groups should be oppressed except explorers or precautions to prioritise the explorer in the students should be taken. Determination of the ideal classroom dynamics in terms of player types in a language learning setting and methodology to be adopted for adjusting students' attitude has remained as a gap in the literature. Bartle's classification had not been expressed in the form of a scale until Andreasen and Downey (2004) designed "the Bartle Test of Gamer Psychology" or shortened form as Bartle Test.

Marczewski (2015a) made a similar categorisation to Bartle's by adding 'Philanthropists' and 'Players' to the taxonomy. Philanthropists seek their purpose of existence in the game by doing favours and sacrificing for the advantage of others. Players and Achievers both try to advance in the game. Achievers tend to be competence oriented while Players pursue extrinsic motives (Marczewski, 2015a; 2015b; 2016; 2019).

Although Marchzewski's categorisation was in line with Bartle's, it was a counter-manifest against prior assumption which claimed that player attitude remains constant both in real game context and 'game-like' context. So called as HEXAD typology of Marchzewski consisting of six player types constituted theoretical basis for various scales developed to determine the player types (Erümit et al., 2021).

Another player typology classification was developed by Bateman and Boon (2005) which defined eight different player types not moving far from previous classifications. What is more, Bateman et al. (2011) reported problematic issues about data collection and methodology of the 'Demographic Game Design Model' they introduced in 2005. Nevertheless, their studies made a great contribution to the psychological aspect of game designs.

The scarcity of empirical studies pertaining player type models was reiterated by Busch et al. (2016). Their primary focus was on the edutainment dimension and the 'Flow Mood' which will be explained in the next section about motivation. Lopez and Tucker (2019) carried out one of the rare case studies pertaining the effect of player types on gamification according to individuals' performance variance in terms of player classification in Hexad Scale Categorisation which defined six player types. Students in experimental group used an application with gamification elements included while control group used the same application without gamification elements. The experimental group performed better than the control group which had no game elements and dynamics included. The results of the study revealed that students' performance vary according to their player type categorisation. For instance, students in disruptor (killer) player type category performed worse than other groups in all tasks while achievers showed higher levels of improvement than the other player types did. This study was outstanding for going one step further than other studies carried out merely to determine the player type of learners. The criticism opposing the one-size-for-all understanding was theoretically and quantitatively based on solid structures through this research. Future implications this research will bring new dimensions to determining game dynamics and elements according to player types besides suggesting ways to improve the performance of each player category.

The development of player type inventories evolved around the Bartle's (1996) classification and the scale utilized in this study was developed by Erümit et al. (2021).

Their work contributed to eliminate the age and school type factors among high schools and universities. Likewise it is in other player type scales, it is still impossible to diagnose one exact player type for one individual by using this scale, since individual attitude varies according to many factors, time being the most significant among them.

Lopez and Tucker (2019) aimed to quantify the effects of gamification on student performance according to Hexad player type classification with 30 participants studying at Pennsylvania State University. Their findings support the existence of correlation between player types and achievement in gamification. Authors of the study emphasized the need for tailoring gamified activities according to individual's player type. In other words, they rejected the one-size-fits-all understanding in gamified vocabulary learning activity design. They provided basic considerations in designing gamified activities tailored for different player types. Their findings might be attributed to the allocation of SDT, which emphasizes the satisfaction of individuals' autonomy, relatedness, and competence needs, as the psychological basis for the study. Replication of the same study with different theories might deny the significance of individual player types over students' success.

2.5 Motivation

According to Entertainment Software Association (ESA) reports, annual revenue of game industry was 152 billion US dollars in 2019, 179.7 billion in 2020, 200 billion in 2021, 235.7 billion in 2022, and 257.1 billion in 2023. According to Global Games Market Report 2023 by Newzoo, which is a leader market statistics provider, the number of gamers all around the world is estimated to be around 2.9 billion. Efforts to explain the rationale behind why people of all ages play games for prolonged periods of time and with focused attention were based on various motivation theories (Csikszentmihalyi, 1990; Deci & Ryan, 1985; Ferguson, 2020; Landers & Armstrong, 2020; Macke & Miri, 2022). These theories have been influential on the adaptation of gamification into vocabulary learning in ELT as the burden of learning new lexical items requires the levels of motivation and concentration enhanced by gaming experiences (Landers & Armstrong, 2020).

Robert Gardner's attempts to define motivation in language learning indicates how perception of motivation has evolved over time. Gardner (1985) defined motivation as the degree to which an individual engages in language acquisition or endeavours to enhance linguistic proficiency is contingent upon their intrinsic motivation and the satisfaction derived from such scholarly pursuit. Gardner (2001) simplified his definition of motivation as the composition of the impetus for motivation power, aspiration to acquire a foreign language, and constructive engagement in it. Motivation was defined as the internal impetus that propels individuals forward, irrespective of external circumstances (Gardner, 2010). Three definitions of the same author indicate that motivation is an evolving term by encompassing different dimensions. Although all definitions share common characteristics, each of them complements and emphasizes varying dimensions. Pardee (1990) adopted behaviourist approach explaining motivation with drives and motives triggering; Crooks and Schmidt (1991) with individual characteristics and emotions; Oxford and Shearin (1994) with impulse to achieve; Maehr and Meyer (1997) with commencement, direction, magnitude, persistence and excellence; Ryan and Deci (2000) with source and intensity; Harmer (2001) and Gardner (2010) with intrinsic force to succeed; Whiteley (2002) with self-confidence; and Csikszentmihalyi (2014) with involvement of emotions, desire to participate and control over them. The major argument causing variety has been about the source of motivation whether being extrinsic or intrinsic which will be discussed in the following sections.

2.5.1 Intrinsic motivation

Effectance motivation, defined as the enthusiasm that keeps individuals attentive and motivated in their daily activities, suggested by White (1959) might have established the foundations of intrinsic motivation. More contemporary form of the definition is the learners' engagement solely because of their own internal drive to learn or be stimulated by their interest in the subject matter as both the learners' focus and attention are directed to the same point (Lepper, 1998; Alderman, 2008). Dörnyei (1998) highlighted the internal encouragement to participate in an enjoyable and pleasant activity which emphasized the learner's enthusiasm and the nature of the activity. It is also defined as an "innate psychological need for competence and self-determination" which led to a dominant motivational theory in gamification known as Self-Determination Theory (Deci

et al., 2001) which will be presented in the following section. Another view supporting this theory was proposed by Crick (2003) emphasizing the individual intrinsic motivation leading to learner engagement both in the process and the product of learning. Reiss (2014) identified 16 basic desires triggering intrinsic motivation some of which are curiosity, integrity, autonomy, love, and interaction.

Intrinsic motivation can be both intrapersonal and interpersonal without limitation of tasks or individuals stemming from independence, proficiency, and connection (Ryan & Deci, 2000; 2006; 2011). Werbach and Hunter (2012) elaborated these three dimensions for being satisfied through autonomy realised by being under no coercion to play, competence by achievements in the game, and relatedness by cooperating with friends. The satisfaction of these requirements can be achieved through varied approaches tailored for each individual; however, the paramount consideration lies in ensuring their fulfilment to facilitate expected advancement and well-being of individuals (Deci & Vansteenkiste, 2004).

Another study aimed to investigate the effects of points, leader boards, and levels as game elements on intrinsic motivation was conducted by Mekler et al. (2022) at University of Basel, Switzerland. Research including 273 participants revealed that game elements did not have a positive effect on intrinsic motivation but increased the performance of participants by motivating them extrinsically. Authors concluded that further research to support their findings and to identify the effects of other game elements on intrinsic motivation and extrinsic motivation is needed.

Sailer and Sailer (2021) studied exclusively the classroom practices dimension of flipped learning. 205 undergraduate students participated in this experimental study with a pre-test post-test experimental design 96 students in the experimental group and 109 in the control group. Researchers adopted Self Determination Theory (SDT) framework and their findings supported favourable impacts of gamified in-class activities on intrinsic motivation and social connectedness, yet no statistically significant effect was observed on the fulfilment of competence-related needs. Points and team leader boards influenced intrinsic motivation positively.

2.5.2 Extrinsic motivation

Extrinsic motivation is a learning catalyst propelled by external stimuli, which can yield favourable outcomes in the learning process (Deci et al., 2000; Deterding, 2013; Werbach & Hunter, 2012). This form of motivation is characterized by incentives provided by external sources. Individuals undertake actions with the anticipation of receiving rewards or evading punishment (Deterding, 2013; Werbach & Hunter, 2012). In a gamified learning environment, rewards can be in the form of gaining badges, points, ranking, and leaderboard while punishment varies such as point loss, badge loss, or being disqualified (Benita, 2020; Jensen et al., 2020; Mauroner, 2019).

When both motivation types are compared, it is not anticipated that these two types of motivation operate in identical manners or remain mutually unaffected by each other (Deci, Koestner & Ryan, 2001). The prevailing error observed in gamification design often entails an overreliance on extrinsic rewards instead of intrinsic stimuli. Therefore, designs ought to prioritize feedback mechanisms and rewards over rigid rules and objectives (Anderson, 2011; Nickholson, 2014). Zichermann and Cunningham (2011) explained extrinsic motivation as a step leading to intrinsic motivation. Deci and Ryan (1999; 2014) opposed to this idea by claiming that offering rewards to individuals based on their actions and merits with a behaviourist understanding fosters extrinsic motivation, neglecting intrinsic motivational factors, which fails to inspire individuals effectively. When the objective is to induce long-term behavioural changes, employing rewards solely for short-term behavioural modifications can pose risks instead of yielding benefits in the long run.

2.5.3 Motivational theories in gamification

Krath, Schürmann, and Korflesch (2021) tried to reveal the theoretical foundations of gamification and relationship among them. The figure given below depicts their findings and the complex nature of interwoven relationship network which means that one sole theory is not sufficient to explain the nature of gamification without the support of others.

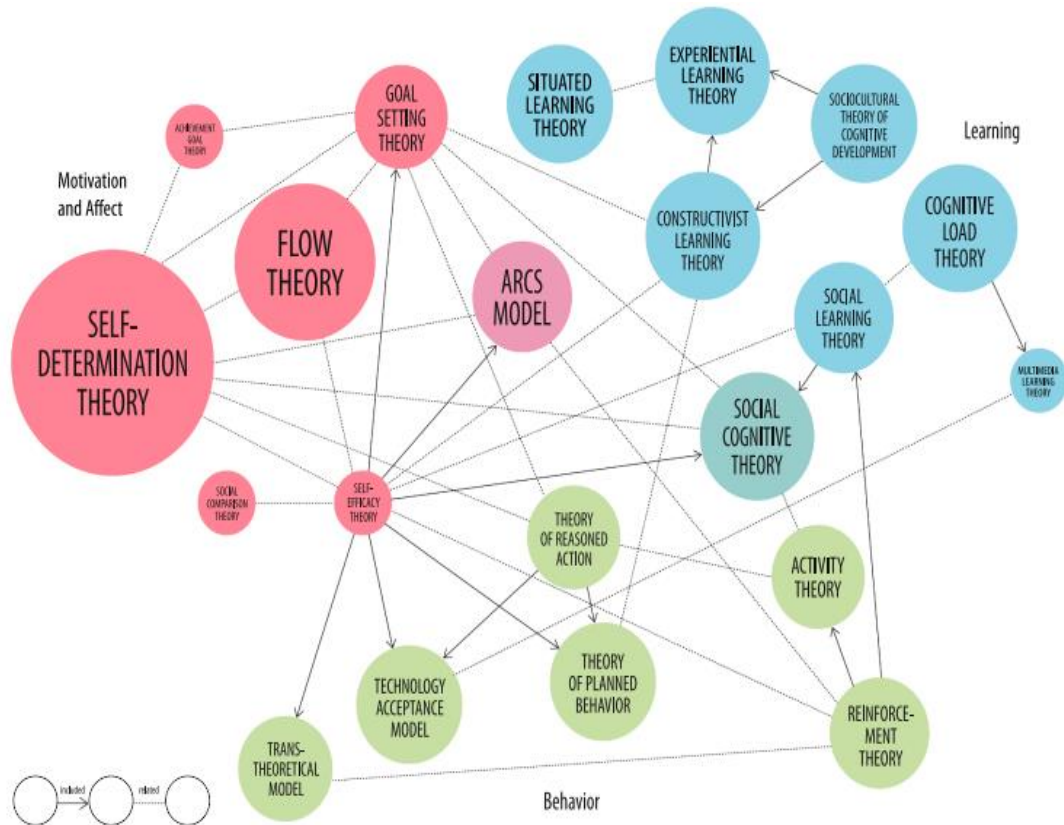


Figure 2.11: Spider Web Model presenting the relationship among motivational theories in gamification.

2.5.3.1 Self-Determination theory

Self-Determination Theory (SDT) is a theory of human motivation and personality that was developed by psychologists Edward Deci and Richard Ryan in the 1980s and has since become one of the most influential theories in the field of psychology (Niemiec, 2019; Vansteenkiste, 2022; Williams & Williams, 2020). SDT proposes that human beings have three basic psychological needs: “autonomy, competence, and relatedness. These needs are essential for optimal motivation, growth, and well-being” (Deci & Ryan, 1991). Autonomy denotes the intrinsic human desire to maintain authority over one's conduct and decisions. Individuals exhibit an innate inclination to pursue endeavours that captivate their interest and pleasure, as well as to partake in actions aligning with their individual principles and convictions. A state of autonomy engenders a perception of ownership and volition regarding one's behaviours (Deci & Ryan, 1985; 1991; 2000; Ryan & Deci, 2000; Ryan & Deci, 2001). Competence encompasses the intrinsic requirement to perceive efficacy and adeptness in navigating one's engagements with the

surroundings. Individuals endeavour to cultivate and refine novel skills, surmount obstacles, and attain a sense of mastery across diverse life domains. Upon experiencing competence, individuals derive a profound sense of achievement and assurance in their capabilities. When these three psychological needs are met, individual state of well-being and social development will be facilitated. As a result of these, individuals are intrinsically motivated, capable of realizing their potential, and actively pursuing increasingly more demanding challenges (Deci & Ryan, 1985; 1991; 2000; Ryan & Deci, 2000; Ryan & Deci, 2001). In this theory, autonomy and social development seem to be two contradicting notions that have caused serious criticism by psychologists advocating the significance of social restrictions for making life satisfying and meaningful (Schwartz, 2000).

2.5.3.2 Flow theory

Flow Theory has been one of the most influential theories in designing gamification research patterns and gamification of vocabulary in ELT (Keller, 2022; Lavoie, 2022). Mihaly Csikszentmihalyi (1975, 1997, 2008) proposed the term ‘flow’ in order to explain the mood, in which people are not aware of their surrounding and time, as a psychological reason for the drive that makes people play. Individual experiencing this mood exhibits intense concentration, a diminished sense of self-awareness, and is fully engrossed in a challenging activity that perfectly balances between the borders of boredom and anxiety, all while losing track of time. The degree of personal perception of difficulty and skill use determines the depth of flow state. Although the level of the challenge is required to be high, it should still be within the individual’s ability to achieve. Zichermann and Cunningham (2011) advocate that whether it is a video game or gamified product with another purpose, enhancing the state of flow is a precondition for the design to be successful.

Csikszentmihalyi (2014) prescribed seven major components of yielding the flow mood: comprehensible directions, immediate feedback, full involvement of the individual without any inhibition, demanding and attainable objectives, individual’s direct control over the result, diminished self-consciousness, and distorted perception of time. Flow is all about intrinsic motivation since extrinsic goals or rewards are not presented to the

individual. In any moment of life, individuals are aware of the challenges surrounding them and they are also aware of their own capabilities to overcome these challenges. The desire for action in the flow mood occurs when there is an equilibrium of challenges and skills arises (Czikszentmihalyi, 2014; Keller, 2022). While designing a gamified vocabulary activity, knowing the learners' competence level and how much they can meet the requirements of the activity are crucial aspects of material development to be considered.

Özhan and Kocadere (2020) tried to figure out the impact of Flow mood, emotional engagement, and motivation on achievement within a gamified learning experience. 40 undergraduate students were their participants. The similarity of the context with the current study might create a foundation to compare findings although the number of participants and research designs are different. Flow and emotional engagement within the context of gamified learning are reported to have exerted a notably substantial influence on motivation. Furthermore, the findings indicated that flow and emotional engagement elucidated 68% of the variability in motivation, while flow, emotional engagement, and motivation accounted for 22% of the variability in academic achievement.

After having considered theoretical foundations of gamification and player types, determining their implications for ELT learners' achievement and motivation requires meticulous planning for the research design. Discovering learners' experiences, perceptions, achievement, and motivation while they were exposed to the intervention is crucial for curriculum development efforts, course book designs, lesson planning, and classroom management.

CHAPTER 3

METHODOLOGY

3.1 Participants and Research Site

The research site of the present study was Bursa Technical University School of Foreign Languages English Preparatory Programme. English Preparatory Programme (EPP) caters to meet the needs of undergraduates before they start their education varying to 30 departments in 6 faculties. Seven of these departments have 100% English programme as medium of instruction and examination which means that students can start their department only if they finish EPP successfully. English is optional for the rest of the departments.

The participants were 224 students pursuing their preparatory language education. The whole programme is divided into 4 quarters, each quarter corresponding to Common European Framework level system as A2, B1, B1+, and B2 levels. The overall aim of the programme is to increase students' competency in English so that they can meet the academic requirements of the department they will study and the practical needs of the sector they will work in the future. This study was conducted when students were at B2 level in 2023-2024 Spring semester. Learners are expected to perceive and produce academic materials at this level. Target vocabulary in this study was selected from academic vocabulary list to contribute to learners' achievement. Each classroom consisted of more than 14 students and the same curriculum is implemented in all classrooms. Data concerning the gender distribution of the sample was not collected since it is not a variable within the scope of the current study. Ages of the participants ranged from 18 to 21.

The participants and the research site were selected according to the criteria within non-probability convenience sampling method (Creswell, 2012). The researcher has worked more than ten years in this institution and participants were convenient and represented characteristics suitable for the research. The weekly lesson plans of the participant classes were arranged according to the research design. The researcher and teacher had class hours with all participants. So as to eliminate the variances in implementation, all practices pertaining to the research were administered by the researcher.

All participants were supposed to share the same level of proficiency since the same placement test was administered at the beginning of the academic year followed by 3 quarters of education. Participants had to pass more than 50 exams and assignments to reach B2 level. A common curriculum shaped around the same coursebook is conducted in all classes. So as to guarantee that no participant is familiar with the target vocabulary to be covered in the study, a multiple-choice pre-test including 'I do not know' option in each question was administered. The researcher had to decide on whether to exclude the participants who are familiar with even one of the vocabulary or the words familiar to the participants. With the lessons taken from the pilot study which was conducted with students studying B2 level two months before the actual implementation, and consideration of the limited number of the participants, target vocabulary pool was expanded almost double size of the actual need and familiar words were excluded from the study.

Official permission pertaining ethical conduct of the study was granted by Anadolu University. In order for obtaining access to the participants and research site of this study, official documents were presented to, and access granted by school of foreign languages. Voluntary consent of the participants was taken after they were thoroughly informed about the purpose and the content of the study. Notifications reminding participants that it is possible to withdraw from the study whenever they want were included in all documents. Participants were assured that this study would not affect their academic life in any case.

16 out of 22 groups at B2 level matriculated to school of foreign languages participated in the study. Classrooms were randomly allocated to 4 groups as Kahoot! Group (KG), Quizizz Group (QG), Socrative Group (SG), and the Control Group (CG). Each group received the intervention solely via the GSRSA they were allocated. CG received the vocabulary tests written on Microsoft Word documents.

3.2 Selection of the Target Vocabulary

The main criterion in determining the target vocabulary items was being unfamiliar to the participants so that the improvement in the vocabulary knowledge of the learners can be attributed to the GSRSA implemented in the study. In order to attain this, a process

with four stages was implemented. First, target vocabulary items consisting of 96 words were selected from the Cambridge Academic Vocabulary List prepared according to the requirements of Common European Framework which is in line with the curriculum applied in EPP. Learners are expected to be prepared for academic tasks during their undergraduate education. The list consisted of equal number of word categories as nouns, adjectives, adverbs, and verbs so that word class will not give a clue to the participants when they are trying to answer the test items. Secondly target vocabulary items pool was processed through Cobb's online vocabulary profiler in order to determine the frequency bands. When the frequency of a word is high (among 1000 most commonly used words in English) this word item might be familiar to the learners. Almost all the words included were among low frequency and academic words.

Table 3.1: *Cobb's Online Vocabulary Profiler*

	<u>Families</u>	<u>Types</u>	<u>Tokens</u>	<u>Percent</u>	
First 500:	---	---	---	---	Words in text (tokens): 172
K1 Words (1 to 1000):	4	4	89	51.74%	Different words (types): 96
Function:	---	---	---	---	Type-token ratio: 0.51
Content:	---	---	89	(51.74%)	(Tokens per type: 1.98)
K2 Words (1001 to 2000):	3	3	3	0.58%	Function-content ratio: 1.00
AWL Words (academic):	10	10	12	6.89%	
MED Words (technical):	---	---	---	---	Onlist Tokens: 102
Off-List Words:	2	79	79	40.70%	Onlist Types: 17
	16+?	96	172	100%	Onlist Type-Token: 6.18
					Onlist Families: 16
					Onlist Family/token: 1.16
					Onlist Family/type: 0.86

Third stage of guaranteeing unfamiliarity of the target vocabulary items was scanning textbooks and other materials used by the learners through their education in order to cross check the non-existence of the target vocabulary items determined to be included in the study. A corpus consisting of educational materials used in the previous quarters was created on Cobb's online vocabulary tutor. This system verified that none of the target vocabulary items existed in books and materials of prior education. The final

stage of verification was realised via a multiple-choice vocabulary pre-test prepared by the researcher and proofread by two professional instructors. In each test item the first option was placed as ‘I do not know’ and participants were informed about the reason for this option both in the consent form and test material. Pre-test played a crucial role in assuring the nonfamiliarity of the target vocabulary items to the learners because there are various resources that the participants might have accessed to or might have been exposed to them. Of the 96 words, half of them were excluded according to the results of the pre-test implemented so that all the words in the target vocabulary pool are unfamiliar for the learners. Another measure taken to prevent familiarity was excluding students who failed at B2 level and previously had taken part in the pilot study.

Repeated exposure is a key element in enhancing vocabulary learning. However, the frequency and the quantity of repetition has been a controversial issue. The previous studies in literature pertaining to this issue indicated numbers ranging ten to six (Nation, 2021; Scott et al., 2020; Webb, 2020). In this study, participants were exposed to target vocabulary items minimum six times as correct answer and three times as distractor.

3.3 Overview of the Research Design

The underlying rationale of this study consists of two dimensions. The effects of GSRSA on learners’ achievement and motivation constitute the first dimension while the second dimension is based on the relationship, which might exist, between player types and the first dimension. Since the scales for determining the player types cannot go further than indicating the dominant player type of an individual, the second dimension must be studied with a qualitative understanding.

A mixed-method research design was adopted in the current study due to the fact that both quantitative and qualitative methods were combined as the nature of the research was not suitable for adopting only one method. “Explanatory sequential mixed method research design” or “two phase model” (Creswell, 2012) is the exact statement of research design adopted as quantitative data collection preceded qualitative data collection which was conducted to gain deeper insight into the quantitative findings.

Quasi-experimental non-equivalent pre-test post-test design or namely quantitative data collection phase included two major components. First, the vocabulary achievement

pre-test consisted of academic vocabulary items above students' level to avoid any familiarity of the target vocabulary items. Vocabulary achievement post-test was equivalent to the pre-test in all aspects except the exclusion of 'I do not know' option. Secondly, Intrinsic Motivation Test (IMT) designed by Ryan (1982) and adapted by Güler (2018) was implemented as the pre-test and post-test motivation data collection instrument before and after the intervention. Delayed post-test was not possible to implement due to time limitations.

Qualitative data collection was administered through an adapted version of the Player Type Scale developed by Andreassen and Downey (2000) based on Bartle's work (Erümit & Şılbrı, 2021). Data obtained from the results of this scale was used to determine the participants to participate in the semi-structured interview section.

The GSRSA implemented in this study, which are Kahoot!, Quizizz, and Socrative, are reported to share certain characteristics in addition to some differences in terms of game mechanics and dynamics. That is why, comparing these three GSRSA may provide insights about the effects of certain game mechanics and dynamics. Combining these findings with player types may change the one-for-all understanding in educational gamified materials.

3.3.1 Pilot study

Pilot study was administered during the 3rd quarter of 2023-2024 academic year with B2 level students who started from B1 level at EPP according to the placement test conducted at the beginning of the same academic year. At the initial stage, target vocabulary pool determination steps were followed. After taking participants' voluntary participation consent, motivation pre-test questionnaire, player type questionnaire, and vocabulary pre-test were administered. The results of the vocabulary pre-test indicated that some vocabulary items were more familiar to the learners than expected at the planning stage. The target vocabulary items pool was refined so as to attain the unfamiliarity to the participants. At this stage, piloting allowed the researcher to save time in determining the lexical items to be included in the real study implementation procedure.

Out of 64 vocabulary items included in the pilot study, participants were familiar with 45 of them, which required to change the target vocabulary list and revise the vocabulary item selection procedure.

3.3.2 Intervention procedures

During the implementation of real study, classes were assigned to 4 different groups randomly. In addition to this, students were randomly distributed equally to the classrooms at the beginning of the quarter as well. After the implementation of player type test, vocabulary pre-test, and motivation pre-test; KG, QG, and SG were given the same content via different GSRSA. CG received the same content in hard copy worksheet form. During this four-week period of intervention, students encountered the use of GSRSA specific for their intervention group for twelve times, each consisting of approximately twenty minutes. The frequency of the intervention and time limitations caused to increase the number of vocabulary items to be studied in each session. Each lesson consisted of studying 24 words from the target vocabulary items pool. 48 vocabulary items were grouped in six to constitute eight bundles. One bundle consisting of six words was replaced with another bundle to revise each vocabulary item six times. After four weeks of intensive treatment period, participants were given the vocabulary post-test and the motivation post-test. Immediate post-tests were implemented as soon as the treatment period was over.

3.4 Materials and Instruments

The descriptions of the following are presented in this section:

- (1) Materials for Intervention
- (2) Materials for Data Collection

3.4.1 Materials for intervention

Intervention materials were prepared by the researcher of the current study who is also the instructor. The content of the materials was suitable for learners and the

curriculum implemented in EPP according to the feedback taken from two experts in ELT.

All items in the target vocabulary pool were divided into twelve equal sessions. Each item was revisited for six times directly and three times as a complement of the other question items. Firstly, materials were prepared according to basic requirements of the control group. Then, the same content was transformed into the format that each GSRSA allows. Items were repeated equally as the correct answer. Some of the GSRSA utilised enabled participants to revise the questions they answered incorrect automatically with the appearance of the same question again during the intervention or at the end of the test. Although GSRSA allowed to utilize audio-visual components to support semantic aspect of the vocabulary items, those components were not included in the study so that the effects of GSRSA can be quantified without the interference of audio-visual use in vocabulary instruction.

Classification of vocabulary tasks developed by Paribakht and Wesche (1997) created five categories as follows:

1. Selective attention: Tasks necessitating learners to concentrate on particular words or attributes of words within a provided context. This phase entails the identification and recognition of novel vocabulary elements.
2. Recognition: Tasks designed to evaluate the ability of learners to identify and recollect vocabulary items. This phase entails the recognition of words previously encountered by learners.
3. Manipulation: Tasks requiring learners to manipulate or alter vocabulary items, necessitating a deeper level of cognitive engagement with the words. This process encompasses comprehending and employing various word forms.
4. Interpretation: Tasks necessitating learners to deduce word meanings from context and grasp nuanced interpretations, thereby entailing the interpretation of words within broader textual frameworks.
5. Production: Tasks demanding learners to actively employ vocabulary items in oral or written communication, necessitating the accurate production of words within suitable contexts.

Among the aforementioned categories GSRSA allow mainly recognition type of tasks. Keeping this aspect in mind, the majority of activity items consisted of instructions containing match the words with their definitions and choose the correct word that best completes the sentence. The same content was administered in the CG by giving hard-copy worksheet version of the same activities.

3.4.2 Materials for data collection

3.4.2.1 Quantitative data collection instruments

3.4.2.1a Achievement pre-test and post-test

Preparation and implementation of the vocabulary pre-test was a significant component of assuring nonfamiliarity of vocabulary items to the participants. Both for being in line with the curriculum in EPP, meeting the participants' needs and ensuring nonexistence of vocabulary items in the previously covered teaching-learning materials, a pool comprising 96 of Common European Framework Academic Vocabulary List was utilised in constructing the vocabulary pre-test. Equal number of items from each part of speech was included and words belonging to the same grammatical category were used in each test item to eliminate the effect of grammatical word category which is claimed to influence participants' ability to guess the correct answer by using this criterion. Sole categories as nouns, adjectives, verbs, and adverbs were included while excluding phrasal verbs, compound nouns, and other categories.

Tests prepared for collecting quantitative data were prepared by the researcher/instructor of the study. Two instructors working in the same institution, which is the setting of the current research, proofread and revised the test items for any kind of grammatical and typographical errors that might impede the participants' comprehension. All instruments and materials were tested through a pilot study conducted with classes which study B2 level during the third quarter in EPP.

Two equivalent tests aimed to comprise the same vocabulary items were implemented as the pre-test and the post-test of the study. I do not know option was excluded from the post-test.

3.4.2.1b Motivation pre-test and post-test

Intrinsic Motivation Test (IMT) which was developed by Ryan (1982), originally intended to be used in laboratory conditions to evaluate individual experience of participants, has been commonly used in studies concerning language learning motivation in classroom settings. Evidence proposed by the findings of McAuley, Duncan, and Tammen (1989) provided strong support in favour of the validity of the scale which is parallel to the study conducted by Tsigilis and Theodosiou (2003). The internal consistency of the scale in both studies was reported to be $\alpha=0.85$. The setting of the current study consisting of Turkish participants whose proficiency level in English might not be sufficient to comprehend the items in the original scale properly made it inevitable to use the Turkish translation of the original scale. The internal consistency of the Turkish version used by Güler (2018) was found as $\alpha= 0.89$. Cronbach's alpha coefficient indicated great internal consistency with $\alpha= 0.92$.

The original scale consisted of 45 items divided into 7 subcategories as enthusiasm/pleasure, personal skill perception, exertion, significance/utility, sensed stress and strain, recognized option, and connection. An adapted from reduced to 25 items under 5 categories (Güler, 2018) in the form of a seven-point Likert scale was utilised in the current study due to the similarity of context and purpose. Items and categories employed in the current study are listed below in Table 4:

Table 3.2: *Intrinsic Motivation Test (IMT) Items*

Interest/Enjoyment	I enjoyed doing this activity. This activity was fun to do. I thought this was a boring activity. This activity did not hold my attention at all. I thought this activity was quite enjoyable. While I was doing this activity, I was thinking about how much I enjoyed it.
Perceived Competence	I think I am pretty good at this activity. I think I did pretty well at this activity, compared to other students. After working at this activity for a while, I felt pretty competent. I am satisfied with my performance at this task. This was an activity that I couldn't do very well.
Effort/Importance	I put a lot of effort into this. I didn't try very hard to do well at this activity. I tried very hard on this activity. It was important to me to do well at this task. I didn't put much energy into this.
Pressure/Tension	I did not feel nervous at all while doing this. I felt very tense while doing this activity. I was very relaxed in doing these. I felt pressured while doing these.
Perceived Choice	I believe I had some choice about doing this activity. I felt like it was not my own choice to do this task. I felt like I had to do this. I did this activity because I wanted to. I did this activity because I had to.

Instead of the 'doing this activity' expression present in the original scale, 'learning vocabulary' was employed so that participants would not be distracted by other components of the curriculum. The adapted form included both English and Turkish versions of the original scale. The language used and accuracy of the translation were checked by two experienced instructors. The scale was implemented at the beginning and end of the study in order to quantify the change in participants' motivation level.

3.4.2.2 Qualitative data collection instruments

3.4.2.2a Player type scale

Individual differences have been a major concern in studies focusing on learning. Gardner's classification of multiple intelligence diverted the focus of studies in education to individual domain. The same change partially occurred after the proposition of multiple player attitude in gamification which is still waiting incomplete to be addressed (Hawkins, 2021). The projection of individual differences in gaming behaviour was first addressed by the works of Bartle (1996). Based on Bartle's work, Andreasen and Downey (2000) prepared a questionnaire consisting of 39 binary choice items which is coined as Bartle Test of Gamer Psychology. Subsequent scales developed to determine the player types are based on Bartle's basic player type taxonomy which classified players into four categories as achievers, explorers, socializers, and killers (Bartle, 1996). Nevertheless, this categorisation does not classify one player into one distinct category. Psychology of more than one player type might be present in a player with different percentages while one of them can be dominant on others. Although Bartle's test has been administered to millions of gamers for the sake of commercial purposes (Gonzalez Marino et al., 2018), its validity and reliability for controlled experimental contexts are not constructed. With this consideration in mind, an adapted version of Bartle's basic player type scale by Erümit, Şılbrı, and Karal (2021) with 32 items was implemented in the current study.

Each item in the adapted version had been selected out of a pool of existing scales present in the literature after exploratory factor analysis and confirmatory factor analysis. Cronbach's alpha coefficient of the scale was .772 which is above 0.6. The data analysis procedure of the current study indicated $\alpha=0.84$. The adapted version of the player type scale is included in the appendix (see Appendix 8 for the player type scale).

3.4.2.2b Semi-structured interview

Interview materials were prepared and conducted in participants' mother tongue so that they can express their ideas and feelings freely without any limitations that might be caused by their incompetency in the target language. Interviews were conducted one-on-one, face-to-face, and recorded with an audio recorder according to the participants' preference in which they declared that they would not feel comfortable with the video

recording of the interview. The semi-structured interview consisted of mainly three questions aimed to explore the participants' feelings and ideas for (a) GSRSA they experienced, (b) the change in their motivation to learn vocabulary if there is, and (c) the change in their achievement in vocabulary learning if exists.

3.5 Data Collection and Data Analysis

3.5.1 Procedures

The initial stage of the study consisted of implementing the player type inventory, motivation pre-test, and vocabulary pre-test which had been prepared to exclude any familiar vocabulary items from the study. Instead of eliminating participants who are familiar with even one vocabulary item, excluding familiar vocabulary was more meaningful due to the limited number of participants. After selection of the target vocabulary items, 16 classes were assigned to four different groups KG, QG, SG, and CG randomly. The implementation stage consisted of three hours a week and four weeks in total. Each student (except CG) encountered the GSRSA implementation 12 times with 24 target vocabulary items covered each time. The CG received printed versions of the same questions.

When the intervention procedure was over, participants were given the same IMT and vocabulary post-test covering 48 target vocabulary. Vocabulary pre-test and post-test were similar in difficulty, but the number of items was reduced to 48 in the post-test.

After the collection of quantitative data, the qualitative data procedure commenced with detection of students with one dominant player type characteristic according to player type scale in each GSRSA group. Semi-controlled interviews were conducted to collect the views of different player types on specific GSRSA.

Table 3.3: *Data Collection and Intervention Procedure*

Time	Group	Intervention / Test
Week 1	KG, QG, SG, CG	Vocabulary Achievement Pre-Test Intrinsic Motivation Pre-Test Player Type Test

Week 2 Week 3 Week 4 Week 5	KG, QG, SG	GSRSA Intervention
Week 6	KG, QG, SG, CG	Vocabulary Achievement Post-Test Intrinsic Motivation Post-Test
Week 7	KG, QG, SG	Semi-Structured Interview

3.5.2 Scoring the tests

The vocabulary pre-test, intervention materials, and the vocabulary post-test were prepared by the researcher / instructor of the current study. All these mentioned tests and materials were proofread by two different instructors, who have experiences of more than twenty years, and working at the same institution, which is also the research site. The same instructors solved the vocabulary tests to identify any problems that may arise during the implementation. Inter-rater reliability of the quantitative tests was calculated based on the scoring done by these instructors and the result was 1.00 for average measures in the quantitative tests which indicated internal consistency of the tests being over the average inter-rater reliability ($\alpha > 0.80$).

The vocabulary achievement pre-test was crucial for determining the target vocabulary item pool. During the scoring process of the pre-test, 1 corresponded to the correct answer provided by the participant while 0 was written for the 'I do not know' option and the wrong answers. The scores written on a table yielded data to eliminate any familiar vocabulary item to the participants.

CHAPTER 4

4. RESULTS

In the current study three different GSRSA constituting the intervention means functioned as the independent variables of the data analysis. On the other hand, CG received the same content via traditional system of hard copy worksheet. The research questions are reiterated in detail below with sub-research questions to present the data and the results obtained throughout the study:

1. What are the effects of three GSRSA (Kahoot!, Quizizz, Socrative) on Turkish EFL learners' recognition of target vocabulary items?

1a. Is there a statistically significant difference in terms of vocabulary learning achievement between

- i. KG's pre-test and post-test
- ii. QG's pre-test and post-test
- iii. SG's pre-test and post-test
- iv. CG's pre-test and post-test

1b. Is there any statistically significant difference in vocabulary learning achievement among KG, QG, SG, and CG?

2. What are the effects of three GSRSA (Kahoot!, Quizizz, Socrative) on Turkish EFL learners' motivation in vocabulary learning?

2a. Is there a statistically significant difference in terms of vocabulary learning motivation between

- i. KG's pre-test and post-test
- ii. QG's pre-test and post-test
- iii. SG's pre-test and post-test
- iv. CG's pre-test and post-test

2b. Is there any statistically significant difference of vocabulary learning motivation among four groups' (KG, QG, SG, and CG)

i. pre-tests

ii. post-tests

3. What are the perceptions of different player types in terms of achievement and motivation towards GSRSA used in learning EFL vocabulary?

4.1 The Effects of Three GSRSA on Turkish EFL Learners' Vocabulary Achievement

The first research question addressed in this study is as follows: "What are the effects of three GSRSA (Kahoot!, Quizizz, Socrative) on Turkish EFL learners' recognition of target vocabulary items?" This question was divided into two sub-questions to identify statistically significant differences 1(a) between each individual group's pre-test and post-test vocabulary achievement scores and 1(b) among four groups' vocabulary achievement scores.

4.1.1 The individual effect of each GSRSA on vocabulary achievement

The sub-question 1(a) is "What are the individual effect of each intervention on vocabulary learning achievement?" Paired Sample t-test comparing each group's achievements in pre-test and post-test was conducted to see if any of the intervention methods had an impact on students' performances in vocabulary learning (See Table 4.1). For each learning method, these analyses demonstrated statistically significant differences in the vocabulary achievement scores of EFL learners after the interventions.

Table 4.1: *The effect of three GSRSA on learners' vocabulary achievement*

		n	M	SD	%	df	t	p
Kahoot!	Pre-test	44	0.00	0.00	0 %	43	43.491	0.000
	Post-test	44	38.77	5.91	81 %			
Quizizz	Pre-test	44	0.00	0.00	0 %	43	36.479	0.000

	Post-test	44	36.5 5	6.65	76 %			
Socrative	Pre-test	44	0.00	0.00	0 %			
	Post-test	44	30.0 7	10.1 4	63%	43	19.666	0.000
Control Group	Pre-test	44	0.00	0.00	0 %			
	Post-test	44	18.7 7	10.8 2	39 %	43	11.511	0.000

Maximum score = 48.00

4.1.1.1 The effect of Kahoot! on learners' vocabulary learning achievement

The overall effect of Kahoot! as a GSRSA on 44 students' vocabulary learning achievement was quantified by running Paired Sample T-test (See Table 4.1). The pre-test scores for all groups were reduced to 0 by eliminating the vocabulary items familiar to the participants. The post-test conducted immediately after the intervention yielded the result that learners were able to recognise 81% of the target vocabulary ($M=38.77$, $SD=5.91$). Thus, it was determined that Kahoot! had a statistically significant effect on EFL learners' achievement in vocabulary learning when the pre-test and post-test results compared, ($t(43) = 43.491$, $p= 0.000$). The findings indicated that there was a vocabulary gain over the four-week training period and learning vocabulary with Kahoot! contributed to an improvement in participants' vocabulary knowledge.

4.1.1.2 The effect of Quizizz on learners' vocabulary learning achievement

The impact of using Quizizz as a GSRSA on the vocabulary learning outcomes of 44 students was evaluated using a Paired Sample t-test (see Table 4.1). To ensure accuracy, the Pre-test scores were adjusted to zero by removing any vocabulary items already known to the participants. The Post-test, administered immediately after the intervention, showed that learners could recognize 76% of the target vocabulary ($M=36.55$, $SD=6.65$). This result indicated that Quizizz significantly enhanced the vocabulary learning of EFL students, as evidenced by the comparison between the Pre-test and Post-test scores ($t(43) = 36.479$, $p= 0.000$). The findings suggest that there was

a notable improvement in vocabulary knowledge over the four-week training period, demonstrating that learning vocabulary with Quizizz was effective.

4.1.1.3 The effect of Socrative on learners' vocabulary learning achievement

The impact of using Socrative as a GSRSA on the vocabulary learning outcomes of 44 students was assessed using a Paired Sample t-test (see Table 4.1). To ensure precision, the Pre-test scores were set to zero by removing any vocabulary items already known to the participants. The Post-test, conducted immediately after the intervention, revealed that learners could recognize 63% of the target vocabulary ($M=30.07$, $SD=10.14$). This result indicated that Socrative had a statistically significant effect on EFL students' vocabulary learning, as demonstrated by the comparison between the Pre-test and Post-test scores ($t(43) = 19.666$, $p= 0.000$). The findings suggest a partial vocabulary gain over the four-week training period, showing that learning vocabulary with Socrative improved participants' vocabulary knowledge to a certain degree.

4.1.1.4 The effect of control condition on vocabulary learning achievement

Paired Sample t-test scores of the 44 participants in Control Group, after the Pre-test score adjustment conducted in the same way with the intervention groups, revealed that participants could recognize 39% of the target vocabulary ($M=18.77$, $SD=10.82$). A statistically significant effect on CG's achievement in vocabulary learning as a result of the Pre-test and Post-test results comparison was demonstrated, ($t(43) = 11.511$, $p= 0.000$). Although the change in the success rate was statistically significant, this score was far below the intervention groups.

4.1.2 The comparison of four groups in terms of vocabulary learning achievement

The sub-question 1(b) addressed in this study was "Is there any statistically significant difference of vocabulary learning achievement among KG, QG, SG, and CG?" One-way ANOVA analysis with pairwise comparisons were calculated to indicate any statistically significant difference among four groups when they are compared one by one with each other (See Table 4.2). All types of GSRSA utilized in vocabulary learning

within this study resulted in higher vocabulary learning achievement scores for EFL learners, which indicated that statistically significant differences among the mean scores of KG, QG, and SG. What is more, One-way ANOVA analysis revealed statistically significant differences not only in intervention groups, but also across these four groups including CG in terms of the participants' achievement in vocabulary learning, $F(3, 172) = 47.391$, $p < 0.001$ level ($p = 0.000$).

Table 4.2: *The results of the One-way ANOVA analysis with Pairwise Comparisons*

	n	M	SD	%	df	F	p
Kahoot!	44	38.77	5.91	81 %	3 172	47.391	0.000
Quizizz	44	36.55	6.65	76 %			
Socrative	44	30.07	10.14	63 %			
Control Group	44	18.77	10.82	39 %			

Maximum score = 48.00

The existence of statistically significant differences among four groups was tabulated in Table 4.2 without stating whether these differences exist when the groups are paired. Pair-wise comparisons using Games-Howell adjustments were conducted to examine the significance of the mean differences among the vocabulary achievement scores across four groups (See Table 4.3).

Table 4.3: *Games-Howell (Vocabulary Achievement)*

(I) Factor	(J) Factor	Mean Difference (I-J)	Std. Error	Sig
Kahoot!	Quizizz	2,22727	1,34106	0,351
	Socrative	8,70455(*)	1,76986	0,000
	Control Group	20,00000(*)	1,85856	0,000
Quizizz	Kahoot	-2,22727	1,34106	0,351
	Socrative	6,47727(*)	1,82792	0,004
	Control Group	17,77273(*)	1,91393	0,000
Socrative	Kahoot	-8,70455(*)	1,76986	0,000
	Quizizz	-6,47727(*)	1,82792	0,004
	Control Group	11,29545(*)	2,23542	0,000
Control Group	Kahoot	-20,00000(*)	1,85856	0,000
	Quizizz	-17,77273(*)	1,91393	0,000
	Socrative	-11,29545(*)	2,23542	0,000

*. The mean difference is significant at the 0.05 level.

The results of Games-Howell test indicate that there is statistically significant difference between KG-SG, KG-CG in vocabulary achievement as $p < 0.05$. On the other

hand, KG and QG do not show any statistically significant difference ($p= 0.351$). This result might mean that the effect of KG and QG share certain characteristics which might have affected these groups' vocabulary learning achievement.

According to the results of the Games-Howell test, a statistically significant difference is revealed in vocabulary achievement between QG-SG and QG-CG, with $p<0.05$. Conversely, no statistically significant difference was found between QG and KG ($p = 0.351$). This outcome suggests that QG and KG may share certain characteristics that influenced their vocabulary learning achievements similarly.

The outcomes of the Games-Howell test reveal a statistically significant difference in vocabulary achievement between SG-KG, SG-QG, and SG-CG because $p<0.05$ in all comparisons. This finding suggests that the SG differs with both intervention groups (KG and QG) as well as the CG.

CG has statistically significant differences with all intervention groups (KG, QG, and SG) according to the Games-Howell test with $p<0.05$. It might be concluded that CG performed worse than three intervention groups as it was hypothesized.

4.2 The Effects of Three GSRSA on Turkish EFL Learners' Motivation in Vocabulary Learning

The second research question of the current study is: "What are the effects of three GSRSA on Turkish EFL learners' motivation level in vocabulary learning?" This research question was segmented into two sub-questions to determine statistically significant differences: 2(a) between the pre-test and post-test vocabulary learning motivation levels of each individual group and 2(b) among the changes in vocabulary learning motivation levels of the four groups.

4.2.1 The individual effect of each GSRSA on vocabulary learning motivation

The sub-question 2(a) is "What are the individual effect of each intervention on vocabulary learning motivation level of EFL learners?" Paired Sample t-test comparing each group's vocabulary learning motivation level in pre-test and post-test was conducted to see if any of the intervention methods had an impact on students' vocabulary learning

motivation level (See Table 4.4). For each learning method, these analyses demonstrated statistically significant differences in the vocabulary learning motivation level of EFL learners after the interventions. However, the direction of the change was negative for all groups, which will be reviewed in the following discussion and conclusion sections.

Table 4.4: *The effect of three GSRSA on learners' vocabulary learning motivation*

		n	M	SD	df	t	p
Kahoot	Pre-test	44	114.37	10.39	43	6.312	0.000
	Post-test	44	113.32	9.80			
Quizizz	Pre-test	44	111.90	7.06	43	9.150	0.000
	Post-test	44	110.77	6.54			
Socrative	Pre-test	44	108.20	11.90	43	2.800	0.000
	Post-test	44	107.72	11.22			
Control Group	Pre-test	44	103.05	10.63	43	2.852	0.000
	Post-test	44	102.57	8.75			

Maximum score = 175.00

4.2.1.1 The effect of Kahoot! on learners' vocabulary learning motivation

The overall effect of Kahoot! as a GSRSA on 44 students' vocabulary learning motivation was quantified by running Paired Sample t-test (See Table 4.4). It was determined that Kahoot! had a statistically significant effect on EFL learners' motivation in vocabulary learning when the Pre-test and Post-test results compared, ($t(43) = 6.312$, $p = 0.000$). The findings indicated that there was a statistically significant decrease in participants' vocabulary learning motivation over the four-week training period and learning vocabulary with Kahoot! did not contributed to a positive development in participants' vocabulary learning motivation.

4.2.1.2 The effect of Quizizz on learners' vocabulary learning motivation

The impact of using Quizizz as a GSRSA on the vocabulary learning motivation of 44 students was evaluated using a Paired Sample t-test (see Table 4.4). It was demonstrated that Quizizz did not significantly enhance the vocabulary learning motivation of EFL students, as evidenced by the comparison between the Pre-test and Post-test scores ($t(43) = 9.150, p = 0.000$). The findings suggest that there was a notable decrease in vocabulary learning motivation over the four-week training period, demonstrating that learning vocabulary with Quizizz was not effective.

4.2.1.3 The effect of Socrative on learners' vocabulary learning motivation

The impact of using Socrative as a GSRSA on the vocabulary learning motivation of 44 students was assessed using a Paired Sample t-test (see Table 4.4). This result indicated that Socrative had a statistically significant effect on EFL students' vocabulary learning motivation, as demonstrated by the comparison between the Pre-test and Post-test scores ($t(43) = 2.800, p = 0.000$). The findings suggest a decline in vocabulary learning motivation after the four-week training period, showing that participants' vocabulary learning motivation diminished with Socrative to a certain degree.

4.1.1.4 The effect of control condition on vocabulary learning motivation

Paired Sample T-test scores of the 44 participants in Control Group indicated a statistically significant difference on their motivation in vocabulary learning, ($t(43) = 2.852, p = 0.000$). This deterioration was similar to the change that intervention groups experienced.

4.2.2 The comparison of four groups in terms of vocabulary learning motivation

The sub-question 2(b) addressed in this study was “Is there any statistically significant difference of vocabulary learning motivation among KG, QG, SG, and CG?” The pre-tests and the post-tests of the four groups were compared separately to attain more statistically accurate results. One-way ANOVA analyses with Games-Howell post

hoc tests were calculated to indicate any statistically significant difference among four groups' pre-tests when they are compared one by one with each other (See Table 4.5). All groups in this study showed varying vocabulary learning motivation scores in their pre-tests. KG and QG had statistically significant differences with CG, while the difference between SG and CG was not statistically significant. There was not any statistically significant difference among intervention groups.

Table 4.5: Games-Howell (Vocabulary Learning Motivation Pre-Test)

(I) Factor	(J) Factor	Mean Difference (I-J)	Std. Error	Sig
Kahoot	Quizizz	2,45455	1,89327	0,568
	Socrative	6,15909	2,38181	0,055
	Control Group	11,31818(*)	2,09828	0,000
Quizizz	Kahoot	-2,45455	1,89327	0,568
	Socrative	3,70455	2,08625	0,294
	Control Group	8,86364 (*)	1,75562	0,000
Socrative	Kahoot	-6,15909	2,38181	0,055
	Quizizz	-3,70455	2,08625	0,294
	Control Group	5,15909	2,27393	0,114
Control Group	Kahoot	-11,31818 (*)	2,09828	0,000
	Quizizz	-8,86364 (*)	1,75562	0,000
	Socrative	-5,15909	2,27393	0,114

*. The mean difference is significant at the 0.05 level.

Table 4.6: Games-Howell (Vocabulary Learning Motivation Post-Test)

(I) Factor	(J) Factor	Mean Difference (I-J)	Std. Error	Sig
Kahoot	Quizizz	2,54545	1,77564	0,483
	Socrative	5,59091	2,24648	0,069
	Control Group	10,75000 (*)	1,97986	0,000
Quizizz	Kahoot	-2,54545	1,77564	0,483
	Socrative	3,04545	1,95867	0,411
	Control Group	8,20455 (*)	1,64608	0,000
Socrative	Kahoot	-5,59091	2,24648	0,069
	Quizizz	-3,04545	1,95867	0,411
	Control Group	5,15909	2,14554	0,084
Control Group	Kahoot	-10,75000 (*)	1,97986	0,000
	Quizizz	-8,20455 (*)	1,64608	0,000
	Socrative	-5,15909	2,14554	0,084

*. The mean difference is significant at the 0.05 level.

Games-Howell test in post-test comparisons revealed the same statistically significant differences as it was in the motivation pre-tests (See Table 4.6). Scores of the

intervention groups did not show any statistically significant differences among them while all of their post-test results were statistically significant with the CG except SG.

4.3 The Perceptions of Different Player Types in Terms of Success and Motivation Towards GSRSA Used in Learning EFL Vocabulary

The third research question addressed in the current study pertains to how participants according to Bartle's four basic player types were affected by the three GSRSA implemented. The unavailability of collecting stable and constant data related to player types required to collect data qualitatively through face-to-face semi-structured interviews. Participants with only one dominant player type characteristics with the highest score according to the player type inventory were interviewed. To enhance anonymity of the information obtained via interviews, interviewees were tagged with the initial letters of the GSRSA group they were in, and the player type they belonged to as follows: Kahoot! Achiever (KA), Kahoot! Explorer (KE), Kahoot! Socializer (KS), Kahoot! Killer (KK), Quizizz Achiever (QA), Quizizz Explorer (QE), Quizizz Socializer (QS), Quizizz Killer (QK), Socrative Achiever (SA), Socrative Explorer (SE), Socrative Socializer (SS), and Socrative Killer (SK). Two player types in two different GSRSA, which were Quizizz Killer (QK) and Socrative Explorer (SE), could not meet the condition of showing the characteristics of only one player type to be interviewed.

The researcher interpreted the responses from semi-structured interviews conducted with all participants by categorizing their responses to analyse the qualitative data. To emphasize the key elements of these responses, the data were organized into various themes or categories (Cresswell, 2013). Content analysis was conducted to determine the existence of key terms, expressions, and concepts. Additionally, a second coder was enlisted to perform the categorization independently. Matching and similar categories and codes obtained from the interview results were identified. Both coders independently reviewed the transcriptions of the interview data multiple times until no section in the texts remained uncoded. Finally, the researcher interpreted the findings, incorporating direct quotations from the students.

Quantitative findings of the study revealed that integrating gamification into vocabulary learning in ELT via GSRSA enhances learners' achievement. Qualitative data

obtained from semi-structured face-to-face interviews supported quantitative results. Interviewees provided qualitative support in favour of utilising GSRSA in vocabulary learning as follows:

KA: I believe that Kahoot! helped me learn vocabulary easily.

SS: I am sure everyone will be more successful if they learn vocabulary in games.

QS: I learn new words successfully in games. ... My performance in writing and speaking exams will be better because we learned lots of academic words.

KE: I learned many words and I hope I can remember them in the exam and get high grades to finish prep school.

QE: I can pick up the new words in Quizizz very quickly.

KK: Integrating technology into the lesson and using technology in the lesson is a very good thing. This positively affects our success.

When it comes to interpretation of data pertaining to vocabulary learning motivation through GSRSA, drawing conclusions with the same exactness is not possible, which requires meticulous consideration in the following sections. However, it is undeniable that face-to-face interviews contributed to study quantitative findings about motivation from the right perspective. Quantitative data revealed statistically significant declines in participants' vocabulary learning motivation, but qualitative findings pointed out positive support for learning vocabulary motivation via GSRSA while revealing a general loss of learning English motivation. Interviewees stated that:

KA: By playing games like this, my interest in the lesson increased. I do not miss classes just to play Kahoot!.

QS: I feel motivated to continue learning vocabulary like that.

SS: My motivation is very high. I want to play the games again. It is the easiest way of learning vocabulary.

QA: I don't think it affected my motivation much. We have already reached the last quarter. We all think that it's over and we should go. The weather is hot. The only thing that will motivate me right now is holiday. I hope we can complete this course without any delay. I don't want to study English for a long time.

QE: Motivation is very important in learning English. I do not feel as motivated as the first semester. All my friends are the same. We are tired. We are bored.

Having fun and being enjoyable are the most stated code by the interviewees constituting almost one third of the adjectives in transcriptions with 26 times occurrence. What is more, the second adjective in the list is boring/ bored which was repeated for 15 times. Participants used this adjective to criticise the traditional or routine vocabulary exercises in the classroom. To put these in other words, it is possible to state that nearly half of the adjectives in the transcriptions indicate entertaining aspects of GSRSA. Almost all the interviewees stated that:

KK: I really enjoy... It's more fun to play

KA: Collecting points is fun. ... Being in the top 5 on that board is very enjoyable, ... Kahoot! was so enjoyable.

KS: For me, playing games is fun... when you chat with friends, okey becomes very enjoyable. I think it is the same for Kahoot!

QS: We found an easier and enjoyable way of learning vocabulary here.

SS: I had fun. ... learn vocabulary in games. It is the easiest and the most enjoyable way.

SK: I know that I had a lot of fun while playing.

KE: Competitions are more enjoyable if they do not take long.

While stating the enjoyable aspects of GSRSA, criticism of the routine practices in vocabulary learning was uttered in the form of prologue as follows:

KE: Otherwise, open this page of the book. Look at the meanings of these words. Place those words in the gaps. Match those words with their definitions. Place the words in the table. It becomes a routine. When the fourth quarter comes, one doesn't feel like doing anything.

KK: When we are given a vocabulary worksheet, everyone tries to do it silently. There is no communication. It gets very boring.

QS: I do not like making lists and memorise them because I am not good at memorization. I tried to keep a vocabulary notebook, but it is very difficult and time consuming. Teachers explain the words in English. They do not speak Turkish. We do not know the word and we cannot understand the explanation.

SS: Normally, when we did the word exercises on paper, everyone took turns reading, saying the correct answer or the right option. Nothing else and very boring.

KA: It is difficult to study words at home. You will find the words from the text. You will write their meaning. You will repeat them. It's very boring. I was studying at the beginning of the year. I only started to write out words and study on the last night before the exam. I did not pay attention in class because I thought I would study later anyway. I put a sign next to it and passed. After Kahoot! things changed...

Another common theme arose in the conversations with the participants was about repetition, which was a double-edged sword. On the one hand, repeating the same lexical items contributed to increase learners' vocabulary input. On the other hand, interviewees stated a warning about the overuse of GSRSA in vocabulary learning which might be boring for the learners in the long run. Interviewees stated this contradiction as follows:

KE: Repeating the same words over and over in Kahoot is helpful for learning words we don't know.... Competitions are more enjoyable if they do not take longer and are not held in the same lesson repeatedly. Otherwise, it gets boring after a while.

KA: Words are repeated throughout the lesson. There is no need to study vocabulary before the exam.

KK: You see the words again and again. You learn more solidly.

QS: In games we see the words again and again. After some time, we can understand the word.

4.3.1 Achievers' perceptions towards three GSRSA

Being determined, competitive, self-disciplined, persistent, and ambitious while playing games are the basic adjectives attributed to Achiever player type in literature (Bartle, 1996; 2003). These adjectives constituted the sub-themes of Achiever characteristics theme. 84 codes pertaining to this main theme were detected throughout the transcriptions of the interviews. These codes might be classified into two categories. First category is about the key expressions Achievers used to explain themselves as follows:

QA: When it is game time, I must win.

KA: ...There is a separate race among us. We are constantly trying to outdo each other...

KA: There are two groups in life. Winner and the others. For losers being the winner is desired, but it is painful. For the winner, the meaning is in itself. Otherwise, everything will be dull and pointless.

SA: If you make a mistake, you must recover very quickly. Otherwise, you will be behind the group.

Achievers indicated their friends' ideas about them as a third eye in the second category. They also received some criticism. They reported that:

KA: Some friends say: "... it is just a game. Why do you take it so seriously?"

KK: Some friends think that game is very important. I really enjoy annoying them and leading them to the wrong answer. It's more fun to troll people like this than to win.

Another main theme stated by the achievers is related to game dynamics and elements such as points, ranking, leader board, speed, and time making up 33 codes in total. Achievers declared that:

KA: Collecting points is fun. It's a great competition. If one of your friends doesn't break away and get too many points ahead of the group, the leaderboard changes constantly. Being in the top 5 on that board is very enjoyable, but once I fall from there, it seems like the game doesn't have much fun.

QA: I was better than the others and became the first many times. ... I broke a record in the class once. I did not have even one mistake.

SA: The game is quick. You do not have time to think about failure. If you make a mistake, you must recover very quickly. Otherwise, you will be behind the group.

KA: Internet connection is also very important. For example, I use service provider A, but service provider B has better signal at our school. That's how we noticed it, too.

4.3.1.1 Achievers' perceptions of success in vocabulary learning through three GSRSA

So as not to cause a misunderstanding in describing the qualitative findings of the current study, the term 'achievement' is replaced with 'success' temporarily. Quantitative results indicated positive increase in vocabulary achievement of all groups at varying degrees. When the taxonomy of player types in gamified activities is considered, achievers are expected to be at the leading position as they are known to be success-oriented players. This tendency is reiterated all through the interviews in various ways as follows:

KA: There is no need to study vocabulary before the exam (after learning vocabulary with Kahoot!).

QA: It must have affected my success in learning words. Everything we do with English has a positive influence on us.

SA: I improved my English with this game I think. I learned a lot of words. I feel successful when I play Socrative. ... I do not prepare any lists to study.

4.3.1.2 Achievers' perceptions of motivation in vocabulary learning through three GSRSA

A total of 27 codes were detected regarding vocabulary learning motivation of Achievers. Although participants expressed positive attitudes towards the use of GSRSA, motivation level of students diminished during the intervention period. Positive feelings for GSRSA and negative motivation for both learning English and vocabulary were declared respectively as follows:

SA: I wish we had studied vocabulary like this all year.

KA: By playing games like this, my interest in the lesson increased. I do not miss classes just to play Kahoot!.

QA: I don't think it affected my motivation much. We have already reached the last quarter. We all think that it's over and we should go. The weather is hot. The only thing that will motivate me right now is holiday. I hope we can complete this course without any delay. I don't want to study English for a long time.

4.3.2 Socializers' perceptions towards three GSRSA

Socializers with their supportive, collaborative, communicative, talkative, and friendly nature reflect their characteristics while they are playing games. 78 codes were marked for characteristics of this player type in the transcribed scripts of the interviews. Communication is the most dominant factor affecting the expectations and attitudes of socializers. The sections related to this aspect were stated as follows:

KS: For me, playing games is fun if there is conversation. Think about it like this: When you play okey and you only throw stones and get stones, it gets very boring when there is no other conversation other than "I'm done, I'm back." But when you chat with friends, okey becomes very enjoyable. I think it is the same for Kahoot!. ... Rather than competing, I like to watch their conversations and make them talk more. ... I can't talk much with the friends sitting next to me. So, when I say anything they immediately say stop...

QS: I say something, and they (classmates) look at me strangely. They don't get the joke. They are the same when playing games. I became like the man whose jokes are not laughed at.

SS: ...as soon as you find the answer, you can raise your head and discuss it with your friends. "What did you do? Which one is correct?" Even friends who don't normally talk in class join in this conversation.

As it is indicated in the lines above, socializers may become very critical about their friends and the GSRSA implemented in the classroom when they cannot talk freely because of the game elements and mechanics limiting their nature. Among these mechanics and elements speed, leaderboard, ranking, nicknames, avatars, and time can be deduced from the interviews. Kahoot Socializer elaborated that:

KS: There is constant concern for time. Everyone is trying to respond quickly as soon as possible. I can't talk much with the friends sitting next to me. So, when I say anything they immediately say stop. While the competition could be more fun, it is not fun enough because there is no dialogue and the conversation. Sometimes it is nice to chat with the teacher. It's also nice to make fun of the leaderboard that appears after each question. It's not that fun when everyone writes their own name, but it's much better when you find a cheerful name. For example, my favourite name is Bihter. Friends ask, "who is this?", but I do not reveal it. Nickname gets funnier when it is unrelated to the person. For example, the friend with the bushy beard uses the nickname Barbie. I wish time for each question were longer. I think if we waited, we would have the chance to talk to each other and discuss the questions after each question.

4.3.2.1 Socializers' perceptions of achievement in vocabulary learning through three GSRSA

Although achievement is not perceived as the primary focus of socializers, they seem to be aware of the fact that they must learn vocabulary and be more successful. Their main concern is about the way they must learn and study vocabulary. They want to have fun by interacting with other students while studying vocabulary. Before presenting the participants' ideas about their achievements, it might be more feasible to state their criticisms for their vocabulary learning and studying processes without gamification as follows:

SS: Normally, when we did the word exercises on paper, everyone took turns reading, saying the correct answer or the right option. It is better when we play games to learn vocabulary.

KS: While in class, the teacher explains one word once or twice in English. Sometimes we don't understand it, sometimes we misunderstand it. These negatively affect. ...

QS: I do not like making lists and memorise them because I am not good at memorization. I tried to keep a vocabulary notebook, but it is very difficult and time consuming. Teachers explain the words in English. They do not speak Turkish. We do not know the word and we cannot understand the explanation.

Same participants expressed their ideas about the changes that took place in their understanding of achievement with the following expressions:

SS: I think learning vocabulary in games is very useful for students. I am sure everyone will be more successful if they learn vocabulary in games. It is the easiest and the most enjoyable way.

KS: While playing games, we learn words very well without realizing it. For me, playing games is fun. ...

QS: I learn new words successfully in games. It is enjoyable. I can remember them better. My performance in writing and speaking exams will be better because we learned lots of academic words.

4.3.2.2 Socializers' perceptions of motivation in vocabulary learning through three GSRSA

Qualitative data obtained about vocabulary learning motivation from socializer participants of face-to-face interviews were marked with 26 codes. Common ideas highlighted among socializers are displayed as follows:

QS: We studied vocabulary intensively in the classroom. We found an easier and enjoyable way of learning vocabulary here. I feel motivated to continue learning vocabulary like that. If the exams were limited with the vocabulary we learn in the game, it would be better.

SS: My motivation is very high. I want to play the games again. It is the easiest way of learning vocabulary. You can make mistakes. I had fun.

KS: ... These (traditional methods) negatively affect people's motivation and desire. When I learn something in class and I really learn it, I don't have to spend time on it again. I've already allocated 5 hours of the day for this. When there is no need to do anything again, a person can be successful easily no matter he is motivated or not.

KS believes that the implementation of GSRSA in the classroom saved them from studying vocabulary outside the classroom, which also saved them from the problem of not being motivated. In other words, GSRSA were beneficial for overcoming motivation problems through increased achievement. This statement contradicts with the quantitative findings of the study and will be discussed in detail in the discussion and conclusion section.

4.3.3 Explorers' perceptions towards three GSRSA

Only KE and QE were interviewed for qualitative data collection procedure because there was not a player with dominant explorer character in the Socratic group according to the results obtained via player type scale. Explorers show characteristics of being curious, adventurous, analytical, and detail oriented. Instead of collecting points or communicating with others, they usually prefer to discover more details and variations in the game. Transcriptions revealed the reflection of Explorers' characteristics as follows:

QE: I knew Kahoot! before. Quizizz seemed very different to me at first, but as I used it, I saw that it was the same. pretty much the same. I didn't feel much of a change. I couldn't find anything different. ...

QE: In such applications, it seems that what the student has to do is very limited. There are only 4 options. We need to click on those 4 options. There isn't even a different key combination. We don't write anything or solve a mystery. It could have been more complex. Or , I don't know, our role could have been different. ... after a while he gets into a routine. There is no innovation left. Then it starts to get boring.

KE: But with this game, it becomes repetitive after a point. Different features are constantly being added, but these are not big changes like in other games... different features, videos, songs etc. can be added. It can be made a little more mysterious or fun. So, do you just know the words or not? Choose the correct one. It seems a bit routine to me.

Three GSRSA implemented in this study might not be satisfying for this player type if they are used for long periods of time. New generations have the reputation of craving for innovation and consuming very quickly. When characteristics of Explorer player type are added into these, GSRSA might be both the trouble and the solution depending on the period of intervention. KE highlighted that:

KE: Repeating the same words over and over in Kahoot! is helpful for learning words we don't know. ... Competitions are more enjoyable if they do not take longer and are not held

in the same lesson over and over again. Otherwise, it gets boring after a while. I believe it positively affects my success.

4.3.3.1 Explorers' perceptions of achievement in vocabulary learning through three GSRSA

Explorers have the same primary concern with the other player types, which is passing the preparatory year and starting their education in their department. It does not matter whether it is about learning vocabulary or another component of language learning, their achievement understanding consists of meeting the requirements to pass the grade. Explorers stated that:

KE: I hope I can remember them (new vocabulary items) in the exam and get high grades to finish prep school.

QE: I am good at vocabulary. My problem is in listening actually. I can learn new words easily. I can pick up the new words in Quizizz very quickly.

4.3.3.2 Explorers' perceptions of motivation in vocabulary learning through three GSRSA

QE: Motivation is very important in learning English. I do not feel as motivated as the first semester. All my friends are the same. We are tired. We are bored. We need new things, new games, more enjoyable things.

QE restated the general atmosphere of students' motivation state in EPP above. The hidden message underlying the expression "new games" might point out that GSRSA helped to increase their motivation temporarily, but this change did not last for the end of time period necessitated to complete the intervention.

KE emphasised and summarized learners' motivation level as follows:

KE: In terms of motivation, it doesn't motivate me anymore, but it's better than nothing. Otherwise, (describing the traditional system) open this page of the book. Look up the meanings of these words. Place those words in the gaps. Match those words with their definitions. Put the given words in the table. It's (Kahoot!) getting into a routine now. When the fourth quarter comes, one doesn't feel like doing anything. At least I have my phone in my hand. I can follow the game on one side and read the messages from the other side. But with this game, it becomes repetitive after a point.

It might be inferred from KE's sentences that s/he had already lost his/her motivation because of the routines. S/he claimed that Kahoot! is on the verge of becoming routine as well. These expressions support the ideas presented by QE. KE was able to detect some better aspects of GSRSA in comparison to book and worksheet-based system.

4.3.4 Killers' perceptions towards three GSRSA

Killers are notorious for their disruptive behaviour in games. Their understanding of fun, achievement, and fun solely depends on the suffering or embarrassment of others. They want to be dominant in the game to show their existence in the society. While Achievers follow the moral way to prove their existence, Killers use various strategies to attain what they desire. Manipulation, betrayal, pretending, and misleading are common components of their strategic moves. They may try to attain the highest rank or impede someone's deserved success. However disruptive their attitude might seem, they might be the source of entertainment in the classroom, initiator of communication, and provocateur of competition as well (Bartle, 1996).

KK: You can criticize others. You can make them give the wrong answer. You can confuse your friends. This way it becomes more fun. ... Some friends take the game very seriously. I really enjoy annoying them and leading them to the wrong answer. It's more fun to troll people like this than to win. I say a word that I don't know the meaning of as if I knew it correctly and people believe it and it's very funny.

SK: ... I started messing around. I was constantly making the person next to me choose the wrong option. Then he got very angry with me. ... I didn't learn much from that program, but I had a lot of fun, I was making others confused by saying "this time we will be the first". I was sabotaging them, and we were losing every time, but it was very enjoyable. My friend changed his place one day, just to know that he would do better without me, and he came last again.

KK embedded killer aspect of his/her activities into positive ones with the image of not being aware of the negative side of his/her attitude and behaviour. SK's understanding of game without empathy is typical of Killers.

4.3.4.1 Killers' perceptions of achievement in vocabulary learning through three GSRSA

KK and SK displayed different attitudes towards achievement in vocabulary learning. Learning vocabulary is a crucial component of language learning for KK. However, SK feels that s/he is competent in learning new vocabulary and underestimates the GSRSA use for academic purposes. They articulated that:

KK: Integrating technology into the lesson and using technology in the lesson is a very good thing. This positively affects our success. ... You encounter the same words very often. You learn more solidly. It looks a bit like the exam. There are no options in the exam, but filling in the blanks is asked again.

SK: These activities were not so difficult for me. That is why, I started messing around.

QK's perception of achievement in vocabulary learning cannot be presented here since a perfect example of Killer player type in Quizizz group did not exist.

4.3.4.2 Killers' perceptions of motivation in vocabulary learning through three GSRSA

Motivation for vocabulary learning is another problematic theme for Killers. Their motives and focus are totally different from other player types. SK indicated that:

SK: I do not know if my motivation changed for vocabulary learning but I know that I had a lot of fun while playing.

There are similarities between KK's motivation expressions for vocabulary learning and different player types. For instance, the following expression might have been uttered by a socializer as:

KK: It improves our communication with friends. When we are given a vocabulary worksheet, everyone tries to do it silently. There is no communication. It gets very boring. But while playing games, you can play games on one side and talk to each other on the other side.

Even though these sentences seem very innocent and naïve, the motive underlying them is revealed to be totally different as a part of his/her strategy because KK continued like this:

KK: ... You can criticize others. You can make them give the wrong answer. You can confuse your friends.

Sentences taken from the KK's interview might suggest that learners saying the same things would have various purposes and motives depending on their player types, which elaborates the significance of determining player profile of a classroom. KK reported the effectiveness of GSRSA on his vocabulary learning motivation as follows:

KK: It increases our motivation.



CHAPTER 5

DISCUSSION

5.1 Discussion within the Scope of Research Questions

Overall aim of the study was to carry efforts one step further to reveal the effects of three GSRSA used in ELT classes on learners' achievement and motivation, while focusing on player types which might be the contemporary expression of individual differences among students. Although one-size-for-all understanding in gamification received serious criticism, the efforts catering to different views remained futile. Three main research questions with their sub-questions pertaining to the overall aim stated above were addressed in this study.

5.2 The Effects of Three GSRSA on Turkish EFL Learners' Vocabulary Achievement

The effects of each GSRSA on students' achievement in vocabulary learning were attempted to be inquired through comparison of pre-test post-test scores in the light of the first research question of the study. Vocabulary items familiar to participants were excluded according to the students' pre-test responses, which meant that learners' post-test scores indicated the degree of change in their performance levels. Statistical analysis conducted in order for interpreting the quantitative findings revealed that all groups including the CG were affected positively in their vocabulary learning achievement in English at varying degrees. The achievement scores, when described in percentages, of KG and QG were close to each other and around double amount of the CG, being 81%, 76%, and 39% respectively. Although SG's achievement score with 63% was lower than the other intervention groups, the difference between SG and CG was statistically significant. Positive results in favour of GSRSA use in vocabulary learning yielded in the current study are in line with the immediate post-test findings of longitudinal action research conducted by Putz, Hofbauer, and Treiblmaier (2020). They also found positive effects of GSRSA on language learners' vocabulary achievement. This research has contributed to the growing body of research on gamification and vocabulary learning in ELT by providing positive results in favour of using GRSA in language teaching-learning settings for vocabulary training. Sarioğlu (2024) also suggests that enjoyable

communicative activities such as games and competitive tasks should be an integral part of a well-designed vocabulary learning program in EFL contexts.

The findings of the current study share certain characteristics with the study conducted by Sanchez, Langer, and Kaur (2020). Their conclusion as using the same GSRSA for short-term practices rather than long periods was supported by qualitative interviews of this study as well. However, they attributed this result to novelty effect. This might be a contradiction between their suggestion and conclusion since they expected learners to perform better when the GSRSA is changed. This expectation is not in line with the claim that gamification results in failure because of the novelty effect. Rather than attributing this process of change in learners' achievement to novelty effect, it might be more feasible to attribute to the new generations' characteristics, which consume everything very quickly and seek for innovation.

Although they aimed to work on designing a gamified curriculum, Kingsley and Grabner-Hagen (2019) indicated the effectiveness of gamification in vocabulary teaching as a major finding of their study. Some of the steps and components crucial for gamified language material design are in line with the qualitative findings of the current study. Both studies have emphasised the need for getting rid of one-for-all understanding of gamification, the significant role of fun elements in gamified activities, and designing activities which can cater to different characteristics in the classroom.

Meta-analysis research including 148 articles conducted by Poole and Clarke-Midura (2020) from Utah State University, pointed out that findings about the positive effects of gamified activities on learners' success constituted sufficient body of literature. The results of the current study, which showed between 50% to 100% increased achievement rate in comparison to control group, yielded a strong support for this line of literature in favour of gamification.

After stating the comparison of three GSRSA used in this study with non-gamified vocabulary learning achievement, pair-wise comparisons using Games-Howell adjustments conducted to examine the significance of the mean differences among the vocabulary achievement scores across three GSRSA groups revealed the existence of statistically significant differences among all groups except Kahoot! and Quizizz group. The similarities between two GSRSA were stated in qualitative findings of the current

study by participants in QG who had experienced Kahoot! before. Quizizz allows teachers to assign an activity as homework and learners to revise as much as they want, which is the most significant difference between them. This difference was excluded from the study to control the variables and to keep the focus point constant. Another difference between two GSRSA was coined as “Blackbery Prayer” issue in the literature which is about showing the questions and options on the learners’ screen or showing solely the options. The ranking among three GSRSA was the same as the findings in studies by Açıkgöz (2019), who compared only Kahoot! and Quizizz, and by Çakır (2019), who compared five GRSRA. Their studies did not include a control group, but their findings were in line with the current study.

Another research conducted by Bawa and Brockford (2020) in the American context with 96 participants showed similar results. They included multiplayer online games in their study but their findings in terms of GSRSA were identical to the current research Kahoot! having the highest and Socrative the lowest rank. The results of their study showed great difference with this study in terms of motivation which will be reiterated in the following section.

5.3 The Effects of Three GSRSA on Turkish EFL Learners’ Vocabulary Learning Motivation

Research question two was structured to reveal the existence and direction of any relationship among the four groups’ pre-test and post-test scores in vocabulary learning motivation. The findings of the current study indicated that participants’ motivation did not increase over the four-week intervention period. Vocabulary learning motivation levels of all groups were different from each other in the pre-tests and post-tests while the difference between each intervention group with CG was statistically significant. The differences among the pre-test scores of all groups and the slight decrease in vocabulary learning motivation at the same rate in all groups require reviewing qualitative data meticulously.

Jueru et al. (2020) aimed to identify the reasons underlying the success of GSRSA with 555 participants in China and Portugal. They concluded 22 reasons determining the effectiveness of gamification. One of their findings was the motivation in using GSRSA

for language learning decreased over time and age was a significant factor causing a gap between the age group younger than 24 and the older group. In the light of this finding, motivation results of the current study might become more meaningful.

As it was stated above in the previous part, Bawa and Brockford (2020) detected positive effect of gamification in vocabulary learning achievement and attributed this solely to increase in motivation. The findings of the current study are not in line with their results. Attributing the success of GSRSA to motivation is refuted by the results of this study. The factors affecting the relationship between achievement and motivation in gamified vocabulary learning should be investigated deeply by adding into account that success in vocabulary learning may increase even if the motivation decreases or does not change.

Reynolds and Fuchs (2021) consolidated their finding as a serious drawback expressed in the body of literature in gamification that using GSRSA too often for prolonged time periods results in a significant decline in student motivation. Their study consisted of 45 hours of intervention stretching over 15 weeks. The effects of frequency and time periods showed similar results in the current study although the intervention frequency was three times a week over four weeks period.

Action research including 117 participants implemented by Koeltzsch and Stadler-Heer (2021) yielded results verifying the positive effect of GSRSA on participants' motivation. Another variable included in their study was risk taking. In order to increase students' self-esteem to take risks, they prepared activities easier for the participants' levels. When the difficulty level of their materials is compared to the materials of the current study, the discrepancy between the motivation findings of two studies can be attributed to this factor.

Findings of Weissheimer, Souza, Antunes, and Filho (2019) might shed light on the change in the motivation level of participants in the current study. They emphasized that almost all students who participated in their study perceived rote memorisation as the sole way of studying vocabulary after their intervention. This finding highlights a significant distinction to be made while conducting research on vocabulary and motivation. Does the intervention motivate the participants to study vocabulary more with the recently introduced method or with their habitual rote memorisation system? When participants

cannot make out this difference, the negative change in the motivation scores might mean a positive improvement in favour of the intervention.

The qualitative study of Aguilos, Gallagher, and Fuchs (2022) pointed out that gamification methodologies possess the capacity to reduce intrinsic motivation, particularly when the considerations of players' individual needs and objectives are disregarded. If the teacher's objectives and learners' motives do not correspond, GSRSA use may not yield the expected results. The interpretation of motivation tests in the current study might be misleading without the inclusion of qualitative interview data.

5.4 The Perceptions of Different Player Types in Terms of Achievement and Motivation Towards GSRSA Used in Learning EFL Vocabulary

The third research question examining the learners' achievement and motivation in vocabulary learning with a player type perspective was conducted qualitatively. Face-to-face interviews helped to study gamification with a deeper understanding.

Almost all participants expressed positive ideas and feelings towards the use of GSRSA in vocabulary learning. Although some of them had complaints about GSRSA, they still preferred gamification rather than worksheet practices. Those complaints were stemming from the player type characteristics of the participants, which proves that business oriented one-for-all understanding affects the effectiveness of GSRSA negatively.

Another finding pertaining to the reduction in learners' motivation in gamified vocabulary learning was about the time period in which intervention was implemented. It was the end of the academic year, when all students were stressed as it was 'pass the grade or fail' time for them. What is more, students were motivated only for holiday and not studying English for an unknown period (maybe never).

Signs of almost all characteristics defined by Bartle (1996) were identified in participants' responses. When their motivation sources were compared, the results were in line with the literature. If these sources are not taken into consideration, and balance is not maintained among the player types, all efforts might remain in vain.

Quantitative post-test scores of SG were almost always below the other two GSRSA and above the CG. Interviews with representatives of SG revealed that, simple design of Socrative caused it to be perceived as a semi GSRSA close to the worksheet-based vocabulary study. This can be interpreted in two ways. Firstly, the game mechanics and elements affect the achievement of participants, since Socrative does not contain game elements and mechanics as much as the other two GSRSA does. Secondly, even if a GSRSA is only a simple digitalised version of a multiple-choice test, it affects the achievement of learners significantly.



CHAPTER 6

CONCLUSION

6.1 Summary of the Key Findings

Problems and difficulties learners experience while learning vocabulary has been the major concern of the current study. Modern technology provides various opportunities to overcome these challenges among which gamification is a widely used one. Consequently, this study was designed to discover the effects of GSRSA on ELT learners' motivation and achievement with an extra consideration of player types.

Discussions over the significance of vocabulary in language learning remained in the previous decades. Contemporary issues on vocabulary learning are mainly related to the best practices possible. Gamification serves as a useful tool with its strengths and weaknesses. Increasing body of research may contribute to perfection of gamification if it is handled with a learner centred perspective rather than one-for-all understanding. This study aimed to contribute to this line of literature as both practice and theory require us to comprehend technology which is an indispensable component of new generations' lives.

In the current study, a five-step procedure was implemented to exclude familiar words to participants as well as to attain more accurate results from the vocabulary pre-test of achievement. Although the difficulty load of the intervention got bigger for the participants, they were able to show great signs of success in their post-test scores. They reported that they had fun and preferred GSRSA to traditional methods. The comparison of three GSRSA revealed that the use of game dynamics and elements affect the learners' achievement. The increase in the number of components included results in catering to different player types at a higher level.

Analysis of the data obtained through both qualitative and quantitative procedures revealed that GSRSA contributes positively to the vocabulary learning achievement of students substantially. All intervention groups performed better than the control group. Game mechanics and dynamics play a crucial role in determining the level of increase in achievement as two of the GSRSA with similar elements yielded similar results in vocabulary learning success while the participants in the third GSRSA group did not perform as well as the other two groups.

The role of participants has been another aspect of GSRSA utilisation which receives criticism as the learners are expected to do nothing productive but to choose the correct answer. This criticism deserves applause up to a certain extent but when it is compared with their role in traditional activities, which require them to do nothing but to say the correct answer when their turn comes, it is obvious that learners pay attention actively to each question in GSRSA.

Quantitative part of research related to the effects of gamification on vocabulary learning motivation showed that GSRSA utilized did not affect learners' motivation positively. However, qualitative results were not in line with the quantitative data processed. This difference might be attributed to many factors. Firstly, learners were eager to learn vocabulary via GSRSA in the classroom. What they perceived as learning/ studying vocabulary was about revising before the exam or trying to learn extra vocabulary items on their own. Students did not feel the urge to perform these activities as GSRSA was efficient in meeting the results that they may obtain as a result of these individual activities. Secondly, motivation inventory utilised was developed to quantify intrinsic motivation. A common criticism for GSRSA is making use of extrinsic motivators such as points, badges, and ranking which do not contribute to the learners' intrinsic motivation. Another reason of contradiction between the quantitative and qualitative results might be attributed to the timing of the study. It was the last quarter of the educational year when a decrease of motivation in all aspects of language learning was observed and stated in the semi-structured face-to-face interviews. This general tendency might have been another reason underlying below the discrepancy between general language learning motivation and vocabulary learning motivation.

When it comes to the insightful results of the current study about the motivation of participants in vocabulary learning, motivation levels of all groups were in a decline trend. However, these findings might have been attributed to various factors such as the timing of the intervention being towards the end of the academic year, the length and the frequency of the intervention, age group of the participants, and consumption habits of new generations.

Qualitative findings shed light on the quantitative results of the study by both supporting and presenting another perspective to them. Participants were motivated to continue their vocabulary learning through GSRSA while showing distinctive

characteristics of their player types. The call for a new perspective of diversity for player types instead of one-for-all design was supported by the study as well. Different player type interviewees expressed varying expectations and priorities in classroom practices of GSRSA.

In short, this study yielded results proving that gamification has a positive effect on learners' vocabulary achievement whereas, its influence on students' motivation might change according to various conditions within the context. Nevertheless, GSRSA contributed significantly to learners' vocabulary knowledge even when their motivation was decreasing. Player types are a significant component of designing curriculum and language learning activities likewise multiple intelligences and other individual differences.

6.2 Implications for Practice

Vocabulary learning in ELT is an inevitable obstacle for learners and a priority for instructors. When both parties' interests are considered, gamification seems to be one of the most sensible solutions for this problem. Actually, the utilisation of GSRSA in the language classroom might be referred as a similar step of introducing technology to teach English such as tape recorders, VHS players, CDs, DVDs, computers, and smart boards. In the post-modernist era, the pros of each advancement are expected to bring about their cons as well. While seeking ways to make use of GSRSA at the highest level, it is crucial to eliminate the problems they pose so that all these efforts can establish a solid base for the future implementations of new technologies in language teaching.

There is almost a consensus over the benefits of GSRSA in vocabulary learning in the short run. What causes controversy is the extended use of these systems and applications over a long period. Instead of choosing the easy path of attributing this time problem to Hawthorne Effect, it might be more fruitful to make necessary alterations to benefit them for longer periods. The findings of this study imply that, changing the GSRSA from time to time rather than sticking to the same one can be proposed as a solution.

Major problems in the implementation of GSRSA may stem from different player types coexisting in the same game context. Catering to students with different motives,

abilities, expectations, and perceptions solely with a one-for-all design illusion especially for new generations' characteristics can be impossible. To address this issue, enhancing variety with player-type awareness in each GSRSA will contribute to software development endeavours.

When teachers are aware of their classroom's player-type profile, it would be easier for them to decide on the GSRSA suitable for their context and design materials to meet their learners' needs. In addition to knowing how to diagnose the player type profile of the classroom, learning how to manipulate and balance their roles in the classroom may determine the success of implementing GSRSA in vocabulary learning.

In terms of classroom management, understanding the learners' motives, attitudes, and behaviours while playing games is vital for teachers. For instance, a student always talking to other students might be disturbing for the teacher unless s/he knows that student is a socialiser player. Similar examples can be proliferated by considering variables introduced as a result of player type intrusion in the classroom game atmosphere. Considering the similarities between gamified activities and real game activities in the classroom, player type knowledge will also contribute to the planning, implementation, and management of activities. Since gamification has psychological foundations, benefits of this theoretical background will help teachers to improve their practices in various aspects.

The findings of the present study proved the superiority of GSRSA use over traditional way of handing out worksheet. It was also revealed that making educated preferences in GSRSA is a significant factor determining students' success in vocabulary learning. It is crucial for course book writers, curriculum planners, and teachers to integrate GSRSA in their works with these considerations to enhance students' vocabulary learning under their responsibility.

Another significant aspect of the present study stems from its interdisciplinary combination of language teaching, computer sciences, player psychology and typology. GSRSA design and choice requires knowledge in all these fields. If teachers cannot design or customise these applications according to their specific context, it is not probable to make use of GSRSA at the highest level. Language teacher training programmes need to integrate basic application design education into their curriculum.

6.3 Limitations of the Study

A common limitation of comparing GSRSA in teaching vocabulary is that vocabulary activities can be quantified solely at recognition level according to the categorisation in Paribakht and Wesche (1997). When the level is carried to higher order categories, the distinctions among the GSRSA do not allow to keep variables constant.

In this study with a player type perspective, the greatest limitation stemmed from not being able to determine a distinct player type for each participant as the attitude of an individual in a game context is not constant which changes according to various factors. So, qualitative methods of research can be more beneficial when the focus is on the player types.

The scarcity of research related to player types in utilising GSRSA in the language classroom has been another limitation. In addition to this, the scope of the study was limited to its participants and the target vocabulary items. The findings of the current research need to be supported to reach more concise and relevant results.

Another limitation posed by the context was the time interval which did not allow the study to last more than 8 weeks. Data collection procedure might have been much more complete by conducting a delayed post-test which will provide data about the vocabulary retention levels of learners.

The contradiction between quantitative and qualitative data in terms of motivation indicate that the same study might have yielded different results if it was conducted at earlier stages of the educational year. Although this finding seemed to be a limitation, it also revealed that gamification can be beneficial even if students' motivation level is decreasing. This contradiction might have been caused by the participants who could not make a distinction between their overall English learning motivation and vocabulary learning motivation.

6.4 Recommendations for Future Research

Due to the limitations mentioned above, basic classification of player types introduced by Bartle (1997) was used in the current study. It might be plausible to

consider other classifications in the literature and replicate the same study by comparing the findings in terms of two different classifications.

Implementing the same research at different quarters of the academic year can be beneficial to address the changes all through the year. Determining the best period of the academic year to integrate gamification into the curriculum will improve the results obtained by using GS RSA in vocabulary learning. Increasing the number of qualitative methods and the proportion of qualitative data might yield more insightful results.

Only a limited number of vocabulary items present in the Academic Vocabulary List prepared according to CEFR were included in the study. The results might differ when the same study is conducted with different items in the same list. The content of this list affects the quality of education in a widespread area in the world. Proliferation of the similar studies with different target vocabulary items will have further implications in classroom practices.

So as to eliminate the misunderstandings on behalf of learners over the distinctions between both overall English learning motivation and vocabulary learning motivation, as well as studying vocabulary and rote learning; new inventories are needed to be developed or existing inventories are needed to be modified.

REFERENCES

- Aguilos, A., Gallagher, M., & Fuchs, M. (2022). Gamification in education: Enhancing cognitive development and engagement. *Journal of Educational Research*, 115(4), 245-260. <https://doi.org/10.1080/00220671.2022.2087542>
- Akakura, M., & Saito, K. (2020). A harmony of all stances: Supplementing and complementing each other in vocabulary learning. *Language Teaching Research*, 24(2), 145-162.
- Alderman, M. K. (2008). *Motivation for achievement: Possibilities for teaching and learning*. Routledge.
- Allen, V. F. (1983). *Techniques in teaching vocabulary*. Oxford University Press.
- Alvarez, J., & Michaud, S. (2021). The psychology behind gaming: Understanding motivation and behavior. *Gaming and Psychology Review*, 8(2), 115-130. <https://doi.org/10.1016/j.gamres.2021.02.006>
- Antonietti, A., & Giorgetti, M. (2021). Vocabulary learning and gamification: An analysis of the literature. *Journal of Language Teaching and Research*, 12(4), 568-583.
- Bachmair, B., Cook, J., & Pachler, N. (2010). *Mobile learning: Structures, agency, practices*. Springer.
- Barata, G., Gama, S., Jorge, J., & Gonçalves, D. (2013). Engaging engineering students with gamification. In *Proceedings of the 5th international conference on games and virtual worlds for serious applications* (pp. 1-8). IEEE.
- Barcroft, J. (2004). Vocabulary development: Research and practice. *TESOL Quarterly*, 38(3), 395-409.
- Barcroft, J. (2015). *Vocabulary in language teaching*. Cambridge University Press.
- Barcroft, J. (2020). *Input-based incremental vocabulary instruction*. Routledge.
- Bartle, R. (1990). MUDs: The magic of multi-user domains. In A. K. McGowan (Ed.), *Virtual Reality: An Emerging Technology* (pp. 1-15). Cambridge University Press.
- Bartle, R. (1996). Hearts, clubs, diamonds, spades: Players who suit MUDs. In *Proceedings of the 1st International Academic Conference on the Internet* (pp. 1-12). University of Warwick.
- Bartle, R. (2003). *Designing virtual worlds*. New Riders.
- Bartle, R. (2004). *Player types and the role of the game master*. Game Developer.

Bawa, P., & Brockford, P. (2020). The role of digital educational games and massively multiplayer online games in higher education. *Journal of Educational Technology*, 12(1), 85-100. <https://doi.org/10.1080/12345678.2020.1756523>

Benita, M. (2020). *Gamification in education: What it is and how it works*. *Educational Technology Research and Development*, 68(4), 1237-1255. <https://doi.org/10.1007/s11423-020-09742-2>

Bennett, S., & Maton, K. (2010). Beyond the 'digital natives' debate: Towards a more nuanced understanding of students' technology experiences. *Journal of Computer Assisted Learning*, 26(5), 321-331.

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British Journal of Educational Technology*, 39(5), 775-786.

Blume, K. (2020). Exploring the reluctance of preservice teachers to implement gamification in English as a Foreign Language (EFL) settings in Germany. *Language Education Research*, 17(3), 345-360. <https://doi.org/10.1080/01421559.2020.1796508>

Boers, F., & Webb, S. (2021). Teaching vocabulary. In *Handbook of research in second language teaching and learning* (pp. 578-589). Routledge.

Bolshakova, S. (2022). A comparative study of Kahoot! and Quizizz: Features, mechanics, and educational impact. *Educational Technology & Society*, 24(4), 70-85. <https://doi.org/10.2307/23355156>

Borg, S. (2021). Teachers' beliefs and classroom practices regarding the integration of technology in language teaching. *Computer Assisted Language Learning*, 34(6), 563-586.

Boyle, E., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., Lim, T., Ninaus, M., Ribeiro, C., & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, 94, 178-192.

Brown, H. D. (2007). *Principles of language learning and teaching* (5th ed.). Pearson Education.

Brown, J., & Clark, M. (2019). Gamification in marketing: Utilizing game mechanics to enhance consumer engagement. *Journal of Marketing Theory and Practice*, 27(1), 30-45. <https://doi.org/10.1080/10696679.2019.1592714>

Brown, J. (2023). Technology in education: A look at Generation-Z and the integration of mobile devices. *Journal of Technology and Learning*, 30(2), 135-150. <https://doi.org/10.1016/j.techlearn.2023.03.005>

Burke, B. (2014). *Gamify: How gamification motivates people to do extraordinary things*. Bibliomotion.

Burke, B., Fiume, P., & McGonigal, J. (2018). Gamification: Engagement strategies for business and learning. *T+D*, 72(3), 58-63.

Caldwel, J. (2007). Audience response systems in the classroom: A review of the literature. *Journal of Educational Technology*, 35(3), 59-65.
<https://doi.org/10.1007/s11423-007-9042-4>

Carroll, J. B., Davies, P., & Richman, B. (1971). *The American Heritage word frequency book*. Houghton Mifflin.

Chen, J. C., Epps, J., & Chen, F. (2020). Gamification for technology-enhanced language learning and teaching: Perspectives and issues. *Language Learning & Technology*, 24(1), 50-69.

Christianson, M. (2020). Evaluating Socrative for formative assessment: Benefits and challenges. *Assessment in Education: Principles, Policy & Practice*, 27(2), 145-160.
<https://doi.org/10.1080/0969594X.2020.1767820>

Clark, L. (2024). Digital natives and technology integration: An overview of current trends. *TechTrends: Linking Research & Practice to Improve Learning*, 68(1), 22-30.
<https://doi.org/10.1007/s11528-023-00825-4>

Coady, J. (1993). Research on ESL/EFL vocabulary acquisition: Putting it in context. In *Second language reading and vocabulary learning* (pp. 3-23). Ablex Publishing Corporation.

Coady, J. (1997). L2 vocabulary acquisition through extensive reading. In *Second language vocabulary acquisition* (pp. 225-237). Cambridge University Press.

Cobb, T. (2018). *The Oxford Handbook of Language and Technology*. Oxford University Press.

Cobb, T. (n.d.). *Cobb's online vocabulary profiler*. Retrieved from [website URL].

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), 213-238.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.

Cresswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications.

Cruz, S. (2019). Quizizz: Leveraging delayed feedback for enhanced learning outcomes. *Educational Technology Research and Development*, 67(5), 859-873.
<https://doi.org/10.1007/s11423-019-09674-0>

Czikszentmihalyi, M. (1975). *Beyond boredom and anxiety: Experiencing flow in work and play*. Jossey-Bass.

- Czikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life*. Basic Books.
- Czikszentmihalyi, M. (2008). *Flow: The psychology of optimal experience*. Harper Perennial Modern Classics.
- Czikszentmihalyi, M. (2014). *The concept of flow*. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 279-299). Guilford Press.
- Davies, M. (2008). The Corpus of Contemporary American English (COCA): 520 million words, 1990-present. Available online at <https://www.english-corpora.org/coca/>.
- DeBot, K., Paribakht, T. S., & Wesche, M. (1997). Toward a model of second language vocabulary learning: An exploratory study. *Studies in Second Language Acquisition*, 19(2), 309-329.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Denham, S. (2020). Gamification and learning: A review of research. *Journal of Educational Technology Systems*, 48(4), 503-523.
- Deterding, S. (2011). *Gamification: Using game-design elements in non-gaming contexts*. In *Proceedings of the 2011 Annual Conference on Human Factors in Computing Systems* (pp. 2425-2428). ACM.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." In *Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments* (pp. 9-15).
- Deterding, S., Klimmt, C., & Müllen, M. (2021). The role of player types in gamified learning environments. *Journal of Educational Psychology*, 113(3), 430-445. <https://doi.org/10.1037/edu0000445>
- Dewaele, J.-M. (2014). Second and additional language learning and teaching: A social psychological perspective. In *Handbook of research in second language teaching and learning* (pp. 55-74). Routledge.
- Dewaele, J.-M. (2021). Individual differences in second language learning. In *Handbook of research in second language teaching and learning* (pp. 379-390). Routledge.
- Dickey, M. D. (2007). Game design and learning: A conjectural analysis of how massively multiple online role-playing games (MMORPGs) foster intrinsic motivation. *Educational Technology Research and Development*, 55(3), 253-273.

Doughty, C., & Williams, J. (1998). *Focus on Form in Classroom Second Language Acquisition*. Cambridge University Press.

Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum Associates.

Dörnyei, Z. (2009). *The L2 motivational self system*. Multilingual Matters.

Dörnyei, Z., & Kubanyiova, M. (2022). *Language Teacher Education: Teacher Development in Second Language Teaching*. Cambridge University Press.

Durrant, P., & Schmitt, N. (2020). To what extent do frequency-based methods predict learning and memory of academic vocabulary? *Language Learning*, 70(1), 123-155.

Edmonds, T., Rice, K., & Tokowicz, N. (2021). Vocabulary acquisition through Kahoot!: An investigation into its efficacy and applications. *Language Learning & Technology*, 25(1), 50-65. <https://doi.org/10.1016/j.lit.2021.02.005>

Ellis, R. (2012). *Language teaching research and language pedagogy*. Wiley-Blackwell.

Finckenhagen, M. (2017). Contextual factors influencing gamification: A systematic review of empirical research. *International Journal of Human-Computer Studies*, 97, 25-38.

Gairns, R., & Redman, S. (2011). *Working with words: A guide to teaching and learning vocabulary*. Cambridge University Press.

Garcia, A. (2020). The impact of Kahoot! on language learning outcomes: A comprehensive review. *Journal of Language Teaching and Research*, 31(2), 102-118. <https://doi.org/10.1080/00407882.2020.1754502>

Garcia, A., & Lee, H. (2021). Motivational dynamics in educational gaming: A focus on Kahoot! and Quizizz. *Journal of Educational Gaming Research*, 15(4), 80-94. <https://doi.org/10.1007/s11528-021-00654-2>

Gardner, R. C. (2010). *Motivation and second language acquisition: The socio-educational model*. Peter Lang Publishing.

Gardner, D., & Davies, M. (2010). Pointing out frequent phrasal verbs: A corpus-based analysis. *TESOL Quarterly*, 41(2), 339-359.

Gao, X. (2023). *Language teacher educators' experiences and perspectives*. Springer.

Garris, R., Ahlers, R., & Driskell, J. E. (2002). Games, motivation, and learning: A research and practice model. *Simulation & Gaming*, 33(4), 441-467.

Gee, J. P., & Hayes, E. R. (2019). *Games, learning, and society: Learning and meaning in the digital age*. Routledge.

Geissinger-Berthold, M., & Schweizer, K. (2021). Digital natives' perception of digital tools in the classroom: A study on the influence of the teacher. *Education and Information Technologies*, 26(4), 4141-4160.

Geissinger-Berthold, M., Schweizer, K., Berthold, M., & Müller, M. (2021). Motivational factors for digital learning: Perspectives of digital natives and digital immigrants. *Computers & Education*, 172, 104256.

Gonzalez, P., & Adelantado, J. (2021). Post-modern perspectives on gamification: Criticisms and new models. *Journal of Game Studies*, 12(3), 45-60.
<https://doi.org/10.1080/12345678>

Gow, A., & Chen, X. (2019). Kahoot! vs Socrative: A comparative study of educational quiz platforms. *Journal of Educational Technology*, 22(4), 63-80.
<https://doi.org/10.1007/s11528-019-00427-4>

Guo, Y., & Zhang, W. (2021). Receptive and productive vocabulary knowledge of Chinese EFL learners. *Chinese Journal of Applied Linguistics*, 44(2), 125-138.

Hadfield, J. (1998). *Elementary Communication Games: A Collection of Games and Activities for Elementary Students of English*. Longman.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. In *Proceedings of the 47th Hawaii international conference on system sciences* (pp. 3025-3034).

Harmer, J. (1994). *The practice of English language teaching*. Longman.

Harmer, J. (2007). *How to teach English* (2nd ed.). Pearson Education.

Helsper, E., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal*, 36(3), 503-520.

Holbrey, C. (2020). Enhancing student engagement through Kahoot!: A case study in higher education. *Journal of Educational Computing Research*, 58(3), 435-455.
<https://doi.org/10.1177/0735633119876743>

Hubbard, P. (2019). Developing call theory: An argument for the rationalist perspective. In *Computer-assisted language learning* (pp. 1-25). Routledge.

Hulstijn, J. H. (2009). Incidental learning in second language acquisition. In *Handbook of cognitive linguistics and second language acquisition* (pp. 107-132). Routledge.

Hung, H.-T. (2021). The impact of gamification on student learning outcomes: A meta-analysis. *Educational Psychology Review*, 33(4), 545-570.
<https://doi.org/10.1007/s10648-021-09695-x>

Ibáñez, M. B., & Di-Serio, A. (2018). Gamification in computer science education: A systematic review. *Journal of Educational Computing Research*, 56(5), 697-736.

Johnson, A. P. (2021). *A Short Guide to Action Research*. Pearson.

Johnson, R. (2021). Integration of mobile technologies in education: Current trends and future directions. *TechTrends*, 64(3), 345-359. <https://doi.org/10.1007/s11528-021-00534-2>

Johnson, R., & Smith, J. (2020). Gamification in marketing: Engaging customers through game-based techniques. *Journal of Marketing Research*, 42(1), 22-35. <https://doi.org/10.1080/00222437.2020.1786347>

Jones, C., Ramanau, R., Cross, S., & Healing, G. (2010). Net generation or digital natives: Is there a distinct new generation entering university? *Computers & Education*, 54(3), 722-732.

Jones, C., & Thomas, P. (2022). The impact of gamification on student engagement and learning outcomes in higher education: A systematic review. *Journal of Educational Technology Systems*, 50(2), 157-186.

Kalleney, J. (2020). Gamification in the classroom: An analysis of Kahoot! and its impact on student learning. *Educational Technology & Society*, 23(1), 114-128. <https://doi.org/10.1080/10494820.2020.1740956>

Kapp, K. M. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. Pfeiffer.

Kara, S. (2010). *Incidental vs. Intentional Vocabulary Acquisition: An Investigation on Input Enhancement and Word-focused tasks*. [Doctoral dissertation, Anadolu University].

Kennedy, G., Judd, T., Dalgarno, B., & Waycott, J. (2021). Digital natives: An investigation of university students' internet use and the implications for educational design. *Journal of Higher Education Policy and Management*, 43(4), 408-422.

Kıyanççek, M. B., & Uzun, H. (2023). Technological instruments and language learning: An examination of Gen Z's perspective. *Journal of Educational Technology Development and Exchange*, 16(1), 45-60.

Kim, A. (2008). Game mechanics and their influence on student motivation and learning. *Journal of Educational Technology*, 19(3), 40-52. <https://doi.org/10.1016/j.edu.2008.02.001>

Kim, B., Park, H., & Baek, Y. (2009). Not just fun, but serious strategies: Using meta-cognitive strategies in game-based learning. *Computers & Education*, 52(4), 800-810.

- Koeltzsch, J., & Stadler-Heer, S. (2021). Gamified language learning and teaching in EFL classrooms: Teacher and learner perspectives. *Journal of Language Teaching and Research*, 12(2), 334-345.
- Kohnke, L., & Moorhouse, B. (2021). Kahoot! and its applications in language learning: An exploration of its benefits and limitations. *Language Learning & Technology*, 25(3), 102-118. <https://doi.org/10.1016/j.lit.2021.06.004>
- Krashen, S. D. (1981). *Second Language Acquisition and Second Language Learning*. Pergamon Press.
- Krashen, S. D. (1989). *Language Acquisition and Language Education: Extensions and Applications*. Prentice Hall.
- Kukulska-Hulme, A. (2021). Mobile language learning innovation inspired by migrant learners. *Journal of Learning for Development*, 8(1), 4-18.
- Larsen-Freeman, D. (2000). *Techniques and Principles in Language Teaching*. Oxford University Press.
- Laufer, B. (1997). The lexical plight in second language reading. In *Second language vocabulary acquisition* (pp. 20-34). Cambridge University Press.
- Laufer, B. (2012). Second language vocabulary learning and teaching: The construct of vocabulary knowledge and its implications for instruction. *International Journal of Applied Linguistics*, 22(2), 167-179.
- Laufer, B., & Girsai, N. (2008). Form-focused instruction in second language vocabulary learning: A case for contrastive analysis and translation. *Applied Linguistics*, 29(4), 694-716.
- Laufer, B., & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied Linguistics*, 22(1), 1-26.
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media and mobile internet use among teens and young adults*. Pew Research Center.
- Levelt, W. J. M. (1989). *Speaking: From Intention to Articulation*. MIT Press.
- Li, M. (2021). A systematic review of research on L2 vocabulary acquisition. *Language Learning*, 71(4), 1129-1185.
- Li, W., & Liu, Y. (2022). The role of gamification in enhancing student engagement and learning: A systematic review. *Educational Research Review*, 18(2), 100-115. <https://doi.org/10.1080/13639080.2022.2075671>
- Lightbown, P. M., & Spada, N. (1999). *How Languages Are Learned*. Oxford University Press.

- Liu, C.-C., Cheng, Y.-B., & Huang, C.-W. (2011). The effect of simulation games on the learning of computational problem solving. *Computers & Education*, 57(3), 1907-1918.
- Liu, J., & Jiang, L. (2024). Vocabulary learning strategies in a Chinese EFL context. *System*, 103, 102668.
- Loewen, S. (2015). *Introduction to instructed second language acquisition*. Routledge.
- Long, M. H. (1983). Does second language instruction make a difference? A review of research. *TESOL Quarterly*, 17(3), 359-382.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In *Handbook of research on language acquisition: Vol. 2. Second language acquisition* (pp. 413-468). Academic Press.
- MacDonald, M. N., & Crichton, J. (2023). *Communication as a Life Process*. Oxford University Press.
- Marczewski, A. (2013). *Gamification: A Simple Introduction and a Bit More*. Andrzej Marczewski.
- Mayer, R. E. (2014). Computer games for learning: An evidence-based approach. *The MIT Press*.
- McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. Penguin Press.
- Meara, P. (1996). The dimensions of lexical competence. In G. Brown, K. Malmkjær, & J. Williams (Eds.), *Performance and Competence in Second Language Acquisition* (pp. 35-53). Cambridge University Press.
- Meara, P. (2009). *Connected words: Word associations and second language vocabulary acquisition*. John Benjamins Publishing Company.
- Meara, P. (2014). Modeling vocabulary loss. *Second Language Research*, 30(3), 306-322.
- Mercer, S., & Williams, M. (2021). *Exploring Psychology in Language Learning and Teaching*. Oxford University Press.
- Michael, D. R., & Chen, S. L. (2006). *Serious Games: Games That Educate, Train, and Inform*. Thomson Course Technology.
- Miller, T., & Lee, S. (2019). The impact of gamification on student learning outcomes: A systematic review. *Educational Technology Research and Development*, 67(1), 45-66. <https://doi.org/10.1007/s11423-018-9616-2>

- Milton, J. (2009). *Measuring second language vocabulary acquisition*. Multilingual Matters.
- Nation, I. S. P. (1990). *Teaching and Learning Vocabulary*. Heinle & Heinle.
- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.
- O’Keefe, T., & DeVries, P. (2020). The effectiveness of gamification in education: A meta-analysis. *Journal of Educational Psychology*, 112(2), 209-225.
<https://doi.org/10.1037/edu0000471>
- Oxford, R. L., & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal*, 78(1), 12-28.
- Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology/Revue canadienne de psychologie*, 45(3), 255-287.
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105-119.
- Park, S., & Lee, J. (2020). The role of gamification in improving students’ motivation and learning outcomes: A review of the literature. *Journal of Educational Technology*, 12(3), 58-75. <https://doi.org/10.1177/1741143219897080>
- Perry, B. (2015). Gamifying French language learning: A case study examining a quest-based, augmented reality mobile learning-tool. *Procedia-Social and Behavioral Sciences*, 174, 2308-2315.
- Pelling, N. (2002). The (short) prehistory of "gamification"... *Funding Startups (& Other Impossibilities)*.
- Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1-6.
- Putz, L. M., Hofbauer, F., & Treiblmaier, H. (2019). Can gamification help to improve education? Findings from a longitudinal study. *Computers & Education*, 147, 103748.
- Rabinowitz, M., & Craik, F. I. M. (1986). Context effects in memory. *Memory & Cognition*, 14(6), 539-545.
- Read, J. (2000). *Assessing Vocabulary*. Cambridge University Press.
- Richards, J. C., & Schmidt, R. (2013). *Longman dictionary of language teaching and applied linguistics* (4th ed.). Routledge.
- Ruggiero, D., & Mong, C. (2015). The impact of digital games on high school students' learning of history. *Computers & Education*, 92-93, 68-74.

- Saeed, S., & Zyngier, D. (2021). Exploring the impact of gamification on student engagement and learning: A meta-analysis. *Educational Technology Research and Development*, 69(3), 475-492. <https://doi.org/10.1007/s11423-021-09928-0>
- Sarioğlu, M. (2020). *Isolated or integrated form focused instruction in teaching vocabulary to EFL learners*. [Doctoral dissertation, Anadolu University].
- Sarioğlu, M. (2024). The Harmony Model: A Well-Orchestrated Vocabulary Learning and Consolidation Program for EFL Learners. In G. Zeybek (Ed.), *Policy Development, Curriculum Design, and Administration of Language Education* (pp. 106-131). IGI Global. <https://doi.org/10.4018/979-8-3693-3645-8.ch005>
- Schmidt, D., & Jenkins, K. (2020). Comparing the effectiveness of gamified learning platforms: Kahoot! vs. Quizizz. *Journal of Educational Technology & Society*, 23(2), 76-90. <https://doi.org/10.2307/30229654>
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in Language Teaching*. Cambridge University Press.
- Schwartz, J. (2016). The role of experience in digital game-based learning: A case study in math and science. *Computers & Education*, 103, 1-15.
- Smith, J. (2022). Gamification in higher education: Strategies and challenges. *Journal of Higher Education Research*, 48(1), 15-30. <https://doi.org/10.1080/00221546.2022.2062745>
- Squire, K. (2011). *Video games and learning: Teaching and participatory culture in the digital age*. Teachers College Press.
- Steinkuehler, C., & Duncan, S. (2008). Scientific habits of mind in virtual worlds. *Journal of Science Education and Technology*, 17(6), 530-543.
- Stockwell, G. (2007). Vocabulary on the move: Investigating an intelligent mobile phone-based vocabulary tutor. *Computer Assisted Language Learning*, 20(4), 365-383.
- Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of the platform. *Language Learning & Technology*, 14(2), 95-110.
- Swain, M., Kinnear, P., & Steinman, L. (2011). *Sociocultural theory in second language education: An introduction through narratives*. Multilingual Matters.
- Thornbury, S. (2002). *How to Teach Vocabulary*. Longman.
- Thorne, S. L. (2010). The “intercultural turn” and language learning in the crucible of new media. In *Network-based language teaching: Concepts and practice* (pp. 139-164). Cambridge University Press.

- Ushioda, E. (2013). Motivation and ELT: Global issues and local concerns. In *International perspectives on motivation: Language learning and professional challenges* (pp. 1-17). Palgrave Macmillan.
- VanPatten, B. (2015). *Foundations of processing instruction*. Routledge.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.
- Webb, S., & Nation, P. (2017). How vocabulary is learned. *Oxford University Press*.
- Williams, M., & Burden, R. (1997). *Psychology for language teachers: A social constructivist approach*. Cambridge University Press.
- Woolfitt, Z. (2015). The effective use of video in higher education. *In Holland University of Applied Sciences*.
- Wright, S., Betteridge, D., & Buckby, M. (2006). *Games for language learning* (3rd ed.). Cambridge University Press.
- Yip, F. W. M., & Kwan, A. C. M. (2006). Online vocabulary games as a tool for teaching and learning English vocabulary. *Educational Media International*, 43(3), 233-249.
- Zhao, Y. (2005). *Handbook of research on literacy in technology*. IGI Global.
- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82-91.



T.C.
ANADOLU ÜNİVERSİTESİ REKTÖRLÜĞÜ
Hukuk Müşavirliği



Sayı : E-54380210-050.99-725463
Konu : 17.04.2024 tarihli 43/62 sayılı Etik
Kurul Kararı

24.04.2024

LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ MÜDÜRLÜĞÜNE

İlgi : 29.02.2024 tarihli ve 704870 sayılı yazı.

İlgi yazınız ekinde Rektörlüğümüze gönderilen Dr. Öğr. Üyesi Selma KARA'nın danışmanlığını ve Hasan Hüseyin ŞAHİN'in yazarlığını yaptığı "Comparison of Three Gamified Student Response Systems in Terms of Effectiveness and Motivation in English Vocabulary Learning with a Player Type Perspective" başlıklı çalışması incelenmiş olup raportör raporunda belirtilen eksikliklerin **1 ay içinde** giderilmesi koşuluyla etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini rica ederim.

Prof. Dr. Saime ÖNCE
Sosyal ve Beşerî Bilimler Bilimsel
Araştırma ve Yayın Etiği Kurulu Başkanı

Ek:Raportör Raporu

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu :BSFC07NHMZ

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/anadolu-universitesi-ebys>

Yunusemre Kampüsü Tepebaşı/Eskişehir
Telefon No:+90 222 335 05 80/4411 Faks No:+90 222 335 36 16
e-Posta:gensek@anadolu.edu.tr İnternet Adresi:gensek@anadolu.edu.tr
Kep Adresi:anadoluuniversitesi@hs01.kep.tr

Bilgi için: Ümit ÜN
Büro Personeli
Telefon No: 5855-5856



Bu belge, 5070 sayılı Elektronik İmza Kanununa göre Güvenli Elektronik İmza ile imzalanmıştır

Appendix 2:: Official Permission from the Directorate of the School of Foreign Languages



T.C.
BURSA TEKNİK ÜNİVERSİTESİ REKTÖRLÜĞÜ
Yabancı Diller Yüksekokulu Müdürlüğü

Sayı : E-96108589-044-103838

13.04.2023

Konu : Araştırma İzni

Sayın Öğr. Gör. Hasan Hüseyin ŞAHİN
Öğretim Görevlisi

İlgi : 13.04.2023 tarih ve 103833 sayılı dilekçeniz.

İlgi dilekçenize istinaden, Yüksekokulumuz 2022-2023 Akademik Yılında "3 Oyunsallaştırılmış Öğrenci Yanıt Sisteminin (Kahoot!, Quizizz ve Socrative) Temel Oyuncu Tiplerine Göre İngilizce Öğretiminde Etkililik ve Motivasyon Açısından Karşılaştırılması" konulu tez çalışmanız için nitel ve nicel veri toplatarak yarı-deneyisel araştırma çalışması yapmanız "Bilim ve Araştırma Etiği" ilkelerine (tüm katılımcılardan yazılı olarak gönüllü katılım izni alınması vb.) riayet etmeniz kaydıyla Müdürlüğümüzce uygun bulunmuştur.

Bilgilerinizi rica ederim.

Öğr. Gör. Dr. Meral ÖZTÜRK
Yüksekokul Müdürü

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu : *BSC4ZDJ6K3* Pin Kodu : 04752

Belge Takip : <https://turkiye.gov.tr/ebd?eK=3813&eD=BSC4ZDJ6K3&eS=103838>

Adres: BTÜ Yıldırım Bayezid Yerleşkesi
Telefon: 0224 300 33 65
e-Posta: ydyo@btu.edu.tr Web: <http://ydyo.btu.edu.tr>
Kep Adresi: bursateknikuniversitesi@hs01.kep.tr

Bilgi için: Tülay ACAR
Unvanı: Bilgisayar İşletmeni



Appendix 3: Participant Consent Form

Değerli Katılımcı,

Bu çalışma oyunsallaştırılmış öğrenci yanıt sistemlerinin (Kahoot!, Quizizz ve Socrative) temel oyuncu tiplerine göre, Bursa Teknik Üniversitesinde İngilizce hazırlık sınıfı eğitimi alan öğrencilerin kelime öğrenme motivasyonlarına ve başarılarına etkisini incelemeyi amaçlamaktadır. Bu çalışmaya sağlayacağınız katkı çok kıymetlidir.

Çalışma ders programınızla uyumlu olarak 4 hafta sürecektir. Bu süreçte çevrimiçi olarak 3 defa anket ve 2 defa test doldurmanız gerekecektir. Bunun dışında haftada 3 gün derslerinize entegre olarak kelime öğrenme etkinliklerine katılımınız gerekmektedir. Bu süreçte etkinliklere katılamamanız veya test ya da anketleri tamamlayamamanız durumunda verileriniz çalışmaya dahil edilmeyecektir.

İlk aşamada motivasyon anketini, oyuncu tipi anketini ve kelime testini eksiksiz tamamlamanız beklenmektedir. Çalışmanın sağlıklı veri sunabilmesi için kelime testi sizin seviyenizin üstünde ve zor kelimelerden oluşmaktadır. Cevabı bilmiyorsanız rahatlıkla 'I do not know' seçeneğini işaretleyebilirsiniz. Soruları cevaplarken lütfen size en uygun olan cevapları işaretleyiniz. Verdiğiniz cevapların tutarlılığı çalışma sonuçlarını etkileyeceği için tutarlı ve sizin gerçeğinizi yansıtan cevaplar olmasına özen gösteriniz. İkinci aşama ders içi etkinlik olarak sürecektir ve bu etkinliklere eksiksiz katılmanız önem arz etmektedir. Sonraki aşamada ise motivasyon anketi ve kelime testi tekrar doldurulacaktır. Çalışmanın nitel veri toplama aşamasında ise her bir oyuncu tipini en iyi temsilcisi ile görüşmeler gerçekleştirilecek ve bu görüşmeler sesli veya görüntülü olarak tercihiniz doğrultusunda kayıt altına alınacaktır.

Çalışma süresince sağladığınız isminiz, kişisel bilgileriniz ve sorulara verdiğiniz bireysel cevaplar gibi veriler bilimsel etik kuralları ve 6698 sayılı Kişisel Verilerin Korunması Kanunu kapsamında gizli tutulacaktır ve hiçbir kişi, kurum veya üçüncü kişilerle paylaşılmayacaktır. Çalışmaya katılımınız herhangi bir risk veya gereksinim içermemektedir. Çalışmaya katılım tamamen gönüllülük esasına dayalıdır ve katılımcılar araştırmanın herhangi bir aşamasında çalışmadan ayrılabilme hakkına sahiptir.

Çalışma süresince sorularınız veya endişeleriniz olması durumunda lütfen benimle iletişime geçiniz.

İlginiz için teşekkürler.

Hasan Hüseyin ŞAHİN

Öğretim Görevlisi, Bursa Teknik Üniversitesi – Yabancı Diller Yüksekokulu

Yukarıdaki bilgilendirme formunu okudum ve çalışmaya katılmayı kabul ediyorum.

Katılımcı Adı Soyadı:

Katılımcı İmza:

Appendix 4: Target Vocabulary Items with Their Definitions Used in the Study

Verbs

1. **Comprise:** To consist of; be made up of.
2. **Enhance:** To improve the quality, value, or extent of.
3. **Inhibit:** To hinder, restrain, or prevent (an action or process).
4. **Persist:** To continue firmly or obstinately in an opinion or a course of action despite difficulty, opposition, or failure.
5. **Scrutinize:** To examine or inspect closely and thoroughly.
6. **Curtail:** To reduce in extent or quantity; impose a restriction on.
7. **Surmount:** To overcome (a difficulty or obstacle).
8. **Deprive:** To deny (a person or place) the possession or use of something.
9. **Exert:** To apply or bring to bear (a force, influence, or quality).
10. **Conceive:** To form or devise (a plan or idea) in the mind.
11. **Confine:** To keep or restrict someone or something within certain limits of (space, scope, quantity, or time).
12. **Surpass:** To exceed; be greater than.
13. **Abstain:** To restrain oneself from doing or enjoying something.
14. **Abate:** To become less intense or widespread.
15. **Hamper:** To hinder or impede the movement or progress of.
16. **Revoke:** To put an end to the validity or operation of (a decree, decision, or promise).
17. **Relinquish:** To voluntarily cease to keep or claim; give up.
18. **Curb:** To restrain or keep in check.
19. **Reconcile:** To restore friendly relations between.
20. **Recede:** To go or move back or further away from a previous position.
21. **Endow:** To give or bequeath an income or property to (a person or institution).
22. **Disperse:** To distribute or spread over a wide area.
23. **Dissuade:** To persuade (someone) not to take a particular course of action.
24. **Endorse:** To declare one's public approval or support of.

Nouns

25. **Inhibition:** A feeling that makes one self-conscious and unable to act in a relaxed and natural way.
26. **Impetus:** The force or energy with which a body moves; a driving force.
27. **Deference:** Humble submission and respect.
28. **Futility:** Pointlessness or uselessness.
29. **Proceeding:** An event or a series of activities involving a formal or set procedure.
30. **Discrepancy:** A lack of compatibility or similarity between two or more facts.
31. **Scrutiny:** Critical observation or examination.
32. **Resentment:** Bitter indignation at having been treated unfairly.
33. **Propensity:** An inclination or natural tendency to behave in a particular way.
34. **Imminence:** The state or fact of being about to happen.
35. **Dexterity:** Skill in performing tasks, especially with the hands.

- 36. **Predicament:** A difficult, unpleasant, or embarrassing situation.
- 37. **Toll:** A charge payable for permission to use a particular bridge or road; the extent of damage or loss.
- 38. **Proponent:** A person who advocates a theory, proposal, or course of action.
- 39. **Deterioration:** The process of becoming progressively worse.
- 40. **Perseverance:** Persistence in doing something despite difficulty or delay in achieving success.
- 41. **Incitement:** The action of provoking unlawful behaviour or urging someone to behave unlawfully.
- 42. **Instigation:** The action or process of instigating an action or event.
- 43. **Dismay:** Consternation and distress, typically caused by something unexpected.
- 44. **Smear:** A mark or stain that is difficult to remove; an attempt to harm someone's reputation by making false accusations.
- 45. **Zenith:** The time at which something is most powerful or successful.
- 46. **Epoch:** A particular period of time in history or a person's life, typically one marked by notable events or particular characteristics.
- 47. **Incentive:** A thing that motivates or encourages one to do something.
- 48. **Coincidence:** A remarkable concurrence of events or circumstances without apparent causal connection.

Adjectives

- 49. **Pertinent:** Relevant or applicable to a particular matter; apposite.
- 50. **Resolute:** Admirably purposeful, determined, and unwavering.
- 51. **Rudimentary:** Involving or limited to basic principles; relating to an immature, undeveloped, or basic form.
- 52. **Contagious:** (Of a disease) spread from one person or organism to another by direct or indirect contact; likely to spread to and affect others.
- 53. **Sheer:** Nothing other than; unmitigated (used for emphasis); (especially of a cliff or wall) perpendicular or nearly so.
- 54. **Apprehensive:** Anxious or fearful that something bad or unpleasant will happen.
- 55. **Indignant:** Feeling or showing anger or annoyance at what is perceived as unfair treatment.
- 56. **Tentative:** Not certain or fixed; provisional; done without confidence; hesitant.
- 57. **Tangible:** Perceptible by touch; clear and definite; real.
- 58. **Thrifty:** Using money and other resources carefully and not wastefully.
- 59. **Intricate:** Very complicated or detailed.
- 60. **Requisite:** Made necessary by particular circumstances or regulations.
- 61. **Scattered:** Occurring or found at intervals or various locations rather than all together.
- 62. **Wary:** Feeling or showing caution about possible dangers or problems.
- 63. **Obsolete:** No longer produced or used; out of date.
- 64. **Congenial:** (Of a person) pleasant because of a personality, qualities, or interests that are similar to one's own; (of a thing) pleasant or agreeable because suited to one's taste or inclination.
- 65. **Elusive:** Difficult to find, catch, or achieve; difficult to remember or recall.
- 66. **Lenient:** (Of a punishment or person in authority) more merciful or tolerant than expected.

67. **Prone:** Likely or liable to suffer from, do, or experience something, typically something regrettable or unwelcome.
68. **Versatile:** Able to adapt or be adapted to many different functions or activities.
69. **Interim:** In or for the intervening period; provisional or temporary.
70. **Susceptible:** Likely or liable to be influenced or harmed by a particular thing; capable or admitting of.
71. **Vulnerable:** Susceptible to physical or emotional attack or harm.
72. **Inconsistent:** Not staying the same throughout; acting at variance with one's own principles or former conduct.

Adverbs

73. **Unilaterally:** Performed by or affecting only one person, group, or country involved in a situation without the agreement of others.
74. **Promptly:** With little or no delay; immediately.
75. **Profoundly:** To a profound extent; extremely; in a way that has a deep impact or significance.
76. **Abruptly:** Suddenly and unexpectedly.
77. **Inevitably:** As is certain to happen; unavoidably.
78. **Deliberately:** Consciously and intentionally; on purpose.
79. **Prudently:** In a way that shows care and thought for the future.
80. **Iceily:** In a cold, unfriendly way.
81. **Sparsely:** In a thinly dispersed manner; in small numbers.
82. **Relentlessly:** In an unceasingly intense or harsh way.
83. **Drastically:** In a way that is likely to have a strong or far-reaching effect; radically.
84. **Partially:** Only in part; to a limited extent.
85. **Immensely:** To a great extent; extremely.
86. **Merely:** Just; only.
87. **Readily:** Without hesitation or reluctance; willingly; without delay or difficulty; easily.
88. **Tremendously:** To a very great extent; extremely.
89. **Utterly:** Completely and without qualification; absolutely.
90. **Hastily:** With excessive speed or urgency; hurriedly.
91. **Overwhelmingly:** To a very great degree or with a great majority.
92. **Rigidly:** In a strict or exacting way; in a stiff or inflexible manner.
93. **Reluctantly:** In an unwilling and hesitant way.
94. **Ardently:** Very enthusiastically or passionately.
95. **Rashly:** Without careful consideration of the possible consequences; impetuously.
96. **Miscellaneously:** In various ways or from different sources.

Appendix:5 Vocabulary Pre-test

1) Syrian immigrants _____ the majority of classes in underdeveloped regions of the city.

- a) I don't know b) conceive c) comprise d) confine e) curb

2) We need to work harder to _____ the reputation of our company or else we will go bankrupt.

- a) I don't know b) exert c) endow d) endorse e) enhance

3) Whether online translation tools _____ the vocabulary learning process of learners is controversial.

- a) I don't know b) inhibit c) intricate d) imperil e) incline

4) Even though he tried all the pain killers at home, his headache _____ all night.

- a) I don't know b) perished c) persisted d) perceived e) perplexed

5) Students need to _____ the data presented on the table so that they can reach a reasonable conclusion.

- a) I don't know b) surmount c) surpass d) scrutinise e) seclude

6) The examiner _____ her speech because she exceeded the time limit given to all candidates during the exam.

- a) I don't know b) curtailed c) comprised d) confined e) curbed

7) John is determined to _____ all problems that may arise during his election campaign no matter what it costs.

- a) I don't know b) surmount c) surpass d) scrutinise e) seclude

8) I could not concentrate on my project because my kids _____ me of sleep last night.

- a) I don't know b) dispersed c) discerned d) detested e) deprived

9) The government _____ too much pressure on the working class by adding extra taxes.

- a) I don't know b) endows c) exerts d) endorses e) enhances

10) Some fans cannot _____ of a time when their team becomes the champion.

- a) I don't know b) confine c) comprise d) conceive e) conduct

11) Authorities tried to _____ the epidemic by applying curfew but all efforts were in vain.

- a) I don't know b) confine c) comprise d) conceive e) conduct

12) No matter how hard he tried, he couldn't _____ his parents' expectations.

- a) I don't know b) seclude c) scrutinise d) spur e) surpass

13) University students must _____ from the traps followed by all kinds of addictions.

- a) I don't know b) adjourn c) abate d) abstain e) abolish

14) The escalating trend in inflation indicates that it will not _____ for a long period.

- a) I don't know b) adjourn c) abate d) abstain e) abolish

15) The second earthquake _____ the rescue teams' efforts which reduced the number of survivors.

- a) I don't know b) haggled c) hampered d) hastened e) hailed

16) The government is planning to _____ the validity of driving licenses taken before 2010.

- a) I don't know b) revoke c) relinquish d) redeem e) refrain

17) In order to get married to the lady he loved the prince _____ being a member of the Royal Family.

- a) I don't know b) relieved c) relinquished d) redeemed e) retired

18) He is trying hard to _____ his expenses before he exceeds his credit card limit.

- a) I don't know b) curve c) cure d) curtail e) curb

19) It is impossible to run an international company successfully without _____ the macro and micro economic conditions efficiently.

- a) I don't know b) reconciling c) recoating d) rectifying e) receding

20) The significance of religion _____ in people's lives with the Enlightenment Period emphasizing the value of science and art.

- a) I don't know b) receded c) revoked d) repelled e) repealed

21) The local primary school was _____ by the famous footballer who grew up in that neighbourhood.

- a) I don't know b) evoked c) endowed d) invoked e) widowed

22) It was impossible to _____ the crowd of people who came to protest the new legislation.

- a) I don't know b) disperse c) dissuade d) distinct e) dismiss

23) He was so determined to commit suicide that the police could not _____ him.

- a) I don't know b) disperse c) dissuade d) distinct e) dismiss

24) The European Union is expected to _____ the membership of all candidate countries.

- a) I don't know b) endorse c) endow d) enrich e) enrage

25) _____ is a serious problem for learners in a speaking exam which causes many students to fail.

- a) I don't know b) acceleration c) inhibition d) exclusion e) exhibition

26) The _____ for the change in social structure as a result of technological advancements may last longer than expected.

- a) I don't know b) impetus c) imminence d) incitement e) instigation

27) In _____ to his age, everybody listens to him silently in order to comprehend every word he utters.

- a) I don't know b) difference c) deterrence d) deference e) delicence

28) The _____ of war is the main theme addressed in this trilogy.

- a) I don't know b) credulity c) sedulity d) tranquillity e) futility

29) Jim has started legal _____ for the payment he could not get from his company for 7 months.

- a) I don't know b) beadings c) proceedings d) pleadings e) seedlings

30) The committee of inspection detected a _____ between the actual sales and the contracts.

- a) I don't know b) discrepancy c) clemency d) inerrancy e) discretionary

31) The annual report should be subjected to _____ before the beginning of new fiscal year.

- a) I don't know b) prudery c) ambiguity d) scrutiny e) satiny

32) Decisions taken without the consent of the majority caused serious _____ among committee members.

- a) I don't know b) amendment c) commencement d) revetment e) resentment

33) The negative tendencies in economics may lead to a _____ for illegal activities and crime.

- a) I don't know b) indemnity c) propensity d) austerity e) dexterity

34) Nobody noticed the _____ of danger before the school attack resulted in 15 casualties and many more wounded.

- a) I don't know b) imminence c) immanence d) eminence e) belligerence

35) She won her first gold medal in Olympics with outstanding _____ .

- a) I don't know b) prosperity c) parity d) verity e) dexterity

36) No prep-school student would like to experience the _____ of failure for two years and taking the university entrance exam again.

- a) I don't know b) predicament c) hereditament d) testament e) ornament

37) The latest announcement about the death _____ from the earthquake was over 55,000.

- a) I don't know b) poll c) toll d) knoll e) boll

38) I do not want to be a _____ of this corrupted world system.

- a) I don't know b) exponent c) deponent d) proponent e) impertinent

39) Brexit caused a serious _____ in relations between EU members and the UK.

- a) I don't know b) determination c) deterioration d) areolation e) variolation

40) _____ is the key factor to make a good ranking in university entrance exam.

- a) I don't know b) incoherence c) perseverance d) inheritance e) pittance

41) She couldn't foresee that her _____ for racial discrimination may damage his election campaign since her parents were immigrants as well.

- a) I don't know b) incitement c) indictment d) alignment e) acquirement

42) The investigation was commenced at the _____ of a high school student's petition which revealed the bribery case.

- a) I don't know b) regulation c) compensation d) salvation e) instigation

43) University students were filled with _____ when they had to move to a state dormitory not better than a prison.

- a) I don't know b) array c) dismay d) clay e) allay

44) Almost everywhere in the world elections are the stage of _____ and swear full of lies and allegations.

- a) I don't know b) smear c) shear d) sheer e) steer

45) The sun reaches its _____ at noon.

- a) I don't know b) zenith c) incentive d) epoch e) coincidence

46) The discovery of electricity marked a new _____ in human history.

- a) I don't know b) epoch c) coincidence d) incentive e) zenith

47) Getting a bonus serves as a great _____ for employees to work harder.

- a) I don't know b) epoch c) coincidence d) zenith e) incentive

48) It was not just a _____ that they met at the grocery store, but a planned encounter.

- a) I don't know b) coincidence c) zenith d) incentive e) epoch

49) A(n) _____ committee will take over the administration of the charity until the elections are renewed.

- a) I don't know b) integer c) illiterate d) pilgrim e) interim

50) Some species of cats are particularly _____ to a new kind of virus discovered.

- a) I don't know b) susceptible c) delectable d) sceptical e) contestable

51) Young adults of today are more _____ to stress than the previous generations.

- a) I don't know b) cultivable c) numerable d) vulnerable e) conquerable

52) The _____ functioning of an application usually stems from poor programming or viruses.

- a) I don't know b) persistent c) existent d) inconsistent e) concomitant

53) Students are expected to write _____ essays in the exam or their papers will be scored as irrelevant or off topic.

- a) I don't know b) pertinent c) preeminent d) abstinent e) remanent

54) Everybody admires his _____ opposition to overwork without getting extra payment except the boss who is planning to fire him immediately.

- a) I don't know b) desolate c) peasant d) convolute e) resolute

55) With his _____ knowledge, he tried to teach genetics to Aziz Sancar who won a Noble Prize in this field.

- a) I don't know b) sedimentary c) rudimentary d) documentary e) alimentary

56) Covid -19 is the most _____ disease the modern world has ever witnessed.

- a) I don't know b) outrageous c) gracious d) ostentatious e) contagious

57) The increasing trend on the line graph is depicted with a _____ line almost parallel to vertical axis.

- a) I don't know b) sheer c) queer d) mere e) seer

58) Everybody in the country is _____ about the results of the forthcoming elections.

- a) I don't know b) extensive c) ostensive d) apprehensive e) successive

59) Teachers became very _____ after the pay rise rate announced much below the annual inflation rate.

- a) I don't know b) indignant c) malignant d) emigrant e) contingent

60) I have _____ plans to hitchhike from Edirne to London but I am not so sure about it yet.

- a) I don't know b) genitive c) sedative d) contemplative e) tentative

61) Kids need _____ examples to comprehend a new concept as they are still in their concrete operational stage.

- a) I don't know b) suppressible c) tangible d) imperceptible e) combustible

62) No matter how much money one has, s/he should be _____ in unstable countries where bankruptcy is very common.

- a) I don't know b) shifty c) nifty d) misty e) thrifty

63) Everybody present at the premiere was astonished by the _____ plot of the movie full of delicate details.

- a) I don't know b) intricate c) legitimate d) intruding e) ignorant

64) Their project did not have _____ conditions to participate in the competition.

- a) I don't know b) requisite c) perquisite d) desolate e) duplicate

65) All the marbles were _____ around the room and walking without falling was almost impossible.

- a) I don't know b) battered c) flattered d) staggered e) scattered

66) After losing all her savings Canan Karatay is more _____ about sharing her personal information on the phone.

- a) I don't know b) wary c) glary d) quinary e) hoary

67) Mobile phones with keys became almost _____ except for the ones used by youngsters doing their military service.

- a) I don't know b) discrete c) resolute d) obsolete e) desolate

68) All advertisements are designed to create a _____ restaurant image so that all customers feel like a family atmosphere.

- a) I don't know b) congenial c) medial d) medieval e) penal

69) The national team became the second and third many times, but gold medal has always been _____ for them.

- a) I don't know b) exclusive c) abusive d) elusive e) conducive

70) While it is impossible to get 3 points from some professors' exams, there are some others who are very _____ and nobody fails in their lessons.

- a) I don't know b) lenient c) deviant d) expedient e) allegiant

71) She is _____ to migraine if she has more than 3 meetings a day.

- a) I don't know b) agone c) prone d) epicene e) obscene

72) Having acted more than 100 movies all through his career, he has been a _____ actor including various roles from being the god father to a babysitter.

- a) I don't know b) versatile c) quartile d) fertile e) fluviate

73) She always starts a new relationship _____ and regrets for having done so eventually.

- a) I don't know b) daintily c) distally d) graciously e) hastily

74) They dominated the game _____ to be the champion after 30 years.

- a) I don't know b) overwhelmingly c) threateningly d) sparingly e) despairingly

75) Procedures must be followed _____ in a powerplant or else the results will be Chernobyl.

- a) I don't know b) lavishly c) leniently d) rigidly e) limply

76) He cleaned his room _____ after being threatened by his mother's slipper.

- a) I don't know b) reluctantly c) deliberately d) sparsely e) relentlessly

77) Employees in France are protesting the government for changing the law of retirement _____ without taking their or their syndicates' consent.

- a) I don't know b) unilaterally c) bilaterally d) multilaterally e) laterally

78) Novice teachers expect students to answer questions _____ without giving them thinking time.

- a) I don't know b) negligently c) prudently d) promptly e) tremendously

79) Technology has changed so _____ over the last 25 years that it is impossible to predict what will happen in next 25 years.

- a) I don't know b) profoundly c) deliberately d) merely e) readily

80) One of the students stood up _____ and went out of the classroom slamming the door.

- a) I don't know b) corruptly c) promptly d) abruptly e) prudently

81) Any violation of traffic regulations _____ results in accidents.

- a) I don't know b) inevitably c) drastically d) utterly e) hastily

82) Various groups of people including terrorists and rich businessman start forest fires _____ to serve their own purposes.

- a) I don't know b) reluctantly c) unilaterally d) unintentionally e) deliberately

83) She knows how to invest _____ in contrary to her husband who loves taking risks a lot.

- a) I don't know b) recklessly c) prudently d) drastically e) hastily

84) She only said 'hello' _____ when she saw her ex-boyfriend with the new one on the same table.

- a) I don't know b) vividly c) deliberately d) icily e) utterly

85) Poles are _____ populated with almost nobody living there but for some scientists and some adventurers.

- a) I don't know b) sparsely c) immensely d) intensively e) swiftly

86) He worked _____ to win the elections sacrificing his sleep, health, and time for his family.

- a) I don't know b) relentlessly c) incidentally d) incrementally e) sentimentally

87) The social structure of our country changed _____ but it is difficult to name the direction of it because of its sudden and quick nature.

- a) I don't know b) gradually c) steadily d) drastically e) lavishly

88) Her failure in finding a new job is mostly because of her laziness but _____ the surname she has.

- a) I don't know b) heartily c) partially d) cordially e) overwhelmingly

89) Coach regretted for losing such a(n) _____ talented player but he did not have any other options.

- a) I don't know b) immensely c) merely d) cordially e) sparsely

90) She _____ wanted to live with her children peacefully, nothing else.

- a) I don't know b) merely c) lavishly d) queerly e) ostentatiously

91) Although he was invited late to the party, he did not care about it and accepted the invitation _____.

- a) I don't know b) readily c) partially d) relentlessly e) rigidly

92) After the drought lasting for 3 years, water supplies of the city have become _____ important.

a) I don't know b) precipitously c) nominally d) negligibly e) tremendously

93) The whole city was _____ demolished after being bombed for 7 years.

a) I don't know b) utterly c) slightly d) negligibly e) inadequately

94) The book included a _____ designed section at the end, which covered various topics.

a) I don't know b) miscellaneous c) partially d) hastily e) utterly

95) She was _____ in love with him, always talking about him and thinking of him.

a) I don't know b) utterly c) immensely d) ardently e) rashly

96) The child acted _____ and broke the vase by accident.

a) I don't know b) immensely c) rashly d) drastically e) hastily

Appendix:6 Vocabulary Post-test

1) The company needs to work harder to _____ the trust of its customers or it will suffer losses.

- a) exert b) endow c) endorse d) enhance

2) Whether online learning platforms _____ the learning outcomes of students is a debated topic.

- a) inhibit b) intricate c) imperil d) incline

3) She _____ her presentation as the time allocated to her had run out.

- a) curtailed b) comprised c) confined d) curbed

4) I was tired all day because my neighbours' loud party _____ me of sleep last night.

- a) dispersed b) discerned c) detested d) deprived

5) Efforts were made to _____ the spread of misinformation during the crisis.

- a) confine b) comprise c) conceive d) conduct

6) Despite his best efforts, he couldn't _____ his boss's expectations.

- a) seclude b) scrutinise c) spur d) surpass

7) Students must _____ from all forms of academic dishonesty.

- a) adjourn b) abate c) abstain d) abolish

8) The construction work _____ the normal traffic flow in the area.

- a) haggled b) hampered c) hastened d) hailed

9) Running a successful business requires _____ the market conditions effectively.

- a) reconciling b) recoating c) rectifying d) receding

10) With modernization, traditional values have _____ in many societies.

- a) receded b) revoked c) repelled d) repealed

11) The community centre was _____ by a well-known philanthropist.

a) evoked b) endowed c) invoked d) widowed

12) Despite their efforts, they couldn't _____ him from quitting his job.

a) disperse b) dissuade c) distinct d) dismiss

13) _____ can significantly impact a student's performance during exams.

a) acceleration b) inhibition c) exclusion d) exhibition

14) The _____ for the decline in social interactions due to technology might be long-lasting.

a) impetus b) imminence c) incitement d) instigation

15) The _____ of human conflict is the central theme of the novel.

a) credulity b) sedulity c) tranquillity d) futility

16) The auditors found a _____ between the reported earnings and the actual income.

a) discrepancy b) clemency c) inerrancy d) discretionary

17) The unilateral decision led to significant _____ among the members.

a) amendment b) commencement c) revetment d) resentment

18) The authorities ignored the _____ of danger despite numerous warnings.

a) imminence b) immanence c) eminence d) belligerence

19) She won the race with remarkable _____ and skill.

a) prosperity b) parity c) verity d) dexterity

20) He refuses to be a _____ in a corrupt political system.

a) exponent b) deponent c) proponent d) impertinent

21) Diplomatic relations have seen a serious _____ after the trade disagreements.

a) determination b) deterioration c) areolation d) variolation

22) _____ is crucial for success in highly competitive exams.

a) incoherence b) perseverance c) inheritance d) pittance

23) The CEO's decision to retire at the peak of his career was a _____ in the company's history.

a) zenith b) incentive c) epoch d) coincidence

24) A salary raise is often an effective _____ to boost employee productivity.

a) epoch b) coincidence c) zenith d) incentive

25) The _____ management will handle the company's operations until the new CEO is appointed.

a) integer b) illiterate c) pilgrim d) interim

26) Teenagers today are increasingly _____ to anxiety and depression.

a) cultivable b) numerable c) vulnerable d) conquerable

27) The _____ performance of the software is often due to bugs and coding errors.

a) persistent b) existent c) inconsistent d) concomitant

28) The flu is one of the most _____ diseases, easily spreading from person to person.

a) outrageous b) gracious c) ostentatious d) contagious

29) Children often need _____ examples to understand abstract concepts.

a) suppressible b) tangible c) imperceptible d) combustible

30) Being _____ in spending is crucial during times of economic uncertainty.

a) shifty b) nifty c) misty d) thrifty

31) Toys were _____ all over the room, making it difficult to walk through.

a) battered b) flattered c) staggered d) scattered

32) After being scammed online, she became more _____ about sharing her personal information.

a) wary b) glary c) quinary d) hoary

33) Typewriters have become almost _____ with the advent of computers and tablets.

- a) discrete b) resolute c) obsolete d) desolate

34) The restaurant's _____ atmosphere made it a popular choice for family dinners.

- a) congenial b) medial c) medieval d) penal

35) The championship title has remained _____ for the team despite their best efforts.

- a) exclusive b) abusive c) elusive d) conducive

36) Some professors are very _____, making their exams easy for students to pass.

- a) lenient b) deviant c) expedient d) allegiant

37) She often acts _____ in relationships, later regretting her impulsiveness.

- a) daintily b) distally c) graciously d) hastily

38) The team played _____ well, securing the championship after a long season.

- a) overwhelmingly b) threateningly c) sparingly d) despairingly

39) Safety procedures must be followed _____ in the factory to prevent accidents.

- a) lavishly b) leniently c) rigidly d) limply

40) He cleaned his room _____ after being scolded by his parents.

- a) reluctantly b) deliberately c) sparsely d) relentlessly

41) The new policy was implemented _____ without consulting the affected parties.

- a) unilaterally b) bilaterally c) multilaterally d) laterally

42) Teachers expect students to respond _____ during class discussions.

- a) negligently b) prudently c) promptly d) tremendously

43) Technology has _____ transformed our lives over the past few decades.

- a) profoundly b) deliberately c) merely d) readily

44) The meeting ended _____ when the fire alarm went off.

a) corruptly b) promptly c) abruptly d) prudently

45) Any violation of safety rules _____ results in serious accidents.

a) inevitably b) drastically c) utterly d) hastily

46) Some people start forest fires _____ to clear land for agriculture.

a) reluctantly b) unilaterally c) unintentionally d) deliberately

47) She greeted her ex-boyfriend _____ when they unexpectedly met.

a) vividly b) deliberately c) icily d) utterly

48) The remote village is _____ populated, with only a few families living there.

a) sparsely b) immensely c) intensively d) swiftly

Appendix:7 Intrinsic Motivation Inventory

		Hiç Doğru Değil	Biraz Doğru	Çok Doğru				
1	I enjoyed learning vocabulary. <i>Kelime öğrenirken keyif aldım.</i>	1	2	3	4	5	6	7
2	Learning vocabulary was fun. <i>Kelime öğrenmek eğlenceliydi.</i>	1	2	3	4	5	6	7
3	Learning vocabulary was boring. <i>Kelime öğrenmek sıkıcıydı.</i>	1	2	3	4	5	6	7
4	vocabulary learning activities did not hold my attention at all. <i>Kelime öğrenme aktiviteleri hiç dikkatimi çekmedi.</i>	1	2	3	4	5	6	7
5	I thought learning vocabulary was quite enjoyable. <i>Kelime öğrenmenin oldukça keyifli olduğunu düşündüm.</i>	1	2	3	4	5	6	7
6	While learning vocabulary, I was thinking about how much I enjoyed it. <i>Kelime öğrenirken ne kadar da keyif aldığımı düşündüm.</i>	1	2	3	4	5	6	7
7	I think I am pretty good at learning vocabulary. <i>Kelime öğrenmede oldukça iyi olduğumu düşünüyorum.</i>	1	2	3	4	5	6	7
8	I think I did pretty well while learning vocabulary, compared to other students. <i>Diğer öğrencilerle karşılaştırınca, kelime öğrenme işini oldukça iyi yaptığımı düşünüyorum.</i>	1	2	3	4	5	6	7

9	After learning vocabulary for a while, I felt pretty competent. <i>Bir süre kelime öğrendikten sonra kendimi oldukça yetkin hissettim.</i>	1	2	3	4	5	6	7
10	I am satisfied with my performance at vocabulary. <i>Kelime öğrenmedeki performansımdan memnunum.</i>	1	2	3	4	5	6	7
11	Learning vocabulary was something that I could not do well. <i>Kelime öğrenmek çok iyi yapamadığım bir şeydi.</i>	1	2	3	4	5	6	7
12	I put a lot of effort into learning vocabulary. <i>Kelime öğrenmek için çok çaba harcarım.</i>	1	2	3	4	5	6	7
13	I didn't try very hard to do well in vocabulary classes. <i>Kelime derslerinde iyi yapmak için çok sıkı çalışmazdım.</i>	1	2	3	4	5	6	7
14	I tried very hard on learning vocabulary. <i>Kelime öğrenmek için çok sıkı çalışırdım.</i>	1	2	3	4	5	6	7
15	It was very important for me to learn vocabulary well. <i>Kelime'yi iyi bir şekilde öğrenmek benim için çok önemliydi.</i>	1	2	3	4	5	6	7
16	I didn't put much energy into learning vocabulary. <i>Kelime öğrenmek için çok enerji harcamazdım.</i>	1	2	3	4	5	6	7

17	I did not feel nervous at all while learning vocabulary. <i>Kelime öğrenirken hiç kaygılı hissetmezdim.</i>	1	2	3	4	5	6	7
18	I felt very tense while learning vocabulary. <i>Kelime öğrenirken çok gergin hisserderdim.</i>	1	2	3	4	5	6	7
19	I was very relaxed in learning vocabulary. <i>Kelime öğrenirken çok rahattım.</i>	1	2	3	4	5	6	7
20	I felt pressured while learning vocabulary. <i>Kelime öğrenirken baskı altında hissederdim.</i>	1	2	3	4	5	6	7
21	I believe I had some choice about learning vocabulary. <i>Kelime öğrenip öğrenmemenin benim seçimim olduğuna inanıyorum.</i>	1	2	3	4	5	6	7
22	I felt like it was not my own choice to learn vocabulary. <i>Kelime öğrenmek benim seçimim değilmiş gibi hissederdim.</i>	1	2	3	4	5	6	7
23	I felt like I had to learn vocabulary. <i>Kelime öğrenmek zorundaymışım gibi hissederdim.</i>	1	2	3	4	5	6	7
24	I learned vocabulary because I wanted to. <i>Kelimeleri istediğim için öğreniyordum.</i>	1	2	3	4	5	6	7
25	I learned vocabulary because I had to.	1	2	3	4	5	6	7

Appendix:8 Player Type Inventory

1. Bir oyunda oynayabileceğiniz yeni bir seviye açılıyor. Hangisini yapmayı tercih edersiniz?

- a) Yeni seviyenin değişik oyun özelliklerini keşfetmek
- b) Yeni seviyeyi ilk bitiren olmak

2. Arkadaşlarınızla grup olarak oynadığınız bir oyunda sizden nasıl bahsedilmesini istersiniz?

- a) Oyunda en yüksek puanı alan oyuncu
- b) Oyunda en çok korkulan oyuncu

3. Bir oyunda sizin için hangisi daha önemlidir?

- a) Oyunda gizemli alanlar içerisine girmek
- b) Rakiplerinizi yenmek

4. Bir oyun oynarken en çok hangisini yapmak istersiniz?

- a) Oyunda daha fazla ödül toplamak
- b) Diğer oyuncuları etkisiz hale getiren bir işlem (büyü) yapmak

5. Bir oyunda hangisi sizin için daha önemlidir?

- a) Oyunda hücum ekibine katılmak
- b) Oyunda araştırma ekibine katılmak

6. Bir oyunda rakip oyuncu sizi kovalarken nasıl davranırsınız?

- a) Grup arkadaşlarımla iletişim kurarak çözümü beraber belirleriz
- b) Saklanıp plan yapabileceğim bir yer belirlerim

7. Oyundaki araçların/birimlerin özelliklerini nasıl öğrenirsiniz?

- a) Seçtiğim aracın/birimin özelliklerini arkadaşlarıma sorarım.
- b) Araçları deneyerek kendim keşfederim

8. Bir oyunda hangisini yapmayı tercih edersiniz?

a) Oyun içinde var olan bir gizemi çözmek

b) Oyundaki puanları toplamak

9. Bir oyunda sizin için hangisi daha önemlidir?

a) Rakibi kısa sürede yenmek

b) Rakip ile mücadele ederken kazandığım puanlar

10. Bir oyunda sizin için hangisi daha önemlidir?

a) Oyunda farklı ödülleri toplayan sihirli bir güce sahip olmak

b) Oyundaki son gelişmelerden haberdar olmanızı sağlayan bir araca sahip olmak

11. Oyunda karşınıza birden bir büyücü çıkarak size gizemli bir hikaye anlatıyor. Hikaye sonunda hangisini yaparsınız?

a) Anlattığı gizemli hikayeyi grup arkadaşlarıma anlatırım

b) Hikayenin oyundaki etkilerini araştırırım.

12. Bir oyunda bir canavara yenilince ne yapmak istersiniz?

a) Canavarla tekrar oynayıp onu yenmeye çalışırım

b) Arkadaşlarımla yenilme sebeplerini tartışıp bulurum.

13. Bir oyun oynarken hangisi daha önemlidir?

a) Oyunda arada bir açılan gizemli bir seviyeyi oynamak

b) Oyunda en yüksek puanı almak

14. Bir oyunda hangisine sahip olmak istersiniz?

a) Arkadaşlarımla iletişim kuracağım farklı iletişim araçları

b) Daha çok puan toplamaya yarayacak araçların (ok, çekiç, araba vb.) olması

15. Bir canavar oyunda sizi kovalarken nasıl davranırsınız?

a) Ona saldırıp mücadele ederim

b) Mücadele etmek için uygun bir alan arayıp hazırlık yaparım

16. Bir oyun oynamaya karar vereceksiniz. Hangisini tercih edersiniz?

a) Tek başıma mücadele edeceğim bir oyun

b) Pek çok arkadaşımın katılacağı bir oyun

17. Bir oyunda hangisini tercih edersiniz?

a) Rakiplerle mücadele etmek

b) Oyundaki tehlikelerden kaçarak güvenli bir yer aramak

18. Grup arkadaşlarınızla beraber oynadığınız bir oyunda bir canavar ile mücadele ederken hangisini yapmayı tercih edersiniz?

a) Arkadaşlarımı durumu anlatarak yardım istemek

b) Saklanacak yeni mağaralar bulmak

19. İki takımın bir biriyle mücadele ettiği bir oyun oynuyorsunuz. Hangisini yapmayı tercih edersiniz?

a) Oyunda tek başıma oynuyormuş gibi rakip takımın oyuncularını yenmek

b) Kendi takımdaki arkadaşlarla konuşarak ortak bir plan yapıp mücadele etmek

20. Oyuna başlarken aşağıdaki araçlardan hangisini tercih edersiniz?

a) Diğer oyuncuları yenmeye yarayan kutu

b) Deneyim puanı kazanmamı sağlayan kutu

21. Grupça oynadığınız bir oyunda hangisini yapmayı tercih edersiniz?

a) İyi bir oyun stratejisi bulduğumda hemen uygulamak

b) Yeni bir oyun stratejisini arkadaşlarımla tartıştıktan sonra kullanmak

22. Bir oyunda hangisi sizin için daha önemlidir?

a) Oyundaki tüm avları yakalamak

b) Oyunun farklı seviyelerini oynamak

23. Bir oyunda büyücünün yaptığı bir büyüyü ortadan kaldırmak için hangisini tercih edersiniz?

- a) Grup arkadaşlarımdan yardım istemek
- b) Büyüyü bozacak yeni sihirler ve araçlar araştırmak

24. Bir oyunda hangisini tercih edersiniz?

- a) Oyunun her seviyesinde lider olmayı
- b) Oyunun her seviyesindeki gizli geçitleri bulmayı

25. Bir seviyeyi tamamladığınızda ödül olarak hangisini istersiniz?

- a) Diğer oyunculardan%20 daha güçlü bir araç
- b) Oyunda bir seviye ileri geçmeyi sağlayan kapı

26. Bir oyunda yenilince bunun nedenlerini anlamak için ne yaparsınız?

- a) Arkadaşlarımla durum değerlendiririm
- b) nedenlerini araştırırım

27. Bir oyunda hangisini tercih edersiniz?

- a) Bilgisayara karşı oynayıp yenmeyi
- b) Arkadaşlarımla birlikte bilgisayara karşı oynamayı

28. Bir oyunda hangisini tercih edersiniz?

- a) Bazı görevleri atlayarak oyunu ilk bitiren olmayı
- b) Tüm görevleri oynayıp keşfederek ilerlemeyi

29. Oyun ortamında işinize yaramayan araçları nasıl değerlendirirsiniz?

- a) İşime yaramayan araçları diğer oyunculara puan karşılığı satarım
- b) İşime yaramayan araçları zayıf oyunculara ücretsiz veririm

30. Oyunda yeni bir rakiple karşılaştığınızda hangisini tercih edersiniz?

- a) Hızlı bir saldırı yapmayı
- b) Oyun hakkındaki tecrübesini, seviyesini, gücünü anlamayı

31. Bir oyunun yeni seviyesi başladığında hangisini tercih edersiniz?

a) Arkadaşımla yeni oyun stratejilerini tartıřmak

b) Hemen yeni maceralara atılmak

32. Bir takım oyununda ařağıdakilerden hangisini tercih edersiniz?

a) Tm rakipleri kendim yenmeyi

b) Rakipleri arkadaşlarımla yenmeyi

